Waste Prevention Programme for England

Wildlife and Countryside Link (Link) is the largest environment and wildlife coalition in England, bringing together 57 organisations to use their strong joint voice for the protection of nature. Our members campaign to conserve, enhance and access our landscapes, animals, plants, habitats, rivers and seas. Together we have the support of over eight million people in the UK and directly protect over 750,000 hectares of land and 800 miles of coastline. This response is supported by the following Link member organisations:

- CPRE, the countryside charity
- Environmental Investigation Agency
- Friends of the Earth England
- Greenpeace UK
- Keep Britain Tidy
- Marine Conservation Society
- Surfers Against Sewage
- Whale and Dolphin Conservation
- WWF-UK

EXECUTIVE SUMMARY

We strongly welcome that the Government is consulting on a waste prevention plan for England. The UK consumes more than its fair share of the planet's resources - in 2017, this was 7.7 tonnes per person (excluding biomass consumption) which equates to 160% of our planetary boundary allowance of 4.8 tonnes per person.[1] The UK is increasingly a net importer of materials with domestic extraction accounting for 27% in 2018, down from 40% in 1997.[2]

It is encouraging that this plan places waste prevention in the context of tackling climate change and biodiversity loss. This reflects the UN's findings that resource extraction and processing cause 90% of global biodiversity loss and water stress, as well as 50% of overall carbon emissions.[3] Waste can also have a devastating effect on the natural world in its lasting direct effects as waste and pollution. We particularly welcome the focus on reuse, repair and remanufacture and the vital role

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[1] 3Keel report for WWF May 2021 "Thriving within our planetary means: reducing the UK's footprint of production and consumption by 2030" - based on the official Eurostat-based material footprint of the UK for 2017, with the biomass fraction subtracted and divided by the 2017 mid-year population and planetary boundary from O'Niell et al. (2018), adjusted to account for population growth and to exclude the biomass fraction.

[2] Material footprint in the UK - Office for National Statistics (ons.gov.uk)

[3] UN International Resource Panel, 2019, Global resources outlook 2019: natural resources for the future we want

that these activities can play in reducing resource use, lowering greenhouse gas emissions and reducing avoidable waste. We also applaud the focus on ecodesign and the recognition of the importance of greater consumer information.

However, for almost all sections of this consultation we have disagreed that the proposed policies meet the intended aims around reducing waste. While the consultation document recognises the difficulty of delivering change in this area (for example noting that "most businesses have a strong interest in increasing sales, and this can run counter to the interests of reuse/repair and remanufacture"), the policies which have been outlined fail to tackle these deep-rooted causes of excess waste.

Overall, the Government's proposals fail to tackle the fundamental design of our consumer culture, with an economy dependent on high levels of consumption. It also aims to 'encourage' more than it does to 'require'; there is little detail on using financial incentives to drive more environmentally beneficial activities. This failure of ambition means that these measures are unlikely to lead to the large-scale shifts in our consumption models which are necessary to meet the Government's environmental and climate targets. It also means we will fail to benefit from the huge boost to local jobs and services which would accompany a more resource efficient economy.

We hope that Defra will work across Government, particularly with the Treasury, to increase the ambition of these proposals as they are developed further.

Consultation questions

Question 8: Do you agree or disagree with our choice of impacts and outcomes as the right goals for us to be aiming to achieve?
> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **If you disagree, please briefly explain why.**

We support some of the impacts and outcomes set out in this chapter. We particularly welcome the focus on reuse, repair and remanufacture and the vital role that these activities can play in reducing resource use, lowering greenhouse gas emissions and reducing avoidable waste. We also applaud the focus on ecodesign and the recognition of the importance of greater consumer information.

However, we would note that the impact and outcome approach detailed in figure 3 is confusing and appears to conflate outcomes and policy drivers. In addition, it fails to address the necessity of reducing our unsustainable levels of consumption which are the primary contributors to waste arisings. This is despite the acknowledgement in the consultation document that a challenge

hindering change is that "business focus on growing sales". Tackling these drivers, which include economic and societal factors (amongst others), will be fundamental to restoring and protecting the natural world upon which we depend. The 2021 Dasgupta Review clearly states that *"...if we are to avoid exceeding the limits of what Nature can provide on a sustainable basis while meeting the needs of the human population....consumption and production patterns will need to be fundamentally restructured."*[4]

This fact is clear throughout this document, where a lack of focus on tackling our high-waste consumer culture is the most notable omission from the outcomes of this section; this has a detrimental effect on the theory of change that infuses all chapters of this document. As hosts of the G7 conference and CoP 26, the UK needs to take a leadership position by pledging to reduce its own resource consumption to within planetary boundaries while also increasing resource efficiency.

We would also highlight that no targets have been quantified and that the Government hasn't produced a public definition of 'avoidable waste'. The aims of 'lower' impacts, more reuse, a sharing economy and the use of secondary materials, provide no indication of the extent of these activities that the Government is hoping to achieve.

Question 9: Do you agree or disagree that our policy approach covers all the areas for action that are needed?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **If you disagree, please explain what you think is missing.**

As with the proposed impacts and outcomes, we broadly agree with the outlined policy approach and note the Government's commitment to delivering certain commitments within the 2018 Resources and Waste Strategy.

However, similar to the proposals to reform Packaging Extended Producer Responsibility, these policies fail to account for the full lifecycle impacts associated with materials sourcing. The majority of these impacts occur outside our borders and place pressure on regions of the world which are already under environmental stress, contributing to the UK's global footprint.[5]

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[4] "The Economics of Biodiversity: Das Gupta Review - Headline Messages" https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957629/Dasgupta_Review_-_Headline_Messages.pdf

[5] 3Keel report for WWF May 2021 "Thriving within our planetary means: reducing the UK's footprint of production and consumption by 2030" - based on the official Eurostat-based material footprint of the UK for 2017, with the biomass fraction subtracted and divided by the 2017 mid-year population and planetary boundary from O'Niell et al. (2018), adjusted to account for population growth and to exclude the biomass fraction.

We would suggest the following broad improvements to the policy approach:

- **Financial incentives.** While we appreciate that this consultation has not sought to propose new fiscal policies, the lack of financial incentives outlined suggests that the policies lack the teeth to drive meaningful consumer change. The Government has a clear appreciation of the role of fiscal levers to promote environmentally beneficial behaviour; the single-use bag charge, plastic packaging tax, and proposed single-use plastic items charge in the Environment Bill are evidence of this.[6] However, this consultation provides no new policies on how sectors such as construction, fashion or vehicles could be financially incentivised to reduce waste. This lack of ambition hampers the overall package of policies proposed here.
- **Monitoring and enforcement**. There is a noticeable absence of policy proposals which will hold stakeholders to account for non-compliance. This is in line with the terms used throughout consultation which indicate a dependence on voluntary actions vs. mandatory requirements. And where mandatory requirements have been proposed, there is a lack of clarity as to how monitoring and enforcement will be effectively undertaken. We are nervous about the over-reliance on the Environment Agency who continue to be grossly under-funded. Policies will only ever be fully meaningful if stakeholders are held to account for non-compliance.
- **Eco-design requirements:** *How prescriptive will eco design guide be in specifying right materials for different products?*

Chapter 2: Designing out Waste: Ecodesign, Extended Producer Responsibility and Consumer Information

Question 10: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

We welcome and support the principle of driving changes in product design so products are made to be more durable, repairable and recyclable. It is estimated that 80% of a product's environmental impact is determined at the design stage[7] - this statistic underlines the importance of having clear design guidelines to mitigate this impact. However, the proposals outlined in this chapter prompt more questions than offer concrete solutions as to how the overarching ambitions will be achieved.

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[6] Though these policies could all be more ambitious. On the Environment Bill we are calling to expand the single use charge to all materials, see https://www.wcl.org.uk/docs/Charging%20for%20all%20single%20use%20items%20-%20Link%20Waste%20&%20Resources%20Policy%20briefing.pdf

[7] https://ec.europa.eu/jrc/en/research-topic/sustainable-product-policy

It is vital that eco design criteria are established by product category and, therefore, tailored to support greater resource efficiency, reduction of waste and the UK's net zero ambition. It should also seek to achieve the following: reduce carbon emissions and costs for consumers, exclude the worst performing and most harmful products from the market, provide a consistent and well-defined approach evidenced by lifecycle analysis, effective stakeholder engagement and buy-in, a flexible framework which allows for both product-specific and "horizontal" measures which apply across product groups and gaining public support through communication of positive impacts and financial savings.[8]

Proposed Actions

1. Non-energy-related products (NERPs)

We welcome the continued focus from the Government on developing policy which aims to tackle the very visible impacts of plastic pollution and addressing packaging waste overall. However, based on the UK waste arisings data and carbon abatement potential, mitigating the greater impacts of other sectors should have been addressed sooner and therefore, must now be addressed with urgency.

The proposals outlined for NERPs suggest a "light-touch" approach to driving design improvements, with a worrying reliance on industry self-regulation. This is a theme throughout the consultation and there are potential risks such as those identified in the 2015 OECD paper *"Industry Self-Regulation: Role and Use in Supporting Consumer Interests"*[9]: We have highlighted specific risks in relation to achieving the aims set out for this topic:

- **A watering down of instruments** to achieve industry support could result in lack of ambition overall
- **An absence of effective enforcement and monitoring** resulting in participants having little incentive to adhere fully to a scheme
- **Risk of regulatory capture** which could occur when a self-regulatory body is overly close to the businesses it is regulating
- **Businesses that are not bound by the self-regulatory scheme** can gain significant advantage which would not occur with formal Government regulation
- **A lack of review and evaluation mechanisms** resulting in lack of accountability
- **Costs** of establishing and maintaining an industry self-regulation body may be passed onto consumers.

Given the monumental task we face in tackling the climate crisis, it is imperative the Government introduces tangible policies which will shift industry urgently towards more effective use of resources.

2. Energy-related products (ERPs)

In contrast to the NERPs proposals, we welcome the encouraging progress on developing a binding policy framework for ERPs, albeit we are lagging behind on the equivalent requirements developed

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[8] https://green-alliance.org.uk/design_for_a_circular_economy_report.php
[9] https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/CP(2014)4/FINAL&docLanguage=En

by the EU. As recognised in the Government's response to the Ecodesign and Energy Labelling Regulations for 2021 consultation,[10] businesses who supply into multiple markets are already in a position to meet the EU regulations, but there is still an opportunity for the Government to drive more ambition than those of the EU - similar to the Government's commitment to phase out petrol and diesel cars by 2030.[11]

We support Green Alliance's call for proper enforcement of existing ecodesign regulations and improvements to the labelling requirements to reflect energy ratings which are based on actual usage vs. relative to a specific product category e.g. an A+ rated 60" television uses more energy than an A+ rated 32" television.

The UK has the second highest level of e-waste per person (after Norway) so in addition to the proposed measures linked to repairability and recyclability, supplementary measures to facilitate durability, upgradeability and component reuse are also needed to achieve a circular economy for these products.[12]

3. Consumer information

Achieving a circular economy for both NERPs and ERPs requires effective consumer engagement. However, that engagement has to go beyond provision of information and needs to be underpinned by greater producer responsibility which includes producer adherence to and Government enforcement of ecodesign regulations.

We support the three approaches outlined for providing information to the consumer, however, there is a risk of consumer information overload with many products, such as electrical goods, requiring mandatory product safety labelling amongst other requirements.

According to an OECD study, although environmental labelling and information schemes (ELIS) have been in use for over 40 years, surveys show that many environmental labels are only recognised by a small proportion of households and subsequently used by an even smaller number to inform purchasing decisions. Additionally, there is the ongoing risk of brands and retailers marketing their products based on uncertified, environmental claims which may mislead the consumer[13]. We note that the Competition and Markets Authority is currently consulting on their "Draft guidance on environmental claims on goods and services[14] as a starting point to addressing this issue - businesses should be required to evidence their claims based on meeting specific criteria related to that product. Adherence to regulations needs to be more rigorously enforced, monitored, with clear consequences for any deviations. Enforcement bodies such as the Environment Agency and Local Authority Trading Standards teams must be properly funded and resourced in order to carry monitoring and enforcement duties.

