

10 May 2020

IOM3 responds to Government Resource and Waste Strategy Consultations

The Institute of Materials, Minerals and Mining (IOM3) is a charitable organisation incorporated by Royal Charter and is the professional body for the materials cycle from extraction, through characterisation and manufacture to use and end of life. Our more than 15 000 individual members work in a variety of sectors including packaging, polymers, ferrous and non-ferrous metals and mining. IOM3 has prepared a response on the following consultations:

- Plastic packaging tax by HM Treasury
- Packaging waste: changing the UK producer responsibility system for packaging waste by DEFRA
- Introducing a deposit return scheme (DRS) for containers by DEFRA

We welcome the recent Resource and Waste Strategy and support the debate. IOM3 has a knowledge bank of independent consultants, academics and current and former practitioners in industry from packaging, polymer, and waste and sustainability backgrounds. It is this calibre of knowledge in the materials cycle that will provide Government with responses to implement the new strategy.

IOM3 agrees with the basic principles of a DRS system particularly where this promotes the reuse of packaging over recycling. The key is to ensure that the mechanical recycling must be cost effective against the cost of the virgin raw material and monitoring would be required at sorting facilities. The Government should seek experience from other countries that have already implemented this. A key challenge will be product variability; this is particularly the case for packaging where many different formats of plastic bottle/cap/label exist. IOM3 suggests a strong focus on the standardisation of product packaging formats and their accompanying materials as this will promote reuse between suppliers. Reducing the variety of materials within individual products should also be considered as part of this to minimise cross contamination of waste streams and improve recycled material quality as highlighted in the *New Plastics Economy Vision* by the Ellen MacArthur Foundation.

The Government needs to consider life-cycle thinking in all aspects of the three consultations and indeed for overall Waste and Resource Strategy. This should include consideration of product design options to enable the best end-of-life options such as design for reuse, recycling and materials/energy recovery.

IOM3 would like to invite DEFRA and HM Treasury to seek the help of IOM3 as an independent organisation with expertise from academia and industry in resource and waste strategy, packaging, polymers and sustainability.

The following 11 points address some specific aspects of the three consultations:

1. The proposed recycled content of 30% to encourage the sustained use of more recycled plastic in the production of plastic packaging to help tackle plastic waste is an arbitrary target. For each product type, there should be an agreed percentage of recycled content in consultation with packaging specifiers and suppliers.
2. A clear precedence exists within the waste hierarchy to promote reuse over recycling and this should be more clearly promoted within the policy. There is a need for the emphasis to be on reuse rather than focussing on recycling.

This might be achieved by:

- Setting a threshold minimum recycled content, which may start at 30%, but with a sliding scale above this that should clearly benefit those who can exceed this target. For each generic polymer and application, there is a far more achievable upper limit of recyclate that can be successfully managed while still maintaining performance and appearance.
- An incentive for producers of plastic to influence the downstream supply through the design, formulation and recovery of their products. This should also be subject to regular review to reflect increasing UK ambition.
- Ensuring waste management systems reform at local Council level to create effective standard systems throughout the UK, which will help, reduce current public confusion.

Understanding of the physics and chemistry is crucial to achieving these goals, as a percentage that includes mechanically recycled cannot be uniformly applied if Government and manufacturers wish to maintain product integrity as this percentage varies from polymer to polymer and process to process.

3. IOM3 recommends that Government should focus on defining the terms 'single use plastic' and 'plastic-based' as these are currently too loose and may give rise to unintended behaviours. This is where standardisation vs innovation is vital and the need for the Government to drive the standardisation of plastic products to ensure clarity and innovation in 2020 and beyond.
4. The UK should have a definitive/approved list of recyclable materials and these should only include those materials for which UK domestic recycling infrastructure exists. Government is well placed to do this with the right people and knowledge of the materials cycle. If materials are to be considered 'recyclable' then an evidential route should exist to ensure effective data management, reporting and national accounting to the public and this is most easily achieved through the availability of effective domestic infrastructure. This would again need effective communication out to the consumers in order to make the infrastructure a success.
5. IOM3 believes that the approved list of recyclable packaging will require full supply chain consultation and will need to consider the whole life cycle of a material to reduce the risk of increasing overall environmental impact.
6. The pharmaceutical industry should be exempt from the proposed plastic tax and IOM3 recommends that the UK pharma industry work together with trade associations/Government/NHS/industry packaging and device experts to continue to define how to optimise the mandated use of virgin polymer packaging materials required to protect and dispense medicines. Government should seek longer-term partnerships with UK pharmaceutical and MedTech companies and encourage the implementation of packaging 'Green Guides' for these sectors (including first and second tier suppliers).
7. Communication and co-ordination within the supply chain will be necessary and the policy should seek to encourage this type of dialogue. Opportunities for standardisation of packaging should be identified early and promoted to simplify DRS and to improve reuse and recycling quality nationally.

8. Clear exemptions should exist for bio-derived plastics capable of being fully composted/digested at the end of life. Caution will need to be exercised regarding photo-catalytically degradable polymers, which in many cases can lead to larger number of microplastics – a focus on the products of the degradation process is to be encouraged.
9. IOM3 agrees with the full net cost recovery but recognises that to develop this there needs to be a better-defined scope for the current and historical littering and fly tipping of packaged items as well as the longer term legacy of historic practices, such as UK coastal pollution, and where these costs then fall. There is no definitive answer but a full net cost recovery system would need to factor this in to ensure the material supplier/manufacturer isn't paying for these costs.
10. IOM3 wants to emphasise that the UK has an opportunity to influence the misuse of materials not just within its own borders but also use its policy to influence international production, importing and design of packaging. This opportunity is not reflected in the draft and should be considered as otherwise imported packaging will increasingly become a UK waste liability.
11. Based on the proposed 2025/2030 targets, IOM3 believes that the targets may be too ambitious and for the UK to achieve these an extension of the objectives to cover imported packaging waste and standardisation with a focus on reuse over recycling is needed, which may help the UK to achieve or exceed, the existing targets.

The Government needs to consider lifecycle thinking after the end of first life i.e. design for reuse or diverting from landfill, such as chemical recycling for plastic materials, which converts the polymer directly back to the original feedstock and restarts the petrochemical cycle. This is probably the most efficient way to ensure that we do not release CO₂ into the atmosphere in any alternative recycling options and that any changes or modifications will not incur carbon emissions in turn increasing climate change figures. It is essential that we use all materials effectively and sustainably.



Signed by Colin Church, CEO of IOM3