House of Commons

Environment, Food and Rural Affairs Committee

The price of plastic: ending the toll of plastic waste

Third Report of Session 2022–23

HC 22

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The Environment, Food and Rural Affairs Committee

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Summary

Plastic waste is one of the biggest global environmental challenges. The world produces around 380 million tonnes of plastic every year. Due to its durable nature, plastic waste can be difficult to dispose of sustainably, with large quantities being incinerated or sent to landfill where it leaks into the environment and breaks down into micro-plastics. The micro-plastics have been found the air, soil, oceans, our bodies and the bodies of animals and there are serious concerns about the impacts on animal and human health.

Currently the UK sends over 60% of its plastics abroad, exporting the problem of plastic waste to countries that often do not have the ability to dispose of this waste sustainably. In less developed countries, this has led to a range of economic, social and health problems including land and water degradation, air pollution and food chain contamination. We are therefore recommending that the Government ban the export of plastic waste by the end of 2027. To make this ban achievable the UK needs to significantly reduce the amount of plastic waste it produces, move away from our "use and dispose" linear economy to a more circular economy, and increase domestic capacity so we can reprocess more of our plastic waste in the UK. To achieve this, we are calling on the Government to:

- Ensure that their targets are ambitious, effective and aligned to the waste hierarchy by prioritising efforts to reduce the volume of waste and increase the amount of plastic that is reused rather than simply recycled.
- Accelerate the roll-out of Extended Producer Responsibility (EPR) for packaging. EPR will see producers bearing a greater proportion of the cost of disposing the material they put on the market, which should incentivise them to reduce the amount of packaging they produce and use more easily recyclable materials.
- Extend EPR to all businesses putting 1 tonne of packaging on the market per year by 2030.
- By March 2024, set out how EPR will encourage more businesses to adopt reuse and refill models, including generic and universal packaging, to support the move to a more circular economy.
- Create a taskforce to explore other ways to make reuse and refill models mainstream, including charges on single-use products, mandatory reporting on companies' plastic footprints, and how to raise public awareness and uptake of reuse schemes.
- Confirm its support for the plastic packaging tax. To avoid paying this tax, producers must ensure that 30% of the content of plastic packaging comes from recycled sources. This should incentivise producers to reduce how much plastic they use while increasing demand for recycled plastic, hopefully driving investment in domestic recycling capacity. We also believe the Government should tailor the 30% recycled content to reflect the need of different sectors and commit to increasing the recycled content requirement over time.

- Work with industry to unlock up to £1 billion of private investment in domestic plastic reprocessing infrastructure. Government should use its infrastructure roadmap, due later this year, to identify key areas of government and private investment. It should also explore how measures such as the rationalisation of the plastics market, the development of more enhanced digital sorting systems and the introduction of price-stabilising mechanisms for plastic recyclate could be used to unlock further investment.
- Reinvest any income raised from applied Extended Producer Responsibility fees and the Plastic Packaging Tax into recycling infrastructure and promising areas of future research. This should support the compostable plastics and chemical recycling industries, which currently appear to offer the best means of managing necessary, but difficult to recycle plastics, such as plastic films.

1 Introduction

The challenge

1. Plastic is a versatile, lightweight and durable material that plays a convenient role in nearly every aspect of society. It helps us transport and protect products, deliver substances hygienically, preserve our food for longer, build lightweight machines and much more. A growing reliance on plastics has led to a nearly 200-fold increase in global plastic production since the 1950s: the world now produces an estimated 380 million tonnes of plastic every year and plastic manufacture is predicted to continue growing.[1]

2. Plastic is often designed for single use as part of a linear economy. This leads to a staggering amount of plastic waste: according to government, the UK generated an estimated 1.86 million tonnes of overall plastic waste in 2018,[2] although official statistics on waste are contested and may be higher:[3] government figures for 2021 suggest that the UK produced over 2.5 million tonnes of plastic packaging waste alone.[4] The durability of plastic means that sustainable disposal of plastic waste is difficult: it is often incinerated, resulting in carbon emissions or it is sent to landfill (even if recycled a few times first). Both landfill and littering allow plastic waste to leak into the wider environment, where it persists, breaking down into micro- and nano- plastics. These tiny particles have been found "nearly everywhere":[5] the air,[6] soil,[7] oceans,[8] the animals we eat[9] and human bodies.[10] There are serious concerns about the impacts of this material on animal and human health.[11]

3. The benefits of plastic mean that it is likely to remain part of society. To preserve these benefits, but limit their environmental and other impacts, the UK Government has committed,[12] along with the devolved governments,[13] to work towards a more circular economy in which the value of waste resources are recaptured, at their highest possible level and put back into the economy to create new products.[14] The UK has also signed up

1 Plastic Oceans, Plastic Pollution Facts, accessed 23 June 2022; Our World in Data, Plastic Pollution, updated April 2022

2 DEFRA, 'Figure 4: Waste generation by waste material, UK, 2018,' updated 12 July 2022

3 *Plastic waste*, Research briefing 08515, House of Commons Library, 9 March 2022, section 1.1. WWF calculates that the real figure, as early as 2014, was 4.9 million tonnes of plastic waste, including 3.3 million tonnes of plastic packaging. Data issues are discussed further chapter 8.