However, the responsibility for minimising the full end-to-end environmental and social lifecycle

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[10] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/967950/draft-ecodesign-energy-labelling-regulations-2021-government-response.pdf
[11] Ban on new petrol and diesel cars in UK from 2030 under PM's green plan - BBC News
[12] "Design for a Circular Economy" https://green-alliance.org.uk/resources/Design_for_a_circular_economy.pdf
[13] https://www.oecd.org/env/policy-persectives-environmental-labelling-and-information-schemes.pdf
[14] https://www.gov.uk/cma-cases/misleading-environmental-claims

impacts of products placed on the market must sit with Government and businesses, supported by robust policies and a clear regulatory framework. This will shift it from being a competitive to a compliance issue. In the same way products have to comply with safety regulations, they should also be confident that the product they're buying meets sustainability criteria which contribute to the Government's net zero ambition. We cannot rely on consumer information labelling alone to drive change and support delivery of that ambition.

4. Extended Producer Responsibility Schemes Consultations

While we welcome the ongoing work to enhance existing EPR schemes for packaging, electrical and electronic equipment, batteries and end of life vehicles, there is a need for greater urgency and prioritisation when determining which sectors to focus on for EPR scheme introduction.

According to Figure 4 of this consultation document, the construction sector has the highest waste arisings and the biggest carbon abatement potential. Therefore, we would urge the Government to recognise that EPR for the construction sector presents the biggest opportunity.

With the regulatory framework in place through the Environment Bill, the effectiveness of EPR schemes still relies on the Government taking an active role in governing the system and providing a conducive environment for stakeholders to deliver against ambitions for the scheme. It will also require the Government to supervise the system operator and establish ambitious targets across reuse, repair, durability, collection and recycling. Additionally, in order to maximise its effectiveness, an EPR scheme should strive to deliver environmental, social and economic benefits to all stakeholders within a given system.[15]

For future EPR schemes, there is an opportunity to incorporate more granular requirements as part of the modulated fee approach and include sub-targets to drive even greater behaviour change e.g. closed loop vs. linear recycling or provenance of recycled materials used in products (domestic sourcing vs. from outside the UK). There is a long way to go in terms of data reporting and transparency to enable this more granular approach however, it is an ambition we would like to see signalled by the Government.

5. Development of principles and approaches

These proposals give us little to comment on in terms of how principles and approaches will be developed.

What we can say is that while industry and key stakeholder engagement is vital for the development of robust principles and approaches to designing out waste, that engagement needs to be framed around the environmental, social and economic imperatives for systemic changes to the way industry operates. It will require a mix of business-led co-operation alongside clear policy levers which push for the most ambitious outcomes and deliver against the Government's net zero commitment.

Any guidance on material usage and good product design needs to be evidenced - in the absence

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[15] https://wwfint.awsassets.panda.org/downloads/epr_fact_sheet.pdf

of evidence, "good product design" remains relatively subjective and there are risks of greenwashing by businesses when marketing their products. Examining IT-enabled labelling systems misses the point - the development process needs to focus on the data which underpins what the principles and approaches are seeking to achieve.

Further suggestions for consideration

- **Definitions:** Work must be undertaken to gain clarity around definitions such as "durable, repairable and recyclable" and what each means for individual product types and their wider sectors.
- **Prioritise reduction:** Alongside the opportunities within the wider packaging waste reforms, there is also an opportunity to champion reduction as part of this policy. Tackling waste once it has been created fails to address the underlying drivers of nature decline resulting from resource extraction and processing, Furthermore, it maintains the status quo of unsustainable consumption - the world is only 8.6% circular[16] and while we must work towards closing that gap, we also need to take stronger action with regard to reduction and reuse.
- **Support a just transition:** There is little in the proposals to support the behaviour change required of consumers in order to deliver against the desired aims and objectives. As noted above, greater detail on fiscal incentives, particularly those which support disadvantaged groups, will be crucial for delivering these policies fairly, and in a manner which commands public support. A 2018 European Commision study found that " The top reason for not repairing products was the high price of repair, followed by the preference to get a new product and the feeling that the old product was obsolete or out of fashion."[17] This underlines that the consumer journey to supporting a more circular economy is complex and requires meaningful consideration.

Chapter 3: Reuse, Repair, Refill, Remanufacture: local services and facilities

Question 11: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

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[16] https://www.circularity-gap.world/2021
[17] https://ec.europa.eu/info/sites/default/files/ec_circular_economy_final_report_0.pdf

We welcome some of the measures outlined in this chapter, however, they are insufficient to achieve the goal of a significantly more circular economy where the reuse, repair, refill and remanufacture of products is the norm. This is disappointing given both the environmental gains that would accompany greater reuse and the potential for new green jobs.

Modelling shows there are huge numbers of jobs that could be created in the circular economy. Indeed, one study estimates that if 20% of current global disposable plastic packaging was converted to reuse models, it would be a $10 billion (£7.5 billion) business opportunity.[18] Domestically, research has shown that the circular economy could create over 200,000 gross jobs by 2030 and that more extensive expansions of the circular economy could create around half a million gross jobs.[19] These predictions are highly relevant to the current chapter as the researchers used ONS data categories of "retail of second hand goods in store", "waste and recycling", "wholesale of waste and scrap", "repair of machinery and equipment", "repair of electronics and household goods" and "renting and leasing".

The most promising proposal for boosting circular economy jobs in this consultation appears to be the use of funds from EPR schemes to support local "circular economy hubs". These appear to be different entities to the 5 R&D circular economy centres supported by UKRI, which are primarily research focused.[20] We welcome the principle that EPR funds could be used to support reuse, repair and remanufacture, however this must be done in the right manner and the current document provides little information into how these schemes would operate in practice. If the "circular economy hubs" are to be effective they must do more than simply provide guidance. There is a great potential for these hubs to provide jobs, reduce resource use, and regenerate local high streets as well as providing a clear public example of circular economy principles in action.

Examples of successful circular economy hubs include Plant Chicago in the USA. This project converted a disused industrial building into a collaborative community of food businesses with a mission to "cultivate local circular economies", aiming for a shift in waste production, driven at the local level. The project aimed to generate equity and economic opportunity for local residents while sharing best practice and improving people's understanding of waste.[21] This could be a model for certain urban circular economy hubs in the UK which could tackle waste and drive regeneration.

In the UK, the Black Country Local Enterprise Partnership (LEP) has devised a plan for 10-50 potential circular economy clusters focused on different industrial activities across the region.[22] These would each be supported by a zero-carbon power hub, with each hub predicted to directly support more than 500 jobs. The LEP highlight an example of the Phoenix 10 Enterprise Zone in Walsall which could become an aluminium reprocessing and re-manufacturing hub, coupled with complementary industrial operations using heat created by the site's activities[23]. The LEP estimates that each hub is likely to require more than £100M of investment by commercial partners and

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[18] Ellen MacArthur Foundation, 2019, Reuse: rethinking packaging

[19] https://ecointelligentgrowth.net/wp-content/uploads/2015/02/Employment-and-the-circular-economy-summary.pdf

[20] https://www.ukri.org/news/circular-economy-centres-to-drive-uk-to-a-sustainable-future/

[21] https://www.plantchicago.org/who-we-are

[22] https://www.blackcountrylep.co.uk/upload/files/Repowering%20the%20Black%20Country%20A%20prospectus%20to%20lead%20a%20clean%20growth%20revolution%20in%20the%20UK.pdf

[23] Ibid

investors, with public finance used to catalyse investments in the first 4 hubs and facilitate engagement in the remainder. These substantial investments, which account for just one region of England, demonstrate the limitations of the current consultation programme, which fails to adequately set out how the transition to a more circular economy will be financed.

Funding for circular economy infrastructure provision must be prioritised as part of the Government's agenda on economic growth. However, the recent Plan for Growth contained just one mention of the Circular Economy which highlighted the Government's ongoing waste reforms but made no proposals for increased investments or financial incentives. Enhanced Capital Allowance (ECA) has been used by the Government to encourage a shift to more energy and water-efficient technologies. This scheme and other financial incentives could be used to assist companies with investments in both plant and machinery which have reuse applications. The Government should also ensure that VAT on repair services is zero-rated to make repairs more affordable and boost the industry. The current tax system applies VAT to the repair of a shoe for example, putting an extra cost on this beneficial activity.

Further local action is outlined in the plan with the goal to make HWRCs more effective in supporting resource efficiency, which is a positive step forward. It is also welcome to see mention of partnerships between charities and local authorities to set up reuse shops at HWRCs, such as the AGE UK and Warwickshire County Council partnership. While the WPP states that the Government intends to "enhance" the third sector's role in reuse, we are disappointed in the lack of information on how this will be achieved. We hope the Government can publish more details on this aspect of the waste agenda, setting out how Ministers believe they can promote more HWRC-based reuse shops, promoting the benefits of second hand products for all income groups and making them more attractive and accessible.

Regarding the third sector, the programme makes no reference to the current difficulties facing charities, which are highlighted as playing a crucial role in waste prevention. Age UK, for example, cut more than 400 jobs and closed around 1/3 of its stores in 2020 as a result of the pandemic.[24] Across the charity shop sector around £285m in customer sales were lost last year and according to one estimate charities face a £10bn funding gap, with one in 10 facing bankruptcy.[25] Growth is still expected to be strong for some charity shops however, with a trend for more out of town charity superstores selling items such as furniture and electricals. The Government should consider how these stores, as well as the wider sector, can be best supported, given their crucial role in waste reduction.

The focus on the local aspects of reuse/repair/remanufacture is welcome, however it cannot be a substitute for strong national action to support this agenda. The Government must take a lead to support schemes which will deliver a shift away from our current single use, disposable culture. The stated aim of this chapter includes that private firms "facilitate reuse, repair, refill and remanufacture of products", a goal which necessitates the buy-in of major supermarkets, the 10 biggest of which put 896,853 tonnes of plastic packaging on the market in 2019[26]. Neither local authorities, LEPs, nor

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[24] https://www.thirdsector.co.uk/age-uk-cut-400-jobs-closed-third-its-shops-last-year/management/article/1703965
[25] https://natwestbusinesshub.com/articles/Charity-shops-plan-for-the-future
[26] https://eia-international.org/wp-content/uploads/Checking-Out-on-Plastics-III-FINAL.pdf

combined authorities will be able to effectively influence the national supermarket chains, this is a role for central Government.

Taking the example of refill infrastructure, the UK Government must take a lead to encourage change in the sector. Important questions still need to be resolved to ensure that refill schemes become mainstream. Supermarkets need to decide on the right delivery system for each product and make it easy and attractive for consumers, with good value products which create less waste, and where dispensers are clean and easy to use. They must also prevent increases in material use, avoiding the failures around the introduction of the UK's single use carrier bag charge where a trend towards repeat purchasing of thicker 'bags for life' has resulted in potentially more plastic waste overall.[27]

The importance of national leadership on reuse and refill will also depend on the product and its expected place of consumption. Products sold for consumption during travel, such as coffee cups, will not be effectively covered by a reuse scheme if, for example, there are options to return a coffee cup in a London station but not after arrival in Sheffield. And certain, more specialised, products will need national hubs for their remanufacture and repair given the small number of products involved.

Overall, Government action is aiming to 'encourage' more than it does to 'require'. This failure of ambition means that these measures are unlikely to lead to large scale shifts in our consumption models, with the local jobs and services which would accompany this.

Chapter 4: Data and Information: from industrial symbiosis to research & innovation

Question 12: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

It is encouraging to hear about the Government's plans to leverage data to drive improvements on circular economy issues.   Both historical and real-time data can provide insights into environmental issues which help tackle the problems we're facing. The advancement in data capabilities is an example of what the World Economic Forum refers to as the Fourth Industrial Revolution (4IR).[28]

However, based on the lack of overall ambition and finer details of what's been put forward, we disagree that the proposals in this chapter meet the chapter aim.