4 DEFRA, 'UK statistics on waste,' Table 6, updated 11 May 2022

5 Royal Society of Chemistry, *Microplastics*, accessed 23 June 2022

6 Royal Society of Chemistry, *Microplastics*, accessed 23 June 2022

7 "*Plastic pollution: European farmland could be largest global reservoir of microplastics*," The Conversation, 23 May 2022; "*Microplastics in sewage: a toxic combination that is poisoning our land*," The Guardian, 26 May 2022

8 Greenpeace, 'Plastic pollution,' accessed 23 June 2022; House of Commons Environmental Audit Committee, Fourteenth Report of Session 2017–19, *Sustainable Seas*, HC980, 17 January 2019, p 15

9 Royal Society of Chemistry, *Microplastics*, accessed 23 June 2022

10 "*Microplastics found in human blood for first time*", The Guardian, 24 March 2022; "*Microplastics found lodged in lungs of living people for first time*", The Independent, 7 April 2022; "*Scientists find insecticides and plastic ingredients inside bodies of pregnant people*", The Independent, 11 May 2022

11 Royal Society of Chemistry, *Microplastics*, accessed 23 June 2022

12 Department for Environment, Food and Rural Affairs (DEFRA), the Department of Agriculture, Environment and Rural Affairs (DAERA), the Welsh Government and the Scottish Government, *Circular Economy Package policy statement*, 30 July 2020

13 Scottish Government, *Delivering Scotland's Circular Economy*, 30 May 2022; Welsh Government, *Beyond Recycling*, 2 March 2021; A draft circular economy strategy for Northern Ireland is expected in Autumn 2022 (Department for the Economy, 'Circular Economy,' accessed 20 September 2022).

14 For more information on what a circular economy is, see Ellen MacArthur Foundation, 'What is a circular economy,' accessed 21 December 2021

to global commitments to develop a circular economy for plastics.[15] This entails:

- Eliminating problematic or unnecessary plastic packaging
- Employing reuse models where appropriate
- Ensuring that all plastic packaging is 100% reusable, recyclable or compostable; and they are recycled, reused or composted in practice
- Using recycled or renewable feedstock for any virgin (new) plastic production.
- Making all plastic packaging free of hazardous chemicals and ensuring the health and rights of people in the plastic supply chain are respected.[16]

Inquiry

4. We launched this inquiry on 9 July 2021, with the following terms of reference:

a) What measures should the UK Government take to reduce the production and disposal of single-use plastics in England? Are the measures announced so far, including a ban on certain single-use plastics and a Plastic Packaging Tax, sufficient?

b) How should alternatives to plastic consumption be identified and supported, without resorting to more environmentally damaging options?

c) Is the UK Government's target of eliminating avoidable plastic waste by 2042 ambitious enough?

d) Will the UK Government be able to achieve its shorter-term ambition of working towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025?

e) Does the UK Government need to do more to ensure that plastic waste is not exported and then managed unsustainably? If so, what steps should it take?

5. This inquiry has looked at the extent to which the Government is delivering on its pledge to create a circular economy for plastics, particularly in the packaging sector. We have focused on the plastic packaging aspect given the proportion of waste generated by this sector (estimated to make up nearly 70% of plastic waste generated in the UK),[17] and our previous work in this area, taking the opportunity to follow up on the recommendations made by our predecessor Committee's 2019 report on "Plastic food and drink packaging". We acknowledge, however, that plastic waste stems from many other sectors, such as construction, textiles, electricals and toys, which we've not been able to consider in detail during this inquiry.

6. We received over 60 pieces of written evidence and held five oral evidence sessions with environmental groups, representatives from the plastics, packaging and waste management sectors, retailers, academia and experts in international trade, as well as the previous Government, DEFRA and the Environment Agency. We would like to thank everyone who contributed evidence to the inquiry.

15 DEFRA, *Resources and Waste Strategy*, 18 December 2018, p 112
16 Ellen MacArthur Foundation, *A Vision of a Circular Economy for Plastic*, accessed 1 July 2022
17 WRAP, 'Plastic packaging,' accessed 1 July 2022; WWF, *A Plastic Future*, 26 March 2018, p 2

2 Plastic waste targets and ambitions

7. There are several government targets or "ambitions" to measure progress towards creating a circular economy for plastics, primarily set out in DEFRA's 25 year Environment Plan[18] and its Resources and Waste Strategy[19] both published in 2018. In this chapter we examine these targets, alongside other voluntary targets in the sector, and consider whether they strike the right balance between ambition and realism.

Objectives set by government

8. The plastic waste related targets or ambitions that former UK governments have established or planned to set are:

- A "strategic ambition […] to work towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025."[20]
- Large producers of plastic packaging[21] are currently expected to contribute towards a recycling rate of 61% by 2022.[22] This is expected to change to 51% in 2024 and 62% in 2030.[23] The updated targets appear less ambitious than the previous ones but they are not directly comparable: new, separate recycling streams will be introduced, such as a deposit return scheme for containers, meaning that some highly recyclable products will no longer count towards this target.[24]
- A "target" of eliminating avoidable plastic waste by end of 2042. Two successive definitions of "avoidable plastic waste" have been made: first, "what is Technically, Environmentally and Economically Practicable" to avoid;[25] and subsequently that which is littered or disposed when it "could have been reused, composted or recycled; if a recyclable or reusable alternative could have been used; or if it could have been composted or biodegraded in the open environment".[26]

9. Future efforts to tackle plastic waste will be affected by wider waste (not just plastic) targets—such as an ambition to eliminate avoidable waste of all kinds by 2050[27] and a recently proposed new target to "reduce residual[28] waste (excluding major mineral wastes) kg per capita by 50% by 2042 from 2019 levels."[29]

18 HM Government, *A Green Future: Our 25 Year Plan to Improve the Environment*, 2018
19 DEFRA, *Resources and Waste Strategy*, December 2018
20 As set out in DEFRA, *Resources and Waste Strategy*, December 2018, p 17
21 Those that handle 50 tonnes of packaging materials or packaging and have a turnover of more than £2 million a year
22 Environment Agency, 'Packaging waste: producer responsibilities,' last updated 7 June 2022
23 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p 16
24 The Government hopes to introduce a deposit return scheme (DRS) for containers after 2024: for more information, see its consultation on *Introducing a Deposit Return Scheme in England, Wales and Northern Ireland* (March 2021). This inquiry has not focussed on the DRS as this has already been subject to inquiries by the Environmental Audit Committee.
25 DEFRA, *A Green Future: Our 25 Year Plan to Improve the Environment*, 11 January 2018, p 29
26 The definition was updated in DEFRA, *Resources and Waste Strategy*, December 2018, p 7
27 DEFRA, *A Green Future: Our 25 Year Plan to Improve the Environment*, January 2018, p 29
28 Waste that that is neither recycled nor reused, and usually sent for landfill or incineration: in the context of household waste, waste that usually goes into black bin bags.
29 The Environment Act 2021 requires the government to set long-term targets in four areas, including resource efficiency. On 16 March 2022, the Government launched a consultation which announced its proposed targets. More can be read in DEFRA, *Consultation on environmental targets*, updated 6 May 2022

Voluntary targets: the UK Plastics Pact

10. In addition to government targets, many businesses that handle plastics are signatories to the UK Plastics Pact (UKPP), administered by the Waste and Resource Action Programme (WRAP) which receives government support.[30] UKPP signatories are "responsible for 80% of plastic packaging sold through UK supermarkets, and approximately 50% of the total plastic packaging placed on the UK market."[31] Members of the UKPP have committed to reaching the following goals by 2025:

a) Eliminate the use of 8 problematic or unnecessary types of single-use packaging through redesign, innovation or alternative (reuse) delivery model.

b) 100% of plastics packaging to be reusable, recyclable or compostable. This is aligned with the Government's own targets.

c) 70% of plastics packaging effectively recycled or composted.

d) 30% average recycled content across all plastic packaging.[32]

Current progress

11. Official provisional data from 2021 reports that, overall, 44.2% of plastic packaging was recycled in the UK. These rates have not significantly risen since 2015.[33] There has also been criticism of the reliability of this data, with a 2018 National Audit Office report finding that DEFRA estimates of recycling rates, which use data reported by recyclers and exporters when claiming recovery notes,[34] are "not sufficiently robust," failing to account for "undetected fraud and error" that the current reporting system encourages.[35] Other organisations have previously calculated that the amount of waste produced is much higher than Government estimates, which significantly reduces the recycling rate. For instance, Eunomia (an environmental consultancy) estimated a plastic packaging recycling rate between 23 and 29% in 2015—where government estimates identified a figure of 39.4%.[36]

12. There are no official statistics available for the amount of "avoidable" plastic waste or recycled content contained in packaging products put on the market. WRAP provides some indicative figures, which are set out in the table below.

30 WRAP is a UK-based NGO supported by the UK, Welsh and Northern Ireland Governments. It works with private and public sector organisations, across multiple sectors (including plastics), to encourage more environmentally sustainable choices. It is one of the primary ways in which the UK Government has attempted to steer us towards a more circular economy.

31 The Department for Environment, Food and Rural Affairs (PW0061)

32 For more information see WRAP, 'The UK Plastics Pact,' accessed 20 September 2020

33 *Plastic waste*, Research briefing 08515, House of Commons Library, 9 March 2022, pp 11–12

34 Packaging waste recovery notes are discussed further in chapter 3, paragraphs 28-29..

35 National Audit Office, *The packaging recycling obligations*, 23 July 2018, p 6

36 Eunomia, *Plastic Packaging – Shedding Light on the UK Data*, March 2018, para 3.5.2

Table 1: Progress towards UKPP voluntary targets [2025]

Target	Progress by 2020–21
Action taken to eliminate problematic or unnecessary single-use plastic packaging items. This includes: • plastic cutlery • plastic plates and bowls • plastic straws (including on cartons) • cotton buds with plastic stems • plastic drinks stirrers • household polystyrene packaging • oxo-degradable plastics • PVC packaging.	46% reduction amongst members since 2018. WRAP also note that, since 2018, "the weight of single use consumer (primary) plastic packaging placed on the market by members has decreased by around 10%" and there has been a "9% reduction in the weight of single use transit plastic packaging."[37]
100% of plastic packaging to be reusable, recyclable or compostable	70% of plastic packaging put on the market by UKPP members is reusable, recyclable or compostable: 65% recyclable (which is similar to previous years) and a further 5% is reusable.[38] 2020 estimates suggest that compostable plastic accounts for around 0.5% of consumer plastic packaging in the UK.[39] There is no earlier data to observe trends for reusable or compostable plastics.
70% of plastic packaging to be effectively recycled	52% of plastic packaging handled by UKPP members is effectively recycled, the same as 2020 and up from 44% in 2018.
30% average recycled content across all plastic packaging	UKPP signatories have increased recycled content from 9% in 2018 to 18% by 2020

Source: WRAP, *UK Plastics Pact Annual Report 2020–21,* 30 November 2021

37 WRAP, *UK Plastics Pact Annual Report 2020–21*, 30 November 2021, p 4
38 WRAP, *UK Plastics Pact Annual Report 2020–21*, 30 November 2021, p 8
39 WRAP, *Compostable plastic packaging guidance*, 6 February 2020, p 7