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[27] https://green-alliance.org.uk/resources/Fixing_the_system.pdf
[28] https://www.weforum.org/agenda/2018/10/how-big-data-can-help-us-fight-climate-change-faster/

1. National Materials Datahub

We welcome the plan for a National Materials Datahub to enable greater visibility of material flows. We note from the consultation that this is a long term project. While this presents an opportunity to shape the nature of the database so that it achieves the most positive environmental and social outcomes, we are concerned about the lack of prioritisation and ambiguity as to how it will be funded. However, we would call for consideration of the following elements when developing the database:

- **Preventing waste remains the priority.** As per the waste hierarchy, eliminating the need to use materials in the first instance and reduction in the volume of materials used must remain the priority. This requires development of effective policies on durability, repairability and remanufacturing of products, as proposed in the consultation, in order to increase resource productivity. However, it is vital to improve resource management from the start rather than waiting until materials become waste.
- **Waste vs. resource efficiency / productivity.** The database must reinforce the principle of "waste" as a valuable resource within a circular economy[29]. We are consuming resources faster than the planet can replenish them - resource extraction has more than tripled since 1970, with a fivefold increase in the use of non-metallic minerals and a 45% increase in fossil fuel use. Global material use is forecast to double by 2060 from 92 billion to 190 billion tonnes, contributing to a 43% increase in GHG emissions[30].
- **Design for sustainability.** It is estimated that over 80% of all product-related environmental impacts are determined during the design phase of a product[31]. Based on this statistic, embedding eco design principles is a critical factor in minimising a product's impact from the outset. Going forward, eco design guidelines need to ensure products are suitable and easily adaptable for reuse by both similar and different sectors.
- **Co-operation across UK nations supported by adequate funding.** Although this programme is designed for England, waste is a transboundary issue and businesses operating with the UK do not necessarily make a distinction between UK nations. There must also be consideration for how to minimise the cost, operational and logistical burdens on businesses if we are to succeed in delivering against these ambitions, with central funding a key part of this.

2. Electronic waste tracking

We strongly support electronic waste tracking but plans for its highly anticipated introduction must not distract from the ongoing failure to enforce current waste regulations. The UK, like many other developed countries, continues to fail to comply with its existing international obligations. Adequate resourcing of the Environment Agency is critical to making the current system fit for

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[29] Report of the Government Chief Scientific Adviser 2016, From Waste to Resource Productivity, The Government Office for Science, London
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/667476/from-waste-to-resource-productivity-final-report.pdf
[30] UNEP "Global Resources Outlook 2019: Natural Resources for the Future We Want"
https://www.resourcepanel.org/file/1172/download?token=muaePxOQ
[31] https://ec.europa.eu/jrc/en/research-topic/sustainable-product-policy

purpose before making further headline announcements. The NAO 2018 report[32] shows that the EA struggles to monitor let alone control waste export trade activity.

3. Product passports

We welcome the ambition to introduce (digital) product passports as a means to expand on the information provided for each product, beyond physical labels and leaflets. They have the potential to become a major enabler of the circular economy. Given both the EU's and UK's interest in this approach, it is vital all Governments work together to make these a reality. The main challenge will be access to and integrity of data in order to make these passports meaningful. The Government needs to tackle urgently how this information will be gathered in a consistent and transparent manner. Green Alliance's "Design for a Circular Economy" report[33] recommends the following priority information should be covered:

- Environmental footprint
- Hazardous substances or chemical composition
- Critical raw material content
- Repair information
- Information on social impact and due diligence

4. Industrial symbiosis

We welcome BEIS' consideration of the potential role of industrial symbiosis to reduce emissions from industry. The Kalundborg Symbiosis, the world's first functioning industrial symbiosis, strives to "provide, share and reuse resources to create shared value". Their mission is focused on …"long-term responsible use of resources, in balance with economic, environmental and social considerations". Case studies from the Kalundborg Symbiosis demonstrate significant CO_2 savings as well as socio-economic benefits.[34] Also, given the consultation acknowledges the positive contribution made by National Industrial Symbiosis Programme (NISP) and how it's a significant lever for delivering the Government's net zero commitment, it is critical that the renewed interest from Government on this topic is accompanied by a robust, long-term central funding plan to avoid the programme's closure, as was the case with the NISP in 2013.[35]

There has been a shift towards symbiosis on an international level, however, we believe a symbiotic mindset must be promoted on a local and regional level to deliver maximum benefit. Additionally, we strongly recommend that the aims for this go beyond reducing carbon emissions and that they seek to mitigate the risk of other economic, environmental and social impacts resulting from the extraction, processing and consumption of resources. These impacts include (not exhaustive) biodiversity loss, water stress, land use change, pollution and human rights violations as called out in the Human RIghts Watch report *"What do we get out of it? The Human Rights Impact of Bauxite Mining in Guinea"*.[36] This all contributes to the UK's overall global footprint above and beyond how we mitigate the impacts of waste.

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[32] https://www.nao.org.uk/wp-content/uploads/2018/07/The-packaging-recycling-obligations.pdf
[33] https://green-alliance.org.uk/resources/Design_for_a_circular_economy.pdf
[34] https://www.ellenmacarthurfoundation.org/case-studies/effective-industrial-symbiosis
[35] https://resource.co/article/industrial-symbiosis-one-mans-waste-11903
[36] https://www.hrw.org/report/2018/10/04/what-do-we-get-out-it/human-rights-impact-bauxite-mining-guinea

5. National Interdisciplinary Circular Economy Research programme

Support from Government and businesses for the new NICER programme is a positive step towards enabling greater adoption of a circular approach to research usage. However, this needs to be matched by efforts to track the use of virgin materials with the aim of closing the circularity gap. Additionally, we must aim to reduce virgin material consumption and mitigate the impacts associated with extraction and production further up the supply chain. The UK consumes more than its fair share of the planet's resources - in 2017, this was 7.7 tonnes per person (excluding biomass consumption) which equates to 160% of our planetary boundary allowance of 4.8 tonnes per person.[37] The UK is increasingly a net importer of materials with domestic extraction accounting for 27% in 2018, down from 40% in 1997.[38] We are increasingly offshoring our impacts to service the UK's domestic consumption requirements, contributing to our overall global footprint. It is our responsibility to minimise our footprint through greater due diligence and reporting requirements for materials sourcing alongside measures to promote more circular use of materials once they're in the economy.

6. Reporting systems

The proposal to support effective industrial symbiosis based on voluntary reporting systems is weak. We call for the Government to introduce mandatory reporting requirements to capture critical information on use of secondary materials and rates of reuse. Without this critical information, there's a risk of inconsistencies in reporting approaches and a lack of accountability for achieving reuse targets which contribute positively to achieving net zero.

Chapter 5: Construction

Question 13: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

Overall aim: to reduce construction waste and increase the reuse of construction materials at

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[37] 3Keel report for WWF May 2021 "Thriving within our planetary means: reducing the UK's footprint of production and consumption by 2030" - based on the official Eurostat-based material footprint of the UK for 2017, with the biomass fraction subtracted and divided by the 2017 mid-year population and planetary boundary from O'Niell et al. (2018), adjusted to account for population growth and to exclude the biomass fraction.
[38] Material footprint in the UK - Office for National Statistics (ons.gov.uk)

their highest value. This means designing buildings for adaptability and deconstruction, increased reuse of components, use of materials that can be reused and recycled, and improved demolition systems.

As evidenced in the consultation, construction is the most resource intensive sector and the biggest contributor to waste arisings in the UK. Given the significant carbon abatement potential, we urge the Government to tackle this sector as a priority to contribute towards the UK's net zero commitment. And while the proposed measures seem sensible, they lack sufficient details for us to agree they will achieve the desired aim.

Although construction waste has a high recovery and recycling rate, simply focusing on end of life successes does not mitigate impacts associated with the full construction materials supply chain. With as much as 60% of a building's whole life emissions embodied in its materials, facilitating circularity is key but not the only measure required to drive down a building's impact. Upstream impacts associated with materials extraction and processing must also be addressed as part of eco-design regulations.

We welcome the focus on streamlining and modernising the planning process with specific attention paid to design and sustainability. The National Planning Policy Framework (NPPF) states clearly that the purpose of the planning system is to contribute to the achievement of sustainable development. However, while the NPPF contains strong policies on climate change, critics point out that on-the-ground delivery of this policy has been weak, potentially deprioritised in favour of tackling the housing crisis and the economic fallout from the Covid-19 pandemic.[39]

Beyond waste recovery and recycling considerations, Government has an opportunity to deliver significant sustainability benefits with its wider planning reforms. Link's response to the NPPF and NMDC consultation proposed several amendments to ensure the NPPF delivers the ecologically sound and zero carbon planning and development required to recover nature, mitigate and adapt to climate change and improve human health and wellbeing.[40] In the context of recovering from the Covid-19 pandemic, we also believe it is even more vital to promote the link between the built environment and sustainability and health, as championed by The Building Better Building Beautiful Commission's (BBBBC) 'Living with Beauty' report. [41]

1. **Routemap towards Zero Avoidable Waste**

Publication of the Green Construction Board's "Zero Avoidable Waste" report is a positive step towards minimising the impact of material usage in the sector. However, the consultation does not provide sufficient detail to comment on the effectiveness of such a routemap and the little detail that has been provided lacks ambition. The Government must do more than simply "facilitate" and "promote" action on this issue, given the size of the waste arisings from this sector.

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[39] https://www.theplanner.co.uk/opinion/is-the-planning-function-delivering-sustainable-development
[40] https://www.wcl.org.uk/docs/Link%20response%20to%20NPPF%20NMDC%20consultation.pdf
[41] "Living with Beauty: Promoting health, well-being and sustainable growth
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/861832/Living_with_beauty_BBBBC_report.pdf

2. Design to encourage reuse and use of recycled materials

The overarching principle of encouraging greater reuse and use of recycled materials is neither novel nor challenging - the latter being a principle that has been widely adopted in the Government's approach to reforming the packaging waste system. Anecdotally, the introduction of the Plastic Packaging Tax in April 2022 is already incentivising businesses to develop recycled material streams in partnership with waste management companies, as well as providing much-needed confidence to invest in creating these material streams knowing there will be commercially viable end markets.

However, incentivising reuse is of greater importance given the embedded impacts in materials throughout their supply chains. Although the Government has missed the opportunity to prioritise reuse throughout the packaging waste reforms, there is a clear opportunity to make it a central aspect of the consultation on Extended Producer Responsibility for the C&I sector.

Furthermore, there is an opportunity to ensure the full lifecycle impacts of construction materials are taken into account as part of any EPR scheme, potentially in the form of minimum sustainability standards, akin to Section 1: Materials - Regulation 7 of the Building Materials.**[42]** This is of particular relevance to carbon intensive materials such as concrete and steel - the Government needs to support efforts to decarbonise these supply chains alongside supporting a transition to greater reuse and recycled materials usage.[43]

The Government has a vital role to play in developing a mix of policies which mandate as well as enable a shift to greater reuse and use of recycled materials. Creating a level playing field through mandatory requirements will likely deliver the most meaningful improvements. As a priority, the Government must end the perverse incentive of VAT relief on new build projects and instead, apply the tax relief to construction projects which involve the renovation of existing buildings.

Encouraging renovation has to be a key outcome of these policy proposals - this approach was recently recognised when the prestigious Pritzker Prize was awarded to the French architecture duo, Lachton and Vassal, who abide by the mantra 'Never demolish, never remove – always add, transform and reuse'.[44]

Inevitably, new builds will be required but the Government should place a duty on the construction industry to meet or even exceed sustainability standards on all new projects. An exemplar green building is the WWF's award-winning Living PLanet Centre. Constructed on a brownfield site (already designated for development) between the Basingstoke Canal and the ancient protected woodland of Horsell Common, the Living Planet Centre is a great example of a building which not only meets the functional requirements of its occupants but incorporates green technologies such as solar panels and wind cowls to deliver an efficient ventilation system. Recycled materials have been widely used both for structural and interior purposes. All this contributes to the building's

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/806919/AD_Regulation_7.pdf

[43] https://www.ucl.ac.uk/engineering-exchange/sites/engineering-exchange/files/fact-sheet-embodied-carbon-social-housing.pdf

[44] https://www.theguardian.com/artanddesign/2021/mar/16/lacaton-vassal-unflashy-french-architectures-pritzker-prize

significantly lower carbon footprint versus the industry standard, for which it has received a BREEAM Outstanding rating.[45]

3. Reducing embodied carbon

As mentioned above, there are clear opportunities to decarbonise the construction sector which go beyond end of life waste prevention measures. The focus on decarbonisation must be turned further upstream in materials supply chains. Concrete, the most widely used synthetic material, is responsible for 5% of total global emissions[46] and according to the International Energy Agency, the steel industry must reduce its emissions by half by 2050.[47] The consultation is scant regarding the scale of the opportunity to reduce embodied carbon - we would therefore urge the MHCLG and Defra to establish their roadmap as soon as is practicable.

While the Government needs to focus on industry action to reduce embodied carbon, they must continue to explore initiatives to green the UK's existing housing stock. The recent scrapping of the Green Homes Grant is tantamount to a disaster for decarbonising household energy consumption. Reports about the scheme itself are less than flattering with the Environmental Audit Committee concluding that "The retrofit of the existing housing sector needs much greater focus and is at risk of letting the rest of the economy down on decarbonisation."[48] and calls for "New initiatives for owner occupiers are needed as this is where the largest climate benefits are to be made.".

In summary, there are multiple pathways to achieving a reduction in embodied carbon and we call for the Government to prioritise this sector for action as urgently as possible. Without a co-ordinated plan for achieving net zero by 2050, the Government risks appearing weak, vague and without accountability in the year the UK hosts COP26.

4. Sustainable resource use in new construction

While we welcome the principle of encouraging more sustainable material usage as part of local planning processes, there is insufficient detail to determine how much this will contribute towards the overall aim for this chapter. However, we believe local authorities will require more than "encouragement" to actively prioritise this approach above other challenges and with funding restrictions .

5. Improvements to materials and component information

We are supportive of the proposal to improve information on materials and components used within construction and at a granular individual building level. We note that this is a high level proposal and would welcome the opportunity to engage with the Government as to the level of detail this information provides. As mentioned throughout our response, we believe it is critical that the full lifecycle impacts of materials are captured e.g. including extraction, processing as well

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[45] https://www.civictrustawards.org.uk/winners/living-planet-centre-wwf-uk-headquarters
[46] https://www.theguardian.com/sustainable-business/2016/mar/04/making-concrete-green-reinventing-the-worlds-most-used-synthetic-material
[47] https://www.ft.com/content/46d4727c-761d-43ee-8084-ee46edba491a
[48] https://committees.parliament.uk/publications/5171/documents/52521/default/

as end -of-life fates.

Chapter 6: Textiles

Question 14: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

We are pleased that textile waste is being addressed by the Government, given the high environmental impact of the sector. As the consultation document notes, the fashion industry could be using more than a quarter of the world's carbon budget by 2050. As noted above, the Dasgupta Review found that our "*consumption and production patterns will need to be fundamentally restructured*" and there are few clearer examples of this than the current 'fast fashion' model of cheap and disposable clothes. The true cost of fashion is revealed only when we also consider the international impacts, where production of raw materials and fabrics causes significant damage through processes such as the release of untreated dyes into local water sources and labour abuses are all too common.

These proposals fail to fully tackle the deep-rooted causes of textile waste in the UK, evidenced by the fact that we buy more clothes per person than any other country in Europe.[49] The Government rejected many of the recommendations from the Environmental Audit Committee in 2019 to tackle these problems,[50] suggesting that there is little urgency for action in this area. This is despite the desire for change amongst many in society, with campaigns such as Fashion Revolution calling for fashion to operate in a circular manner.[51]

That said, the intention to develop an EPR scheme for textiles is welcome and could provide meaningful financial incentives and financing for change in the sector.

Addressing the proposals in turn:

A new voluntary agreement for 2021- 2030, Textiles 2030:

While action on clothing durability, recyclability, reuse business models and closed-loop recycling is welcome, we would note that this is a voluntary, rather than mandatory, agreement. As noted in the

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[49] https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/1952/report-summary.html
[50] https://committees.parliament.uk/committee/62/environmental-audit-committee/news/100390/government-rejects-recommendations-to-force-fashion-industry-pay-to-clean-up-its-act/
[51] https://www.fashionrevolution.org/manifesto/

EAC report on fixing fashion "voluntary corporate social responsibility initiatives have failed significantly to improve pay and working conditions or reduce waste".[52] Voluntary initiatives in the industry have frequently been exposed as 'greenwashing' with little environmental benefit.[53] Given the difficulties of achieving more environmentally responsible fashion in such a price competitive market, the report also notes that "Government needs to provide clear economic incentives for retailers to do the right thing".

The fashion industry must also be required to improve clothing design to increase the recyclability of clothing. Items which have mixed fibres are particularly difficult to recycle to a high value and some fibre mixes are especially tricky, notably those that contain spandex or elastane, such as jeans.[54] Principles of the circular economy need to be therefore factored in at the design stage of new items.

Develop a proposal for Extended Producer Responsibility (EPR) for textiles, supported by measures to encourage better design and information, and consult with stakeholders on options by the end of 2022:

We welcome the proposals on EPR for textiles and the proposed measures of a landfill/incineration ban, separate textiles collection requirements, and ecodesign and information requirements. To be effective, an EPR for textiles must cover the full environmental costs of textile waste and effectively support reuse and new business models. It must also be delivered on schedule.

Furthermore, as per our position on EPR reforms for packaging, we believe the full lifecycle impacts must be considered within any scheme. For textiles, this must include the impacts of microfibre leakage into the natural environment, as supported by the APPG for Microplastics.[55]

The Government has previously rejected calls to use the tax system to better incentivise reuse, repair and recycling, and to reduce VAT on repair services,[56] so we hope that EPR will be approached with a different mindset; being delivered in a manner which provides meaningful incentives for behaviour change, including through the use of modulated fees to encourage recyclability.

Encourage industry to set effective standards on resource efficient product design:

We support increased requirements for improved labelling and consumer information, including information about microfibres shedding. Allowing consumers to make more informed choices can help promote those businesses which are acting most sustainably.

Explore the need for and best means of enabling better textile waste collections:

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[52] Ibid
[53] https://www.independent.co.uk/climate-change/news/hm-greenwashing-sustainable-circulose-venetia-falconer-manna-a9312566.html for discussion of the difficulty of assessing brands' sustainability claims see also https://www.voguebusiness.com/sustainability/the-flawed-ways-brands-talk-about-sustainability-coronavirus
[54] https://designforlongevity.com/articles/close-the-loop
[55] https://www.thewi.org.uk/campaigns/key-and-current-campaigns/end-plastic-soup/all-party-parliamentary-group-on-microplastics
[56] https://committees.parliament.uk/committee/62/environmental-audit-committee/news/100390/government-rejects-recommendations-to-force-fashion-industry-pay-to-clean-up-its-act/

An estimated £140m worth of clothing is sent to UK landfill each year[57], showing the failure of the current system to encourage either reuse or recycling of clothing. We would support measures to make textile collections more frequent and comprehensive in scope, funded by EPR for textiles. There is a lack of consistency around the country over textile collections with only some local authorities offering a free home collection service for recycling.[58] As the Government works to improve consistency in household recycling, consideration should be made as to how local authorities can be better incentivised to offer greater textile collections. Work to increase collections must be accompanied with more investment in textile recycling infrastructure.

Identify how best to support investment and innovation in the textiles reprocessing sector:

This is a welcome intention however these proposals lack detail.

The Interdisciplinary Textiles Circularity Centre:

This is a welcome investment, however the circa £5m of funding is a drop in the ocean of this £21 billion industry.[59] As recognised in the EAC report, there are strong economic drivers of our current model of fashion and R&D funding for sustainable approaches will need to be significantly increased if there are to be meaningful shifts in the sector.

Chapter 7: Furniture

Question 15: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

   Please provide details / explain your answer

With 670,000 tonnes of furniture disposed annually by households in the UK, we welcome action in this sector. And, with the figures in the consultation document relating only to household waste, the scale of this problem is even greater once the commercial and industrial sectors are included. Addressing the proposals in turn:

Encourage sharing of best practice:

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[57] https://wrap.org.uk/taking-action/textiles
[58] https://www.threerivers.gov.uk/egcl-page/kerbside-collection-of-textiles
[59] See https://www.britishfashioncouncil.co.uk/news_detail.aspx?ID=228

A number of retailers are delivering positive action on furniture reuse. Ikea, for example, has developed a programme to buy back used furniture items which are then resold in a buy back area or online.[60] In addition, Ikea's flat pack designs can aid disassembly and it is right that others in the sector adopt best practice in sales and product design. However, the proposals in the consultation provide no detail of how the Government will seek to drive best practice. Without further information it is not possible to determine what impact these actions would have on furniture waste reduction.

Explore the benefits of using powers to be acquired through the Environment Bill to set minimum standards:

As noted in previous chapters, we welcome and support the principle of driving changes in product design so products are made to be more durable, repairable and recyclable. However, as noted previously, the proposals outlined here prompt more questions than offer concrete solutions as to how the overarching ambitions will be achieved.

There are a number of standards that must be met in future design requirements for furniture. The Nordic Council has outlined draft product design standards for furniture which the Government should consider[61]. These include:

- **Expected lifespan.** Manufactures should be required to declare the expected lifespan of their products under normal usage conditions. While some companies will conduct tests to determine the maximum durability of their furniture, this data is rarely available to the consumer. Greater product information would permit more informed consumer choices and drive demand for more durable products.
- **Provision of spare parts.** A lack of availability of spare parts hinders the owner's ability to fix a piece of furniture, even for minor problems such as broken doors or hinges. Mandatory availability of spare parts to customers for a set period after the date of purchase would ensure a longer life for pieces of furniture. These parts should also be provided at a cost proportionate to the original piece of furniture. Mandatory standards would move the sector in-line with best-practice already undertaken by some retailers. Ikea, for example, have reported providing 14m spare parts last year, and have pledged to roll-out a system for ordering spare parts for their furniture.[62]
- **Design for disassembly.** This is essential to boost repair and recycling so furniture owners can separate a product into different materials. Disassembly should be made as easy as possible with simple instructions and the need for only basic tools.
- **Packaging.** Furniture is typically heavily packaged to protect products during shipping. This packaging should consist of materials which are readily recycled or part of a reuse system.

Design requirements should also tackle the proliferation of low quality materials for furniture, where cheap plastic, chipboard, and medium-density fibreboard (MDF) have in many places replaced more durable materials such as solid wood and metal.

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[60]https://www.ikea.com/gb/en/customer-service/terms-conditions/ikea-buy-back-terms-and-conditions-pub9e989950
[61] https://norden.diva-portal.org/smash/get/diva2:1221509/FULLTEXT01.pdf
[62]https://www.chargedretail.co.uk/2021/01/25/ikea-to-begin-selling-spare-parts-for-its-furniture-in-latest-sustainability-drive/

Encourage Local Enterprise Partnerships and local authorities to offer support to businesses that adopt circular models:

There is huge potential for local leadership around reuse of furniture and a number of local authorities are already taking positive action, for example through the reuse shops at HWRCs referenced in Chapter 3. In addition, the Furniture Reuse Network (FRN) calculated that its members delivered 120,000 tonnes of reuse in 2015, representing approximately 6% of total furniture arising as waste.[63] Still, there is potential for much more reuse in the sector and greater financial support will be needed to drive change at the pace needed to meet waste and climate goals.

France provides a strong example of how EPR funds could support reuse. The French Government guarantees that 5% of the EPR fees covering reusable waste streams such as furniture, are used for financing reuse projects run by social enterprises.[64] In the UK, as referenced in chapter 3, funds from EPR schemes could be used to support circular economy hubs and we support this principle. Indeed, furniture provides a strong example of how EPR funds could help transform financial incentives, supporting both reuse and more resource efficient design.