Criticisms

A lacklustre voluntary approach

13. Apart from plastic packaging recycling targets under producer responsibility regulations, most progress has been driven by the voluntary targets under the UK Plastic Pact and its Roadmap to 2025. The British Retail Consortium (BRC) told us that there has been "good progress" under the UKPP targets for 2025, particularly in efforts to reduce single-use packaging. The BRC argue that its collaborative and holistic approach across the supply chain works well.[40] Many retailers have spearheaded initiatives[41] and there is clearly appetite for change: most major supermarkets have goals for reducing plastic consumption and are working with their suppliers and customers to reduce plastic consumption.[42]

14. However, as the table 1 (above) shows, reported progress has stalled in recent years. While this may be partly due to the technical challenges of changing plastic products and supply chains,[43] several contributors to the inquiry, primarily environmental NGOs, academics and local authorities, blame the primarily 'voluntary target' approach for the lack of progress so far.[44] The Chartered Institute for Wastes Management (CIWM) agreed with the BRC that the UKPP Roadmap to 2025 has had a significant impact but added that these targets should be included within an unspecified "regulatory regime" in order to strengthen the likelihood of delivery on them.[45] The National Infrastructure Commission, alongside its 2018 recommendation for a 75% total plastic packaging recycling rate by 2030, highlighted how enforced, specific targets can be helpful. It cited the example of Wales, which had already achieved a municipal recycling rate of 64%, in part through "ambitious recycling targets for local authorities" and introducing fines and support programmes for those authorities that failed to meet these targets.[46] Wales has had the top recycling rates in the UK for the past 10 years.[47]

Limited ambition

15. While the previous Government believed its target recycling rates for packaging were "realistic,"[48] some organisations told us that the target recycling rate for packaging put on the market by major producers (which do not cover all packaging put on the market) were "unambitious."[49] While some producer representatives, such as the Food and Drink Federation, told us that the 2042 target for eliminating avoidable plastic waste is achievable and appropriate,[50] not all producers agreed. The BRC and the CTPA (the Cosmetic, Toiletry and Perfumery Association) felt the target lacked ambition and was

40 British Retail Consortium (PW0043); Q153
41 The *2020–21 UK Plastics Pact Annual Report* sets out many examples of retailers taking action to curb plastic usage and improve recyclability. This work is continuing: for instance, WRAP is now recommending retailers sell more loose vegetables in its report on *Reducing household food waste and plastic packaging* (February 2022).
42 Q150; Qq158–161; Environmental Investigation Agency and Greenpeace, *Checking Out on Plastics*, January 2021
43 Q162
44 The Grantham Centre for Sustainable Futures, University of Sheffield (PW0051); Wildlife and Countryside Link (PW0044); Devon County Council (PW0054); A Plastic Planet (PW0058); Greenpeace UK (PW0024); Q127
45 The Chartered Institution of Wastes Management (CIWM) (PW0046)
46 National Infrastructure Commission, *National Infrastructure Assessment 1*, 2018, p.47
47 "*Recycling: Wales is top UK performer for over 10 years*", BBC News, 11 May 2022
48 Q319
49 Wildlife and Countryside Link (PW0044); Viridor (PW0049)
50 Food and Drink Federation (PW0037)

"unaspiring."[51] Submissions from the waste management and environmental sectors, as well as academia, felt that the 2042 delivery date should be brought forward given the scale of the problem and the scale of public support.[52] Some waste management organisations felt that a delivery date of around 2030 was feasible.[53] Other environmental groups and local authorities have called for the 2042 target to be broken into a series of interim milestones to guide progress towards the target and "drive policy in the present".[54]

Inappropriate metrics

16. There is evidence to suggest that these targets measure the wrong things. For instance, we were told that aiming for packaging *to be* recyclable, compostable or reusable (a 2025 government target) was flawed: just because an item *can be* recycled, composted or reused that does not mean it that it *will be*—it might be littered or put in the wrong waste steam.[55] Green Alliance (an environmental think tank) and WWF (World Wildlife Fund—an international conservation NGO) have called for the 2025 target to follow the example of the UKPP and measure the "effective" recycling rate.[56]

17. Many stakeholders expressed confusion over the term "avoidable" which is a feature of government targets for both 2042 and 2050. Without a formal methodology to report against this target,[57] Wildlife and Countryside Link (an England-based environmental coalition) and WWF argue that the previous Government's attempt at a definition is ambiguous and "open to interpretation:" for instance, the definition fails to account for whether plastic keeping food fresh is regarded as a necessity, even if it is, for instance, compostable.[58] While some evidence to the inquiry called for government to work with stakeholders to define the meaning of "avoidable",[59] others, such as Kevin Vyse (ProAmpac RAP—a packaging business) and Sian Sutherland (A Plastic Planet[60]) argued that "avoidable" was a "weasel word" that would always mean different things to different organisations.[61] When we talked to the then Minister, Jo Churchill MP, she agreed that these different definitions would make progress difficult to measure. In response, she pointed to a DEFRA evaluation programme, currently in development, which would be trying to define problem plastics or mixes of plastics.[62]

18. There have been calls for a clearer approach from government. Environmental stakeholders suggested additional plastic or packaging reduction targets.[63] Some waste