There are strong economic reasons to pursue greater reuse. There are currently few jobs in remanufacturing of furniture, with the European furniture sector estimated to employ 3,400 workers for this purpose, less than 0.1% of the sector total. However, research suggests that refurbishment and remanufacture could create 157,000 jobs across the EU. For the UK, it is estimated that there could be a £500m boost to GVA by 2030.[65]

The design of new reuse schemes must recognise the heterogeneity of the furniture sector. For example, take-back systems will require different forms for specialised furniture designed for schools or offices compared to furniture for household kitchens or bathrooms.

Develop proposals for EPR for bulky waste and seek to consult on this by the end of 2025:

For the reasons just outlined, we welcome proposals for EPR for bulky waste and the possibilities of using funds from the scheme to support reuse. Modulated fees would also provide an incentive towards better design while disincentivising cheap and non-durable furniture.

However, the timeline of a consultation by the end of 2025 is woefully slow, falling after the end of the current Parliament. Action on EPR for bulky waste must be brought forward to avoid over half a decade of additional waste being produced under the current arrangements.

Proposals missing from the consultation:

The potential of public sector procurement of furniture is not referenced in the consultation.

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[63] http://eeb.org/wp-admin/admin-ajax.php?juwpfisadmin=false&action=wpfd&task=file.download&wpfd_category_id=80&wpfd_file_id=51266&token=8aeb72fc1c55c94fd4f2ee332ad5112c&preview=1

[64] https://www.recycling-magazine.com/2020/01/30/france-to-create-a-solidarity-re-use-fund/

[65] http://eeb.org/wp-admin/admin-ajax.php?juwpfisadmin=false&action=wpfd&task=file.download&wpfd_category_id=80&wpfd_file_id=51266&token=8aeb72fc1c55c94fd4f2ee332ad5112c&preview=1

Indeed, Government procurement (excluding the wider public sector) represents approximately 10% of the office furniture market in the UK.[66] Mandatory 'green' public procurement would drive demand for products with better environmental performance and the potential for longer lifespans.[67] While the Government's sustainable procurement guidance promotes reuse as the first priority[68], more consideration must be given as to how the Government can better ensure that these principles are adhered to and that repurposing of furniture is always a viable option.

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Overall, we disagree that the proposals in this chapter meet the chapter aim. There is not enough detail nor ambition to reassure us that meaningful action will be taken to reduce waste from the furniture sector.

Chapter 8: Electrical and Electronic Products

Question 16: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

This chapter fails to adequately tackle the UK's internationally poor record on electronic waste, with the UK generating more e-waste than any country in the world except for Norway.[69] Demand for new electrical equipment has been increasing in recent years, with two million tonnes placed on the market each year and WRAP has predicted an additional increase of 19% between 2015 and 2020.[70] Policy must firstly address our outsized levels of electronics consumption, tackling the powerful cultural and economic drivers of ever increasing spending on new consumer goods.

We support the proposals outlined in the Green Alliance Design for a Circular Economy report[71]. Green Alliance have calculated that effective policies in England could halve the amount of waste electrical and electronic equipment (WEEE) entering the household waste stream by 2030. This would require adoption of better design standards coupled with improved information, take back

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[66] http://eeb.org/wp-admin/admin-ajax.php?juwpfisadmin=false&action=wpfd&task=file.download&wpfd_category_id=80&wpfd_file_id=51266&token=8aeb72fc1c55c94fd4f2ee332ad5112c&preview=1

[67] Ibid

[68] https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-furniture

[69] https://green-alliance.org.uk/resources/design_for_a_circular_economy.pdf

[70] https://www.wrap.org.uk/sustainable-electricals/switched-on-to-value

[71] https://green-alliance.org.uk/resources/design_for_a_circular_economy.pdf

centres, specialist return logistics and improved assessment for reuse, repair and remanufacturing[72].

Addressing the consultation proposals in turn:

Review the WEEE Regulations in 2021:

We welcome the commitment to review WEEE regulations recognising that the policies listed here are at an early stage of development. We particularly welcome that the Government may be considering action for online retailers to take back old electrical products from customers, which would close the disparity between online marketplaces and physical stores. We will continue to engage with these policies as the Government develops more detailed proposals over the coming months and years.

Work towards improving systems of collection of WEEE for repair and reuse:

This is a welcome priority however there is far too little detail included in the consultation document. The Environmental Audit Committee have recommended that the Government make kerbside collection of WEEE "mandatory for local authorities, with the cost paid for by producers and those smaller retailers or online marketplaces still exempt from collecting E-waste directly from the public"[73] and we welcome the Government's commitment in its response to "consult on options for delivering this ambition as part of our review of the WEEE Regulations later this year".[74]

Currently, used electricals are primarily collected at household waste recycling centres (HWRCs). However, the UK has the fewest of these per capita in Europe[75] and the means of disposal (electricals generally deposited in skips) can easily damage products. The Government must strive to maintain the value of electronics collected for reprocessing as at present collection methods can damage goods. This helps explain why so many phones, for example, are shredded at generalist recyclers rather than being disassembled, repaired or reused[76].

The Consultation on Consistency in Household and Business Recycling in England specifies that the Secretary of State may specify waste electricals to be collected in accordance with certain conditions following consultation. It explains that the Secretary of State will only consider this if they are satisfied that "the waste stream concerned is suitable for recycling or composting and that this will have an environmental benefit".[77] Given the internationally high rate of e-waste in the UK, we would argue that the evidence base already exists to support the environmental benefits of improved collection of electronics waste.

Use public procurement as appropriate:

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[72] https://committees.parliament.uk/writtenevidence/2622/pdf/
[73] https://committees.parliament.uk/writtenevidence/2622/pdf/
[74] https://committees.parliament.uk/publications/3675/documents/35777/default/
[75] https://green-alliance.org.uk/resources/design_for_a_circular_economy.pdf
[76] https://green-alliance.org.uk/resources/design_for_a_circular_economy.pdf
[77] https://consult.defra.gov.uk/waste-and-recycling/consistency-in-household-and-business-recycling/supporting_documents/Recycling%20Consistency%20Final%20Consultation_May%202021.pdf

We welcome these initiatives to use public procurement to drive positive action.

Work with the Department for Business, Energy & Industrial Strategy (BEIS) on future implementation of minimum ecodesign requirements in Great Britain:

We welcome the attention to ecodesign from BEIS and would urge the Department to adopt the design suggestions of the Green Alliance Design for a Circular Economy report[78]. This means incorporating standards according to criteria for enhanced durability, upgradeability, repairability, component reuse, recycled content and critical raw material content. The UK must continue to stay aligned to the EU ecodesign framework which includes over 30 product categories, with new categories considered for inclusion every 3 years.[79] Government should adopt EU standards as a minimum and go further where appropriate, such as on electric kettles which may not be regulated at the EU level.

Develop proposals to provide consumers and businesses with information on the durability, reparability and recyclability of the products they buy

We welcome the intention to provide greater information to consumers. Government should consider following France's lead on the introduction of a 'repairability index' of certain electronic products.[80] This colour coded index provides consumers with an easily understood score out of 10 for the repairability of the product, calculated based on criteria including: documentation; disassembly, accessibility, tools, fasteners; availability of spare parts; and the price of spare parts.[81]

In addition to the proposals listed, the Government must act to ensure that regulations are enforced. As mentioned elsewhere in this response, enforcement agencies are not adequately resourced. The Government must also consider using fiscal levers to promote repair. Ensuring that VAT on electronic repair services is zero-rated would make repairs more affordable and boost the industry. While this proposal has recently been rejected by the Government due to the expected loss of tax revenue,[82] this should be reconsidered given the positive impact this change would deliver for consumers, jobs, and the environment.

Many of the recommendations in the excellent EAC report on Electronic Waste[83] were not accepted by the Government.[84] This includes their ask for the Government to "set ambitious long-term targets including for the collection, re-use and recycling of E-waste to be undertaken to a very high standard".

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[78] https://green-alliance.org.uk/resources/design_for_a_circular_economy.pdf
[79] https://green-alliance.org.uk/resources/design_for_a_circular_economy.pdf
[80] https://www.indicereparabilite.fr/
[81] www.indicereparabilite.fr/wp-content/uploads/2021/01/210107_Instructions-manual-repairability-index.pdf

[82] https://committees.parliament.uk/publications/4840/documents/48587/default/
[83] https://committees.parliament.uk/publications/3675/documents/35777/default/
[84] www.indicereparabilite.fr/wp-content/uploads/2021/01/210107_Instructions-manual-repairability-index.pdf

This general lack of ambition means that the proposals in this chapter are unlikely to meet the chapter's aims, especially given the ongoing trend towards higher electronics consumption.

Chapter 9: Road Vehicles

Question 17: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

As referenced in the consultation document, the number of cars on UK roads is increasing, from around 25 million in 2000 to around 39 million in 2019. Given this trend, and the additional resource use it entails, it is notable that this chapter's aim does not include a goal to reduce private vehicle ownership levels.

It is welcome that there is a limited reference to new models of car ownership, however more comprehensive proposals are missing which would address the need for a societal shift away from the private car. Indeed, the high prevalence of car travel can be viewed as the result of decades of investment and design decisions in cities, towns and regions which prioritise the car above other modes of travel.[85] The Department for Transport is reported as spending £6bn on buses, walking and cycling against £50bn on roads.[86] These factors lie at the heart of the problem of vehicle waste as well as the 10 - 13 MtCO2e of annual emissions from the manufacture of new cars registered in the UK

Addressing the proposed actions in turn:

In the Resources and Waste Strategy we outlined a number of commitments of relevance to the automotive sector, including development of ecodesign standards, product information and labelling schemes, as well as exploring Extended Producer Responsibility (EPR) for tyres, and reforms to the End-of-life Vehicle Regulations:

We welcome the potential introduction of EPR for tyres, given that this is currently already the case in a majority of EU states. Particles released through the wear of tyres can enter the environment

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[85] https://www.sustrans.org.uk/media/5531/final-reducing-car-use-report.pdf
[86] https://www.bbc.co.uk/news/business-48944561

with consequences for air quality and microplastic pollution in rivers and seas.[87] A study from the International Union for Conservation of Nature and Natural Resources estimated that 28% of microplastics entering the oceans derived from tyre wear with pollution increasing in line with a vehicle's size.[88]

The Republic of Ireland introduced producer responsibility for tyres in 2017, resulting in a system where the producer is charged a fee by the scheme operator when placing a tyre on the market.[89] The design of a UK scheme for tyres could go further than elsewhere by seeking to modulate producer fees based on tyre design. This could disincentivise quick wearing tyres and promote longevity and repairability. Pollution from tyre wear would also fall if policies promoted reduced driving and increased public transport use.

Work across Government, and with industry and academia to consider ecodesign principles for the UK automotive sector:

We welcome the commitment to improved vehicle design, however, as noted throughout this consultation, the proposals here are limited in detail. With the current transition away from internal combustion engine vehicles to electric vehicles (EVs), it is crucial that ecodesign principles are developed and enacted at the earliest stage of this transition.

Encourage recommerce, including greater use of repaired, remanufactured and reclaimed vehicle components:

We welcome these suggestions to promote greater use of repaired, remanufactured and reclaimed components and hope that the Government can deliver them as soon as possible.