51 CTPA (PW0019); British Retail Consortium (PW0043)
52 Environmental Industries Commission (EIC) (PW0022); Dr Eleni Iacovidou (Lecturer in Environmental Management at Brunel University London); Dr Olwenn Martin (Lecturer in Global Challenges at Brunel University London); Dr Lesley Henderson (Reader in Sociology and Communications at Brunel University London); Dr Norman Ebner (Research Fellow at Oxford University); Mr John Barwise (Director of Quality of Life Environment Management and Communications Consultancy at Quality of Life Environment Management and Communications Consultancy); Dr Spyridoula Gerasimidou (Post-doctoral researcher at Brunel University London) (PW0047); SUEZ UK (PW0017); The Chartered Institution of Wastes Management (CIWM) (PW0046)
53 ReNew ELP (PW0038); Viridor (PW0049)
54 Wildlife and Countryside Link (PW0044); Leicestershire County Council (PW0057)
55 Professor Richard Thompson OBE FRS (Professor of Marine Biology at University of Plymouth) (PW0027)
56 Green Alliance (PW0033); Qq27–29
57 This was highlighted by AAT (Association of Accounting Technicians) (PW0013)
58 Wildlife and Countryside Link (PW0044); Q26
59 SUEZ UK (PW0017), para 3.2–3.3, Environmental Industries Commission (EIC) (PW0022)
60 A campaign organisation working to reduce plastic consumption across businesses.
61 Q193
62 Q321
63 Q18; Q258

management organisations proposed that packaging should pass some sort of "necessity" assessments before being put on the market.[64] Others have proposed sending stronger messages by targeting the elimination of specific products or types, or combinations, of plastic by a certain date. The latter could be enforced via the introduction of bans or charges on problematic plastics like PVC (polyvinyl chloride)[65] or specific items like non-recyclable plastic sachets, wet wipes, nappies, chewing gum and personal care products.[66] This is not the first time that there have been such calls. In 2018, the National Infrastructure Commission recommended creating a "clear timetable" to phase out hard-to-recycle plastics, like PVC and polystyrene by 2025. They argued that this clear signal would "allow industry to develop sustainable alternatives."[67]

Wrong priorities

19. Many of the arguments and proposals for improvements we heard are based on the criticism that the targets do not reflect the priorities of the waste hierarchy, a well-established[68] ranking of waste management options from best to worst:

- Prevention (eliminating use of resources in first place)
- Reuse
- Recycling
- Recovery (usually recovering energy from the waste material via techniques such as energy from waste)
- Disposal (landfill and incineration)[69]

20. For example the 2025 target makes recycling, reusing and composting plastic equally valid options, when the waste hierarchy would suggest that reuse should be a higher priority.[70] Similarly the Royal Society of Chemistry (RSC) and Green Alliance both argued that the 2042 target's definition of "avoidable plastic waste" focuses too much on whether a product can be recycled, composted or biodegraded (downstream reforms) and not enough on whether the plastic should have been used in the first place (i.e. designing out unnecessary plastic packaging entirely) (upstream reforms).[71] Overly focussing on downstream targets, like recycling rates, could look like effective progress on paper, but if this is accompanied by increased material consumption (i.e. more packaging produced),

64 Q124; SUEZ UK (PW0017); Environmental Industries Commission (EIC) (PW0022); Environmental Services Association (PW0050)
65 Q112; Q221; Q242
66 For examples see Surfers against Sewage (PW0015); SUEZ UK (PW0017); A Plastic Planet (PW0058); Somerset Waste Partnership (PW0053)
67 National Infrastructure Commission, *National Infrastructure Assessment 1*, 2018, pp 47–48
68 EU Retained Law requires the UK to apply the waste hierarchy to its policymaking and provides that all UK organisations responsible for importing, producing, collecting, transporting, recovering or disposing of waste should apply it
69 Waste prevention - achieved by minimising production and reusing items - is usually the most sustainable option as it eliminates the environmental costs associated with production. It is therefore often the quickest and most effective means of lessening environmental impact. Recycling, on the other hand, still has an environmental footprint caused by the recycling process, albeit usually much less than primary production, and there is a limit to how many times most material can be recycled.
70 Professor Richard Thompson OBE FRS (Professor of Marine Biology at University of Plymouth) (PW0027)
71 Royal Society of Chemistry (RSC) (PW0056); Q26

the UK could increase the environmental impact of packaging overall.[72] In a similar vein to comments made by former Prime Minister Boris Johnson MP,[73] environmental organisations agree that we "cannot recycle our way out of the current crisis"[74] and we must focus more effort on "turning off the plastic tap"—upstream interventions such as reduction and reuse targets—to make a real impact on plastic waste.[75]

21. We have heard that care is needed with reduction targets. For instance, although plastic packaging contributes to the carbon footprint of food, this might be vastly outweighed by the emissions savings it brings by preventing food waste, one of the largest sources of carbon emissions both in the UK and worldwide.[76] The plastic industry and environmental organisations have also stressed the risks of 'material swap out' if plastic products are replaced by materials that are unrecyclable or have a larger carbon footprint.[77] There is some evidence that this is already happening both globally[78] and in the UK.[79] Stakeholders across various sectors therefore call for other assurances, such as ensuring that reduction targets apply to all packaging[80] or targeting the overall environmental footprint of packaging, including the supply chain behind it, that a business puts on the market.[81]

22. When we asked the Government about the potential for reduction targets, both internationally and domestically, the then Minister, Jo Churchill MP, told us that the UN Environment Assembly had begun work an initiative, to which the UK had signed up (see Chapter 7 below), which is potentially working towards a global reduction target, but she suggested that the priority was "targets that we ourselves can make sure that we meet in-country." DEFRA also highlighted that it is looking at reduction targets under other upcoming reforms:[82] these are discussed in chapter 4.[83]

23. **Despite progress in reducing the use of some problematic plastics and plastic products and creating an uplift in recycled content in new plastic production, progress in tackling plastic waste appears to have slowed in recent years. Current initiatives are clearly not driving progress as effectively as possible. Some of the definitions and metrics for the targets driving change need to be improved to make them: clearer and less ambiguous; more ambitious and measurable; and more reflective of the waste hierarchy with a strong focus on reducing the amount of plastic waste created in the first place. However, with this focus comes the need to ensure that plastics are not replaced by possibly more impactful materials as plastic usage is reduced in the future.**