Seek to maximise the resource efficiency of electric vehicle batteries through the Faraday Battery Challenge:

We welcome action to support the efficiency of EV batteries. When we talk about reuse and recyclability we mean batteries must be better designed so that they are easy to refurbish (for reuse/ second life) and to recycle at their end of life (so the materials are re-used). Recovery and recycling of materials in batteries should become mandatory everywhere, which is a call supported by industry experts.[90] Action on batteries is essential given that only around 5% of lithium-ion batteries are estimated to be recycled globally and, as many more EVs are scrapped in 10-15 years' time, we will need strong measures in place to deal with this waste.[91]

To support ongoing work being led by other government departments, capture evidence relating to the social and environmental benefits of car-sharing and ridesharing models:

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[87] https://www.ecosurety.com/news/can-we-get-a-grip-on-tyre-epr/
[88] https://www.theguardian.com/environment/2021/mar/26/lockdown-did-not-reduce-air-pollution-from-tyre-wear-in-london
[89] https://www.ecosurety.com/news/can-we-get-a-grip-on-tyre-epr/
[90] https://cewaste.eu/
[91] https://www.bbc.co.uk/news/business-56574779

We welcome the attention given to new models of mobility which have the potential to reduce private car use and ultimately reduce vehicle waste. However, these proposals imply that the main challenge facing new models is a lack of evidence. In reality, there is strong research showing that ride sharing apps reduce the number of vehicles on the road and encourage the use of multi-modal sustainable transport. In addition, car sharing schemes have been shown to reduce car ownership, with each new car in a shared scheme estimated to replace 5-15 cars on the road.[92] It should be noted that car-sharing, ride-sharing and other mobility services are not a replacement for government investment and policy to increase walking, cycling and public transport, which is by far the most effective means of reducing private vehicle use and encouraging modal shift. Government should also reallocate funding away from new road-building projects, which will induce demand for further private vehicle use, towards active travel and public transport.[93]

The pollution caused by tyre wear will also continue unless we move away from our current levels of car use and the associated brake wear, tyre wear and road surface wear; a shift to electric vehicles will not alleviate these sources of pollution. These factors are also estimated to directly contribute to well over half of air particle pollution from road transport.[94]

This consultation should have shown greater recognition of the available evidence on the social and environmental benefits of car-sharing and ridesharing. It should also have tackled the root causes of high levels of vehicle waste, particularly the high levels of private vehicle usage.

Chapter 10: Packaging, Plastics and Single-use Items

Question 18: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

> **Please provide details / explain your answer**

Packaging, plastic and single-use items (to be referred to collectively as Pa,PL,SU items) all have their own and interlinking impacts on the environment, society, health and resources. In combination, their impact is significant - especially with regards to the environment as a

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[92] **https://www.transportenvironment.org/sites/te/files/publications/Does-sharing-cars-really-reduce-car-use-June%202017.pdf**
[93] https://bettertransport.org.uk/roads-nowhere/induced-traffic
[94] **https://www.bbc.co.uk/news/business-48944561**

consequence of linear resource extraction[95], litter[96], treatment[97] and pollution[98].

To better comprehend the scale of this issue, Government data suggests that in 2017 at least 11.5 million tonnes of packaging waste was used, disposed of or recovered in the UK.[99] This is still 3.37 million tonnes more than all the fresh vegetables, fresh fruit and potatoes grown in in the UK that same year.[100] In 2017 the UK's 42 incinerators released a combined total of nearly 11 million tonnes of CO2, around 5 million tonnes of which were from fossil sources such as plastic.[101]

Of the 11.5 million tonnes of packaging waste used and disposed of in 2017, the most predominant packaging materials were paper/board, glass and plastic[102] - glass being the only material that can be endlessly recycled. England, and the UK, cannot recycle its way out of the significant, and increasing[103], amounts of packaging, plastic and single-use items produced, consumed, disposed of (either through recycling, incineration, landfill or export) and littered per annum, especially when it comes to plastic, which is hugely harmful to the environment, has a low recycling rate[104] and can only be recycled a very few number of times.[105]

Of the minimum 11.5 million tonnes of packaging used in the UK in 2017, approximately 8 million tonnes of said packaging was accepted for recycling, recovery and export, as cited within this

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[95] https://www.bpf.co.uk/press/Oil_Consumption and https://www.sciencedaily.com/releases/2019/04/190415144004.htm
[96] https://www.keepbritaintidy.org/faqs/advice/litter-and-law#:~:text=More%20than%20two%20million%20pieces,%C2%A31%20billion%20a%20year. and https://www.cpre.org.uk/wp-content/uploads/2020/12/Litter-in-lockdown-summary-report-December-2020.pdf
[97] Whether it be incineration (https://ukwin.org.uk/climate/) or energy from waste incineration (https://www.theguardian.com/environment/2020/nov/16/increase-in-burning-of-plastic-driving-up-emissions-from-waste-disposal), whilst if recycled there is typically a net GHG emission saving https://www.sciencedirect.com/science/article/pii/S0921344915301245
[98] Plastic waste accumulates rather than decomposes, causing near permanent pollution of the marine, freshwater and terrestrial environment (Source: Geyer R et al, 2017. Production, use and fate of all plastics ever made, Science Advances, 3:7. Available at: http://advances.sciencemag.org/content/3/7/e1700782). Plastic pollution is now deemed a major threat to marine biodiversity, known to negatively impact more than 800 species including birds, marine mammals and turtles (Source: Secretariat of the Convention on Biological Diversity and the Scientific and Technical Advisory Panel—GEF, 2012. Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions, Montreal, Technical Series No. 67, 61 pages).
[99] If there was a 70% recycling rate of disposed packaging waste for those obliged to take part in the current Producer Responsibility Packaging scheme source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918270/UK_Statistics_on_Waste_statistical_notice_March_2020_accessible_FINAL_updated_size_12.pdf
[100] In 2017 2,699 thousand tonnes of fresh vegetables were grown, 750 thousand tonnes of fresh fruit was grown and 4,679 thousand tonnes of potatoes were grown. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950618/AUK-2019-07jan21.pdf
[101] https://ukwin.org.uk/climate/
[102] According to the NPWD this was still the case in 2020 and 2021. https://npwd.environment-agency.gov.uk/Public/PublicSummaryData.aspx
[103] https://www.theguardian.com/environment/2020/oct/30/us-and-uk-citizens-are-worlds-biggest-sources-of-plastic-waste-study and https://www.swiftpak.co.uk/insights/the-challenges-the-packaging-industry-face-in-2021
[104] As mentioned in paragraph 1 page 52 of the consultation document
[105] Recyclability rate/ downgrading of plastic depends on the type of plastic, level of contamination (polymer breakdown can be countered by mixing in virgin plastic), the nature of the product it is recycled into. https://www.foodpackagingforum.org/fpf-2016/wp-content/uploads/2015/11/FPF_Dossier08_Plastic-recycling.pdf and https://www.eunomia.co.uk/reports-tools/final-report-chemical-recycling-state-of-play/ being references to the finite nature of plastic recyclabilty

consultation document, thus making it the second largest UK waste stream within the sectors covered within the WPP for England. Combined with England being the largest waste producing nation in the UK makes action on this particular waste stream in this plan critical. For instance, when considering plastic more generally, the latest publicly available Government data for all plastic wastes produced in the UK is from 2016 and amounts to a total of 1,528,527 tonnes[106]. England alone accounted for 1,187,279 tonnes of this waste. Furthermore, without a significant turnaround in industry trends, Eunomia estimates that UK plastic packaging waste alone could increase 22% between 2018 and 2030, growing to nearly 4,500,000 tonnes.[107] Please note, this does not account for any shifts occurring as a consequence of the Covid-19 pandemic.

As Wildlife and Countryside Link has communicated on several occasions, the scale and rapidity of our plastic, packaging and single-use item usage and disposal is a huge and urgent environmental concern. To achieve a circular economy, England, and the UK, should have targets to eliminate non-essential, unnecessary Pa,PL,SU items and fundamentally move away from current throw-away culture - not only conserving material resources used for these products but the energy and resources required to continually and linearly source, produce, manufacture, transport and treat these products.

Acknowledging legislation already in place and currently being developed, if ambitious objectives and aims on this waste stream is not a Government priority, this will impact the extent and rate industry will adapt voluntarily. Industry intent, awareness and voluntary actions, no matter how crucial for the environment and human health, will have difficulty competing with binding business model requirements (increase in sales, immediate profitability) in the absence of mandated Government measures. Especially when their true cost and impact are not fully internalised by those putting them on the market and profiting off them. The Government needs to provide a level-playing field and legislative leadership on the issue to create a reliable framework within which industry can operate. We, therefore, strongly urge the Government to refocus its aim to catalyse a wholesale transition away from single-use Pa,PL,SU items and towards reusable solutions, ensuring that all Pa,PL,SU items placed on the market are part of a closed-loop circular economy whereby the full lifecycle costs are internalised by producers. Consequently, clear and binding targets on reduction, reuse and refill are the measures that will reduce litter, plastic pollution, enable material resource conservation and facilitate the timely achievement of aims and objectives already put in place by the Government (including those in Table X below). Ensuring environmentally sound management and applying the principles of proximity, self-sufficiency and least transboundary movement of waste are also key.[108]

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[106] https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management cited in https://commonslibrary.parliament.uk/research-briefings/cbp-8515/

[107] Eunomia report for WWF, 2018. A Plastic Future: Plastic Consumption and Waste Management in the UK. Available online here: https://www.wwf.org.uk/sites/default/files/2018-03/WWF_Plastics_Consumption_Report_Final.pdf

[108] https://www.basel.int/Portals/4/Basel%20Convention/docs/text/BaselConventionText-e.pdf and http://webcache.googleusercontent.com/search?q=cache:wvYCzyt_zOgJ:www.basel.int/Portals/4/download.aspx%3Fd%3D UNEP-CHW-OEWG-7-OEWG-VII-1.English.pdf+&cd=4&hl=en&ct=clnk&gl=uk

England's 2018 Waste and Resources Strategy[109] has several following aims with regards to packaging, plastic and single-use items, some include:

- Eliminate avoidable plastic waste over the lifetime of the 25 Year Environment Plan
- Work towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025
- Removal of single-use plastics from the central government estate (2020)
- Subject to consultation: 75% recycling rate for packaging* (2030)

Therefore, with all this in mind, we strongly encourage the Government to adopt the following aim when it comes to preventing Packaging, Plastics and Single-use Items waste:

"Our aim: To ensure a significant reduction in single-use (including plastic) packaging, products and items usage, waste and pollution, particularly if unnecessary and non-essential; an elimination of hard to recycle packaging, plastic products and items; and ensure long-term repetitive usage of safe and durable reusable and refillable packaging, products and items as the status quo[110]. And for this to take place within a circular closed-loop ensuring environmentally sound management and self-sufficiency with regards to waste treatment so as the environment, society and resource conservation are not negatively impacted."

Response to Paragraph 1 to 8 in Chapter 10:

1. Reusable and refillable packaging is also able to reduce product damage, increase shelf life, reduce food waste and provide product information[111]. We welcome the Government's decision to remove targets for recovery of packaging waste from 2021, and there being no recovery obligation for 2021 and 2022, there only being targets for recycling[112]. Waste to energy as a recovery and recycling treatment option is not viable[113].

2. We are encouraged by the Government's view that the current EPR system should increase reuse and reduce unnecessary packaging. EPR should also be designed to, in time, eliminate the majority of packaging having waste to energy, landfill and incineration as an end of life treatment outcome. It is important to note, with regards to plastic, that lightweighting of packaging can result in packaging becoming less

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[109] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf
[110] With limited exceptions for essential packaging, products and items (like those of a medical nature) that cannot be reused or refillable.
[111] https://www.reloopplatform.org/ and https://www.beunpackaged.com/ being two examples
[112] https://www.gov.uk/guidance/packaging-waste-apply-to-be-an-accredited-reprocessor-or-exporter#changes-to-targets-from-1-january-2021
[113] https://www.wcl.org.uk/docs/Consultation%20Response%20-%2001.03.2021%20-%20UK%20Plan%20for%20Waste%20Shipments%20.pdf

recyclable[114] and could become overall more energy intensive to recycle[115], and both impacts should be taken into account when adopting plastic packaging lightweighting as a solution to this issue. Furthermore, some of the most polluting and harmful plastics are lightweight, such as microplastics, plastic films or polystyrene, so plastic lightweighting should not be seen as a solution. In addition to the PRN system shortcomings outlined by Government within this consultation document, we would also like to flag that the current market-based pricing mechanism is ultimately flawed as it assumes 100% recycling rate of ePERNs, skewing prices so that it is preferential to treat waste via export[116], exporting also opening up the opportunity to difficult to monitor illegal activity and fraud[117]. National Packaging Waste Database data currently shows that total plastic packaging waste accepted for recycling and recovery, domestically or for export, increased between 2019-20. This is also coupled with an increase in recycling rate objectives set by the Government (there was an increase of two per cent and a recycling target of 57 per cent for 2020). However, the BPF stated that UK recycling centres were running at lower capacity being faced with less overall plastic consumption as a consequence of lockdowns and cheaper virgin plastic prices throughout 2020, but plastic waste exports to countries with high mismanagement rates were still higher than plastic packaging waste treated domestically.[118]

3. Innovative industry action, like that undertaken through the UK Plastics Pact, is encouraging, with industry voluntarily committing to targets more ambitious than that outlined by the Government - it demonstrates the scale of the issue at hand. Despite industry willingness and success in certain areas, including removing and in the process of removing problematic plastics, overall performance is lacking. For instance there has been a 1.2% increasing in plastic packaging put on the market by the 10 major UK supermarkets between 2017 and 2019.[119]

4. Comments covered above in paragraph 3.

5. Comments covered above in paragraph 3.

6. Wildlife and Countryside Link's view on the Government plastic packaging tax can be found here[120]. The EU has announced a new plastic packaging tax, which came into effect from January 2021. This tax, levied in the form of EU Member State contributions, is set at €800 (around £685) per tonne for non-recycled plastic packaging, dwarfing the £200 per tonne set for the current UK Plastic Packaging Tax proposals. If the UK is serious about being a world leader on the environment, then

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[114] Lightweighting can encourage a shift into plastics like films and laminates which are non-recyclable and therefore have no role to play in a circular economy.