72 Q69
73 "*Recycling plastics does not work, says Boris Johnson*," BBC News, 25 October 2021
74 Wildlife and Countryside Link (PW0044)
75 Q115; Pew Charitable Trusts and SYSTEMIQ, *Breaking the Plastic Wave*, 2020
76 The National Food Strategy, *The Plan*, July 2021, p 107; British Plastics Federation (PW0042); Q120; Q152
77 British Plastics Federation (PW0042); Surfers against Sewage (PW0015); Viridor (PW0049); Green Alliance (PW0033)
78 According to the WWF, research from the Ellen MacArthur Foundation has shown that 76% of global plastic reduction has been achieved through material switching - a fifth of this was via paper [Q19]
79 According to WRAP, while UK producers are putting less plastic on the market, other packaging materials have been on the rise, including aluminium, glass, paper and card. WRAP concludes that this may indicate a "substitution effect" [WRAP, *Plastics Market Situation Report 2021*, 6 October 2021, p 7]
80 Q18; Institute of Grocery Distribution, *Halving the environmental impacts of the UK packaging system*, 2022
81 Institute of Grocery Distribution, *Halving the environmental impacts of the UK packaging system*, 2022; Tetra Pak (PW0031); Viridor (PW0049); Q60; Q69; Q99;
82 Q316; Q338
83 Subsection "EPR and reuse."

24. ***We recommend the 2042 target for the elimination of plastic waste should be reaffirmed by the new Government but, crucially, without the qualifier "avoidable". The goal would be clearly defined as ensuring that all plastic waste is recycled, reused or composted by 2042. The new Government should also set out two-year milestones to drive progress towards this target.***

25. ***We also recommend that other government targets be revised to reflect and implement the waste hierarchy. These changes should cover:***

- ***Reducing the volume of plastic that is put on the market. Where plastic is replaced with other materials, the new Government should commit to monitoring whether those replacement materials are more sustainable.***
- ***Reuse targets to increase the market share of reusable plastic products, particularly packaging.***
- ***Recycling rate targets that measure how much packaging is actually recycled, rather than whether it is theoretically recyclable.***

26. ***The new Government should commit to reporting on progress against all these targets annually. We also recommend that the Government should devise mechanisms to enforce these targets either through an existing regulator or upcoming reforms.***

3 Extended Producer Responsibility for packaging

27. Extended Producer Responsibility (EPR) for packaging was expected to be one of government's main tools to drive progress towards its plastic waste targets. While EPR contains several measures,[84] at its core are the "modulated fees" that producers will have to pay on packaging products they put on the market. These fees will essentially transfer more of the costs of waste management from local authorities to plastic packaging producers, which previous governments hoped would incentivise more sustainable packaging designs. This chapter looks at how the sector has responded to proposals so far, how EPR policy has changed and our recommendations about how it should be implemented. While our recommendations are directed to the UK Government, any decisions on EPR must be done alongside the Scottish and Welsh Governments and the Northern Ireland Executive, which are working with the UK Government to develop this policy.

What is EPR replacing and why?

28. EPR would replace the current system of 'producer responsibility' for packaging. The current regulations[85] require businesses that both handle over 50 tonnes of packaging annually, and have a turnover of over £2 million per annum, to pay towards a share of recycling targets, based on the amount of packaging they handle and their role in the supply chain. For domestically recycled products, they buy 'Packaging Recovery Notes' (PRNs) from accredited reprocessors (organisations that mechanically[86] recycle waste plastic), to demonstrate that their target tonnage of waste has been recovered and recycled. Alternatively, they can purchase a Packaging Export Recovery Note (PERN) from exporters who send waste to be recycled overseas.[87]

29. This system has seen recycling rates rise since the first regulations were introduced in 1997.[88] However, the PRN/PERN system has been criticised for having a lack of transparency and a tendency toward mismanagement,[89] and incentivising the export of UK waste overseas.[90] When the first joint consultation on EPR was launched in February 2019 by the UK Government and the devolved governments, the then Government argued that it did not provide enough incentives for producers to design more sustainable products. This was in part because PRN and PERN prices—paid by producers—did not reflect the environmental impact or the recyclability of the products put on the market; it was also partly because the cost of purchasing PRNs and PERNs covered less than a tenth of the costs of managing household packaging waste: the majority of the burden was still shouldered by local authorities, public authorities and businesses who consume packaged goods.[91] Many organisations we heard from agreed with the assessment that the PRN/

84 For example, it includes labelling reforms and will require some businesses to take back disposable cups.
85 Provided for in the Producer Responsibility Obligations (Packaging Waste) Regulations 2007 (SI 2007/871), as amended, although the policy dates back over 20 years.
86 Types of recycling are discussed in chapter 6: mechanical recycling is the mainstream process of recycling plastics.
87 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Consultation on reforming the UK packaging producer responsibility system*, February 2019, p 18
88 Valpak, 'Packaging Recycling Evidence,' accessed 21 September 2022
89 Dr Eleni Iacovidou et al. (PW0047), para 5.1
90 Peel L&P (PW0034); Viridor (PW0049); ReNew ELP (PW0038)
91 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Consultation on reforming the UK packaging producer responsibility system*, February 2019, p 19, p 27

PERN system does not create the "political and economic conditions" needed to align the plastic supply chain and businesses' key performance indicators to more sustainable principles.[92]

How will EPR help?

30. EPR will require businesses that place packaging on the market (referred to generally as "producers")[93] to cover much or all of the costs of waste management through a system of fees on products put on the market. The funds generated by the modulated fees system will be distributed to local authorities responsible for managing waste. The transfer of costs from local authorities to producers is expected to provide a direct, and therefore much more powerful incentive to reduce the amount of packaging put on the market. These fees will also be modulated to incentivise more sustainable product designs—for instance, under EPR, a more easily recycled packaging design should attract lower fees.[94]

31. Many businesses, local authorities, producer and waste management representatives and environmental organisations welcomed the new system, telling us that a well-designed EPR should lead to a more sustainable supply chain for plastic packaging.[95] Representatives from the plastics and waste management industry appeared confident that EPR could bring about the crucial changes in design practices needed, without the need for further statutory intervention.[96] There was agreement with the Government that EPR schemes, which had been successfully used across a variety of industries[97] were a well-established and generally effective way of taking us closer to the "polluter pays" principle.[98]

Implementation

32. The first consultation on EPR in 2019 stated that the new system would be fully operational by 2023.[99] By 2021, the previous Government had decided to split implementation: the Scheme Administrator would be set up and collecting data and limited fees from producers in 2023, and full modulated fees, covering the total costs of managing household and commercial waste, would be introduced in 2024.[100] This timetable was subsequently postponed by 12 months, so modulated fees, the key part of EPR, would not

92 Dr Eleni Iacovidou et al. (PW0047) para 1.3; British Plastics Federation, *Sustainable Design for Plastic Packaging*, April 2020, p 4; Q125

93 The previous Government explained that this will entail differing fees for brand owners, importers, distributors, online marketplaces and service providers: DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Extended Producer Responsibility for Packaging Consultation Document*, March 2021, para 5.5

94 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Extended Producer Responsibility for Packaging Consultation Document*, March 2021, paras 1.28, 2.2 and 8.66

95 For instance, CTPA (PW0019), McDonald's UK (PW0023), Kimberly-Clark (PW0032), Wildlife and Countryside Link (PW0044), The Chartered Institution of Wastes Management (CIWM), (PW0046) Environmental Services Association (PW0050), Devon County Council (PW0054), National Association of Waste Disposal Officers (PW0059)

96 Qq82–83

97 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Consultation on reforming the UK packaging producer responsibility system*, February 2019, p 19

98 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Consultation on reforming the UK packaging producer responsibility system*, February 2019, p 27; Wildlife and Countryside Link (PW0044); Surfers against Sewage (PW0015)

99 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Consultation on reforming the UK packaging producer responsibility system*, February 2019, p 119

100 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Extended Producer Responsibility for Packaging Consultation Document*, March 2021, paras 14.4 - 14.10

be operational until 2025.[101] The previous Government has not fully explained the reason for the delay. When we questioned the then Minister about this, she told us that EPR was delayed as producers felt that there was "insufficient time" to prepare but it would be "up and running" and "fully operational" by 2024,[102] even though the modulated fees will not be in place until 2025.

33. Since then, Ministers have reportedly suggested to the sector that EPR, along with some other plastic-related policies, could be further delayed, due to the cost of living crisis.[103] A view on these matters is awaited from the new Government. No detail or guidance about EPR fees, as well as other important supporting policies,[104] has yet been announced to help businesses prepare for the new system. Representatives from the packaging, retail and waste management sectors told us that these delays, and the lack of information about the fees under EPR, would be a problem for governmental ambitions, in particular the aim for all packaging put on the market to be recyclable, reusable or compostable by 2025.[105]

34. **The introduction of Extended Producer Responsibility (EPR) for packaging is a welcome reform that has the potential to drive progress towards a more sustainable plastics economy. However, the lack of information about the EPR fee scheme and the two-year delay in implementation mean that achieving meaningful change in packaging design in the short term is unlikely. Despite the former Minister's assurances that the scheme will be fully operational by 2024, we cannot see how that can be the case if the modulated fees that underpin the scheme will not fully be in place until 2025. To make progress towards 2025 targets, the delivery of EPR needs to be expediated and information for businesses provided well in advance to give them time to adapt.**

35. ***We recommend that the new Government reaffirms its commitment to Extended Producer Responsibility for packaging and a re-accelerated process to implement the system in order to meet the targets set for 2025. This requires publication of a consultation on EPR fees and any accompanying guidance in early 2023 and the introduction of the fee system by 2024.***

The new EPR proposals

36. In March 2022, in addition to announcing the new timetable for EPR, the previous Government, alongside the Welsh and Scottish Governments and the Northern Ireland Executive, announced the latest iteration of EPR policy following its most recent consultation. The main elements of the policy are set out in the table below, compared to the original proposals that were consulted upon.

101 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022

102 Q314; Q335

103 "*Deposit return scheme: government to reconsider time frame for rollout*", The Grocer, 14 July 2022

104 AAT (Association of Accounting Technicians); (PW0013) Surfers against Sewage (PW0015). For instance, a delay and lack of information about consistent local collections of waste may prevent designers from making more sustainable design choices for our future waste management system.