[115] https://packagingeurope.com/doing-more-with-less-the-future-of-lightweight-packaging/

[116] It is assumed that recycling output for waste for recovery exported abroad is at 100%, (Source: Lets Recycle, July 2019. Levelling the playing field in plastics recycling. Available at: https://www.letsrecycle.com/news/latest-news/levelling-the-playing-field-in-plastics-recycling/) effectively incentivising low-quality exports. Even if a UK facility's generated recovery rate was 90% (which is considered very good), there is still a 10% financial disadvantage compared to facilities where waste is exported for recovery, where rates of recovery are all assumed to be 100%.

[117] https://www.endsreport.com/article/1687783/why-packaging-fraudsters-importing-plastic-waste-netherlands

[118] https://www.plasteurope.com/news/RECYCLING_UK_t246715/

[119] https://checkingoutonplastics.org/

[120] Plastic Packaging Tax, May 2019 - https://www.wcl.org.uk/docs/ELUK%20Plastic%20packaging%20tax%20consultation%20response.pdf, Finance Bill 2021: Plastic Packaging Tax Link policy briefing, April 2021 - https://www.wcl.org.uk/docs/assets/uploads/Plastic_Packaging_Tax_Link_policy_briefing.pdf

the Government should review the proposed levy and increase it to match the EU or more. This is all the more important given recent low oil prices which risk companies absorbing the cost of the tax due to cheaper virgin polymer costs. A higher levy or placing the tax on virgin plastic would reduce this risk.

7. With regards to littering, and current littering levels, a composition analysis survey of litter by Keep Britain Tidy for Defra in 2019 showed that 75% of items by volume were drinks containers. This is why a UK-harmonised all-in Deposit Recovery Scheme for drink containers is required. Wildlife and Countryside Link's position can be found here[121]. A DRS for all drinks containers will shift behaviour change quickly as it is an easy process to which the public can adapt, and the Covid-19 pandemic cannot be a reason for its delay - both Germany and the Netherlands expanded DRS throughout 2020.

8. We agree with the measures outlined within para. 8 page 54 of the consultation document that outline what businesses could undertake to reduce waste and litter. We do, however, believe that businesses "should" rather than "could" undertake these measures, and that such should be supported by Government in the form of mandated and binding targets.

Response to What will the Government do

Taking into account our comments, position and suggested aim outlined above, we have the following comments for the actions outlined for this waste stream in the WPP for England:

1. The changes to the Single Use Carrier Bags Charges are a step in the right direction, but the Government must do much more to incentivise reuse and reduce avoidable waste. As a first step, Ministers should:
   1. Expand the carrier bag charge to cover paper bags, bringing England into line with the devolved administrations
   2. The charge should include lightweight fruit and vegetable bags which are currently a major source of plastic waste
   3. Prevent the continued rise in bag for life sales by raising their cost to a level which effectively disincentivises purchases; at least 70p[122]
   4. Follow the lead of numerous businesses who have already removed single use plastic bags from sale, by considering a ban on the sale of single use plastic carrier bags.
   5. Ensure mandatory reporting of all carrier bags

   Wildlife and Countryside Link's position on the The Single Use Carrier Bags Charges (England) (Amendment) Order 2021 can be found here[123]. Although charges on other single-

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[121] https://www.wcl.org.uk/docs/Deposit%20Return%20Scheme_EAC%20Inquiry%20-%20Wildlife%20and%20Countryside%20Link%20response.pdf

[122] The Irish charge was designed to be six times higher than the price consumers reported that they were willing to pay. Polling found that 58% of people were willing to pay 20p for a supermarket carrier bag. Out of that 58%, 34% would pay as much as 50p and 6% even said £117. Source: Business Waste survey, 2017 reported in: https://www.edie.net/news/5/Plastic-bag-charge-UK-sustainabilitystatisticsfrom-Defra-2017/

[123] https://www.wcl.org.uk/docs/assets/uploads/Draft_Single_Use_Carrier_Bags_Charges_Link_briefing.pdf and https://www.theguardian.com/environment/2021/apr/18/supermarket-bags-for-life-must-cost-more-to-cut-plastic-use-urge-campaigners?CMP=Share_iOSApp_Other

use plastic items can encourage a reduction in their use, a ban on unnecessary and not essential single-use plastic items would actually result in the levels of plastic reduction required. In 2019, in UK supermarkets alone, the number of individual sales units comprised of single-use plastics was 56.5 billion, nearly 9 times the number of people alive today[124].

2. Wildlife and Countryside Link's position on restrictions on the supply of single-use plastic items can be found here[125]. We strongly encourage the Government to build on current single-use plastic restrictions (like those in place for plastic straws, cotton buds, and drink stirrers). However, acknowledging that material substitution with regards to reducing single-use plastic products and items is an issue that needs to be countered, increasing reuse and refill systems needs to be a central objective. With all this in mind, at a minimum, we urge England, and the UK, to match current European Union objectives[126] and consult on banning single-use plastic plates, cutlery, balloon sticks, oxo-degradable plastics, expanded polystyrene food containers, beverage containers and beverage cups by 2022. We would also highlight our priority amendment ask for the Resource and Waste chapter of the Environment Bill - to extend the powers to charge for single-use plastic items to cover ALL single-use materials - specifically aimed at avoiding the unintended consequences of switching to alternatives to plastics and shifting environmental and social burdens to other material supply chains. Overall, we would like to see the Environment Bill strive towards a reduction in consumption of all materials, alongside driving down plastic consumption and reducing pollution from mismanaged waste.

3. Wildlife and Countryside Link will be submitting a separate consultation response on EPR for packaging. Link's latest published position on the subject can be found here[127]. To briefly touch upon the subject here, the new Extended Producer Responsibility (EPR) requirements should ensure a design that increases reuse and reduction of packaging as well as recyclability, in line with the waste hierarchy and this should also be done through the eco-modulation of fees.

4. We welcome the current review of the Packaging (Essential Requirements) Regulations 2015.

5. We strongly support Government financial incentives and support, and believe that such will facilitate industry action and innovation. Funds specifically focused on facilitating reusable refillable safe and durable products and packaging at an economy of scale so usage can be nation-wide (like systems created by unpackaged and reloop with regards to grocery packaging) as well as eco-design[128] would be hugely impactful. We also suggest that research into all types of plastic packaging is accounted for within these funds (i.e. consumer/ retail packaging and non-consumer packaging (agriculture, construction & demolition, commercial & industrial (retail back of store, hospitality, manufacturing).

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[124] https://www.greenpeace.org.uk/wp-content/uploads/2020/08/Greenpeace_Unpacked_Report.pdf

[125] https://www.wcl.org.uk/docs/Link%20response%20to%20Defra%20plastic%20straws,%20cotton%20buds%20and%20stirrers%20consultation.pdf

[126] https://eur-lex.europa.eu/eli/dir/2019/904/oj and https://rethinkplasticalliance.eu/wp-content/uploads/2019/05/ZWE_Unfolding-the-SUP-directive.pdf

[127] https://www.wcl.org.uk/docs/Environment%20Links%20UK%20response%20to%20Extended%20Producer%20Responsibility%20consultation.pdf

[128] For instance, the World Packaging Organisation and World Design Organization have recently announced joint project to tackle sustainable packaging - https://wdo.org/world-packaging-organisation-and-world-design-organization-announce-joint-project-to-tackle-sustainable-packaging/

6. Additional approaches that are necessary in reducing packaging, plastic and single-use item waste, and therefore should be considered in this plan, are:
    1. Total plastic, single-use and packaging (of all materials[129]) reduction targets[130] - recycling only goes so far. We would welcome further targets set in secondary legislation - the Environment Bill target-setting process is a key opportunity for plastic pollution reduction targets to be set.
    2. Ensuring environmentally sound management (apply precaution to chemical recycling as a solution, for instance, whilst focusing on eco-design so there are no problematic plastics or other materials to treat in the first instance)
    3. Applying the principles of proximity, self-sufficiency and least transboundary movement of waste through a plastic waste export ban. Wildlife and Countryside Links position on this can be found here[131].
    4. Mandatory Government annual reporting of sourcing, production, usage, transport and waste of all packaging, plastic and single-use items, which is then made available to stakeholders
    5. That packaging and single-use items be reviewed in a holistic manner so as not to encourage material substitution
    6. Apply the precautionary principle when it comes to compostable, biodegradable and bio-plastics. Wildlife and Countryside Links position on this can be found here[132].
    7. That toxicity and chemical use within packaging and products (including plastic) and their cumulative impact is looked at more closely[133].
    8. As mentioned previously, Wildlife and Countryside Link encourages all the UK Governments and Government departments must work together: There is inconsistency across UK Governments and Government departments that is proving extremely unhelpful and could risk the effectiveness of all proposed schemes[134].

Additional related resources and positions of interest:

- Wildlife and Countryside Link: Putting an end to plastic pollution in the UK (March 2019) Source: https://www.wcl.org.uk/docs/Link%20plastics%20position%20paper%20FINAL.pdf
- https://www.thetimes.co.uk/article/supermarkets-france-forced-ditch-plastic-macron-bill-j95jw76gz

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[129] Material substitution is an issue, more information here:
https://www.wcl.org.uk/docs/Charging%20for%20all%20single%20use%20items%20-%20Link%20Waste%20&%20Resources%20Policy%20briefing.pdf
[130] https://eia-international.org/report/checking-out-plastic-policy/
[131] https://www.wcl.org.uk/docs/Consultation%20Response%20-%2001.03.2021%20-%20UK%20Plan%20for%20Waste%20Shipments%20.pdf
[132]
https://www.wcl.org.uk/docs/Link%20response%20to%20BSI%20proposed%20PAS%209017%20standard%20FINAL.pdf
and https://www.wcl.org.uk/docs/Wildlife%20&%20Countryside%20Link%20response%20to%20standards%20for%20bio-based,%20compostable%20plastics.pdf
[133]
https://www.wcl.org.uk/docs/Wildlife%20and%20Countryside%20Link%20submission%20to%20Environmental%20Audit%20Committee%20Toxic%20Chemicals.pdf
[134] https://www.wcl.org.uk/docs/ELUK%20Plastic%20packaging%20tax%20consultation%20response.pdf

Chapter 11: Food

Question 19: Do you agree or disagree that the measures described are likely to achieve the overall aim set out at the beginning of this chapter?

       a. Strongly agree
       b. Agree
       c. Neither agree nor disagree
       d. Disagree
       e. Strongly disagree
       f. Not answered

       Please provide details / explain your answer

While the proposals lack ambition overall, we are encouraged by the Government's acknowledgement of the significance of the adverse impacts of food waste, in addition to some of the key policy commitments proposed - particularly that of mandatory annual reporting.

Food waste targets with appropriate baseline

We strongly encourage the Government to continue to work towards implementing a binding food waste reduction target, as mentioned within the 2018 Resources and Waste Strategy for England. Namely to "*consult on legal powers to introduce food waste targets and surplus food redistribution obligations*".[135] Norway already has binding reduction targets in place.[136] This, in addition to mandating separate food waste collections from all households and businesses[137]. Progress under Courtauld 2025 and the Food Waste Reduction Roadmap has been inadequate and slow. Food businesses have collectively achieved measurable food waste reductions of just 0.23 million tonnes between 2011-18 (less than a 7% decrease) – compared to a total of between 3.78 and 6.38 million tonnes of food waste occurring in the primary production, manufacturing, retail and HaFS sectors. Voluntary ambitions for 2030 are for further reductions of only 0.54 million tonnes by 2030. This is unacceptable.

European Member States are currently encouraged to achieve a food waste reduction target of 30% by 2025 and 50% by 2030[138]. The European Commission, in tandem with its Farm to Fork Strategy, will propose legally binding targets to reduce food waste across the EU by the end of 2023, in addition to a revision of EU rules on date marking by the end of 2022[139]. Furthermore, the Commission has provided Recommendations for Action in Food Waste Prevention, somewhat similar to the WRAP Food Waste Reduction Roadmap[140], providing guidance for primary

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[135] Page 11 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf

[136] https://www.regjeringen.no/en/aktuelt/agreement-to-reduce-food-waste/id2558931/

[137] https://green-alliance.org.uk/resources/A_new_direction_for_UK_resource_strategy.pdf

[138] https://www.eurofoodbank.org/en/food-waste

[139] https://ec.europa.eu/food/safety/food_waste/eu_actions_en

[140] https://wrap.org.uk/taking-action/food-drink/initiatives/food-waste-reduction-roadmap

production, manufacturing, retail, hospitality/food, consumers and food donation.[141]

Courtauld 2025 and the Food Waste Reduction Roadmap currently only plan to reduce retail, manufacturing and catering food waste from 2.88 million tonnes in 2018 to 2.34 million tonnes by 2030[142] – 15 years for a 19% decrease, about 1.5% per year overall. There are currently no concrete national targets for the reduction of primary production food waste, due to a lack of data. Thus, overall the rate of food waste reduction planned by businesses may be as low as 0.75% per year.

Rather than admit that the current pace of change under voluntary agreements is insufficient to meet SDG 12.3, businesses have simply moved the goal posts by adopting a new methodology for measuring reductions.

Courtauld 2025 was originally presented as achieving a 20% reduction in UK food waste by 2025, when launched in 2016.[143] However, under WRAP's new methodology, Courtauld 2025 achieves a 40% reduction in food waste[144], despite there being no changes to the tonnage of food waste the agreement aims to reduce by 2025. The new methodology of calculating percentage reductions cumulatively waters down ambition using the following methods:

- Uses a baseline from 2007 onwards, rather than 2015 onwards, meaning any food waste reduction between 2007-15 already counts towards the 50% reduction;
- Measures food waste per capita, and uses a 2007 baseline for the UK population – meaning that the increase in population between 2007-15 makes the target easier to achieve;
- Only targets a 50% reduction in edible food waste – rather than a 50% reduction in inedible and edible food waste (which would in practice require a more than 50% decrease in edible food waste).
- Excludes primary production food waste from the total figures, removing a substantial portion of food wasted by UK businesses from the targets.

Under this new methodology, the UK has achieved 27% reductions in food waste per capita between 2007 and 2018 (rather than 15%) and is thus on track to achieving 50% reduction by 2030. Using a methodology which effectively doubles the UK's food waste reductions is unacceptable. We therefore recommend that the UK aims to achieve a 50% reduction in all per capita food waste (edible and inedible) from farm to fork by 2030, against 2015 baselines – and achieves this through greater regulation.

Mandatory reporting

We strongly recommend that mandatory reporting be introduced by October-December 2021, giving businesses 3-6 months notice to develop measurement systems ready to begin measurement in April 2022, and report the data for the 2022/23 financial year by June 2023. Businesses who already have food waste data available should be required to publish it publicly immediately, by January 2022 at the latest. In 2020 there are still only 60 businesses in the UK who have publicly reported their food waste data (nearly all Tesco suppliers), with most signatories of

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[141] https://ec.europa.eu/food/sites/food/files/safety/docs/fs_eu-actions_action_platform_key-rcmnd_en.pdf
[142] https://wrap.org.uk/sites/files/wrap/Food-Waste-Reduction-Roadmap-Progress-Report-2020_0.pdf
[143] https://wrap.org.uk/content/courtauld-commitment-2025-transform-uk-food-and-drink
[144] https://wrap.org.uk/sites/files/wrap/Food_%20surplus_and_waste_in_the_UK_key_facts_Jan_2020.pdf

the Food Waste Reduction Roadmap still reporting confidentially to WRAP.

We also strongly recommend that this mandatory food waste reporting consultation should include within its proposals extending mandatory food waste measurement and reporting to the primary production sector. WRAP's estimates suggest that between 0.9 and 3.5 million tonnes of food waste occur on UK farms, compared with 2.9 million tonnes in the manufacturing, hospitality and food services and retail sectors combined.

Producer obligations

We welcome that the government is seeking powers in the Environment Bill "to apply producer responsibility obligations to food waste prevention and redistribution of food surplus [which] could be used in future, subject to consultation". These producer responsibility obligations should be focused on prevention of food waste, not voluntary food redistribution (see section below 'Prioritise increased funding for food waste prevention and strengthened financial social safety nets over food redistribution').

We strongly object to the fact that "this will only be considered if voluntary measures combined with annual reporting are sufficient to maintain progress towards SDG 12.3". Waiting until mandatory food waste reporting is introduced, and then waiting a further few years to assess progress, delays meaningful regulation on food waste until 2026 or even later.

Consumer campaigns

We recommend that the government broaden its scope to recognise that consumer decisions occur within an environment which is significantly shaped by retailers and other businesses – this could be partially achieved by producer responsibility obligations mentioned above. Recognition of the responsibility that supermarkets and other actors play in generating household food waste is essential – supermarket policies can have a big effect, such as the variety of portion sizes provided, best before dates and information on the best way to tell when food is still good to eat, marketing promotions which incentivise impulse buying, and whether resealable packaging is provided. For instance, if a supermarket doesn't offer loose apples, a consumer may have to buy a pack of six when they only wanted two, and end up wasting four.

Food donations

Voluntary surplus food redistribution is not a credible long-term solution to either food waste or food poverty. We therefore recommend that the government prioritise funding to design food waste out of the supply chain in the first place, in accordance with the government's Food and drink waste hierarchy for dealing with surplus and waste, alongside strengthening social safety nets to ensure nobody in the UK needs to rely on food aid and charities to survive.

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Additionally, Government can draw inspiration from stronger national measures already introduced

and successfully practiced, like France which has legislated a hierarchy of food waste prevention, recovery and recycling for supermarket retailers[145] and South Korea, a country previously with very high consumer food waste levels, implementing a food waste recycling levy using smart bins and a pay-as-you-go system in 2013.[146]

We also believe the remit of the Groceries Code Adjudicator (GCA) should be extended to protect indirect suppliers, such as farmers, against unfair trading practices like last-minute order cancellations which lead to avoidable food waste in the supply chain. In addition, the GCA should be strengthened and given sufficient funding to penalise such practices. The former Groceries Code Adjudicator, Christine Tacon, noted the importance of unfair trading practices in causing food waste: "One supplier's comments really stood out. It was that if the retailers only knew just how much waste their forecasting was generating, they would surely do something about it".[147] A 2018 report by Feedback was consistent with the GCA's findings, showing evidence of last minute order cancellations, last-minute changes in cosmetic standards, and incentives to overproduce.[148]

Whilst Anaerobic Digestion (AD) is a good waste management option for food waste, it is significantly sub-optimal in terms of greenhouse gas emissions savings compared with food waste prevention and using food waste as animal feed. A recent life cycle assessment found that preventing food waste results in direct emissions savings around 9 times higher than sending it to AD – and that if the land used to grow this food is instead afforested, this results in emissions mitigation levels almost 40 times higher than sending the same volume of food waste to AD, per tonne food waste.[149] Therefore, a minimum 'floor' price should be introduced on the fees charged for food waste collection from businesses by anaerobic digestion and composting plants, which could be raised over time. This would create a reliable income stream for AD plants, reducing their reliance on subsidies, and could be used as a policy tool to incentivise food waste prevention.

We also wish to highlight, and think it needs to be acknowledged within this programme, that food waste does not only create a substantial GHG emissions issue - but water, land, soil quality, deforestation, pollution and wildlife issues also[150]. And that it intersects with other important subjects including our consumption patterns with regards to produce seasonality, labour rights and poor working conditions in addition to our dependence on agriplastics.

Fundamentally, food waste is a global environmental and socio-economic tragedy. The FAO estimates that one third of all food produced for human consumption is wasted annually (a total of 1.6 billion tonnes)[151], significantly more than what would be required to feed the 820 million[152]

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[145] https://www.theguardian.com/world/2016/feb/04/french-law-forbids-food-waste-by-supermarkets and https://ec.europa.eu/food/sites/food/files/safety/docs/fw_eu-platform_20170331_pres-10.pdf

[146] https://www.weforum.org/agenda/2019/04/south-korea-recycling-food-waste/

[147] https://www.thegrocer.co.uk/food-waste/forecast-and-promo-failures-driving-waste-warns-tacon/560504.article

[148] https://feedbackglobal.org/wp-content/uploads/2018/08/Farm_waste_report_.pdf

[149] Styles et al, 2020 - https://feedbackglobal.org/wp-content/uploads/2020/08/Styles-et-al-2020-Identifying-the-Sustainable-Niche-for-Anaerobic-Digestion-in-a-Low-Carbon-Future.pdf

[150] https://ec.europa.eu/food/sites/food/files/safety/docs/fw_lib_council_food-losses-food-waste_2016.pdf and https://en.reset.org/knowledge/global-food-waste-and-its-environmental-impact-09122018

[151] http://www.fao.org/news/story/en/item/196402/icode/

[152] http://www.fao.org/food-loss-and-food-waste/flw-data)

hungry people in the world[153]. The UK benefits substantially from having a global food supply chain, importing 45% of the food it consumes[154]. Therefore the Government's waste prevention programme focus with regards to food waste must not only be UK-centric, and should accommodate international frameworks trying to solve this global problem - like the G20 Action Plan on Food Security/Sustainable Food Systems.

Chapter 12: Monitoring and Evaluation

Question 20: Do you agree or disagree with the described approach to monitoring and evaluation of this Waste Prevention Programme?

> **a. Strongly agree**
> **b. Agree**
> **c. Neither agree nor disagree**
> **d. Disagree**
> **e. Strongly disagree**
> **f. Not answered**

Please provide details/explain your answer

Monitoring and evaluation data for all sectors, all waste produced and manner of treatment should be mandatory, standardised, traceable and publicly available. Enforcement agencies must be adequately funded and resourced to undertake their duties, without this, all measures proposed in this consultation will be meaningless.

In relation to figure 5 in the consultation, we believe there is some merit in capturing *total preventable waste arisings* as part of waste production monitoring to understand how well waste prevention measures are working. We would also call for increased granular analysis of the UK's materials footprint, specifically to understand where our material sourcing activity has disproportionate impacts. This is demonstrated for the packaging sector in the recent WWF study, *The UK's Packaging Materials Footprint*, where detailed analysis has shown, for example, that while we only source a relatively small volume of material from Jamaica, it has a disproportionately high impact on ecosystems.[155] This global footprint perspective also applies to carbon emissions - in 2016, 54% of the UK's carbon footprint was domestically sourced but the remaining 46% comes from emissions released overseas to satisfy UK consumption.[156]

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[153] http://www.fao.org/platform-food-loss-waste/en/
[154] https://www.gov.uk/government/statistical-data-sets/agriculture-in-the-united-kingdom
[155] The UK's Packaging Materials Footprint Report - WWF and Eunomia - May 2021
[156] Carbon Footprint: Exploring the UK's contribution to climate change https://www.wwf.org.uk/sites/default/files/2020-04/FINAL-WWF-UK_Carbon_Footprint_Analysis_Report_March_2020%20%28003%29.pdf