105 Q125; Veolia (PW0045) p.4 ; Q189; Viridor (PW0049)

Table 2: Changes in key elements of EPR proposals

Proposals as set out in 2021 consultation	Proposals as set out in previous Government's response to consultation (March 2022)
Fees paid by producers will reimburse the full cost of managing the disposal of their products at their end of life	Fees will only cover the waste management costs of household waste, not commercial/ public authority waste. The consultation response states that some of these costs will be covered by the PRN/PERN system
EPR estimated to cost producers £2.7bn in first year.	EPR estimated to cost producers £1.7 bn each year
EPR designed to replace the current system in which producers buy PRN/PERNs from accredited reprocessors to fund a proportion of the recycling of packaging waste	PRN/PERN will continue in the short term, subject to some reforms.[106] This dual EPR and PRN system will be subject to a review in 2026/27.
The threshold for obligations will include businesses with over £1m turnover per year and handle 25 tonnes of packaging	The threshold for obligations will be unchanged from current producer responsibility regulations: only those businesses with £2m turnover and handling 50 tonnes of packaging each year. A government review of this approach is expected after 2026.
Businesses with over £1m turnover per year and handle 25 tonnes of packaging will be required to report how much packaging they are putting on the market	No change
Plastic recycling targets for packaging in scope of EPR would be 41% in 2024 and 56% in 2030	Plastic recycling targets for packaging in scope of EPR would be 51% in 2024 and 62% in 2030
EPR reforms will also introduce clearer labelling on packaging to ensure that consumers can properly dispose of it.	No change
Vendors with 10 full-time staff or more will need to operate a takeback bin for fibre-based composite cups. This will be introduced by 2024.	No change

Sources: DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, ***Extended Producer Responsibility for Packaging Consultation Document***, March 2021 and DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, ***Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response***, March 2022

As these modifications were announced later in our inquiry, we did not take evidence commenting on these specific changes, but some evidence we took is relevant and is discussed below.

Continuation of the packaging recovery note system

37. Instead of replacing the PRN/PERN system, a reformed version of it will operate alongside EPR. The plastic and waste management sectors told us that, unlike the current

106 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Reforms to the Packaging Waste Recycling Note (PRN) and Packaging Waste Export Recycling Note (PERN) System and Operator Approval: consultation document*, 26 March 2022

PRN/PERN system, the original EPR proposals did not offer a direct funding stream for the recycling sector: EPR funding would go directly to local authorities.[107] This would suggest that a short-term continuation of the PRN/PERN system would be welcome in a sector that needs to significantly expand its capacity (discussed further in chapter 5). 47% of respondents to the previous Government's most recent consultation also agreed that there would be problems in the short term if PRN/PERNs were removed straight away.[108] Recent comments from the Chartered Institution of Wastes Management (CIWM) suggest that this move has been tentatively welcomed although there are fears that overlap between the two systems might lead to "unneeded complexity."[109]

38. The previous Government's last announcement on the topic was that the dual system was not expected to be permanent and a taskforce would be set up to explore how to fully move away from the PRN/PERN system in time for a review in 2026/27.[110] At the time of writing however, a new Government has just been established and there is no further information on this review or a timeline for moving to a full EPR system.

39. **We agree that it is best to continue the Packaging Waste Recovery Note (PRN) system in the short term to ensure some continued funding for the reprocessing sector. Government should ensure that any temporary dual-running system, and the added complexity it brings, does not become permanent. We welcome the previous Government's proposal for a taskforce to help navigate the way to a full EPR system in the future but we are concerned about the lack of a clear timetable for this change.**

40. ***We recommend that the Government develops a clear exit strategy for any dual running of Extended Producer Responsibility (EPR) alongside a legacy Packaging Waste Recovery Note system. This exit strategy should be published no more than a year after EPR is introduced. This strategy should explain how we will arrive at a comprehensive EPR system that covers the total costs of managing plastic waste—including commercial waste. This would be an appropriate job for the previously proposed EPR Taskforce.***

Changes to scope

41. Until at least 2026, EPR fees will only cover the costs of managing household waste, not the costs of managing commercial waste—although the continuation of PRN/PERN system will do so to some extent. The previous Government stated that 56% of respondents to the most recent consultation were unable to decide on the best approach for funding commercial waste costs and were split on whether producers should take full responsibility for them.[111]

42. The new EPR proposals will also see fewer producers covered by financial obligations than was originally envisaged. The previous Government decided that EPR would keep

107 ReNew ELP (PW0038); Environmental Services Association (PW0050); Qq102–104

108 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p 39

109 "*Concerns over 'significant watering-down' of EPR proposals*," Circular, 29 March 2022

110 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p 40

111 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p 39

the same threshold for obligations as current producer responsibility regulations, which capture businesses with £2 million turnover that handle 50 tonnes of packaging each year. Businesses with £1 million turnover, handling 25 tonnes of packaging or more, would still have to report on their packaging but would be exempt from fees. This approach was to be maintained until "at least 2026", when it would be subject to a review. According to 2019 figures, non-obligated producers under current regulations were estimated to account for 13% of plastic packaging put on the market in the UK.[112]

43. The previous Government's response to the most recent consultation does not fully explain why it is retaining the threshold at which businesses are in scope of EPR obligations. Of those that responded to this element of the consultation, 57% of respondents supported lowering the threshold and only 16% opposed it entirely.[113] This policy change goes against previous recommendations by the Environmental Audit Committee which recommended that the *de minimis* packaging handling threshold should be significantly lower (1 tonne per year) to "ensure that all businesses who handle a significant amount of packaging are obligated to recycle."[114]

Lowers costs for producers

44. The response to the latest EPR consultation indicates that producers, as a sector, will face lower costs than under the original EPR proposals. This is likely due to the changes in scope.

45. The retail and food sector were concerned that the costs of EPR, as proposed initially, would be "difficult to absorb"[115] and affect the ability of producers to invest in innovation and new packaging designs as well as lead to a rise in food prices: the Food and Drink Federation (FDF) estimated the original EPR proposals could increase the average household food bill by £75 per year.[116] This would likely hit the poorest families hardest[117] at a time when food security and prices have become a significant problem. It has been reported that the recent changes to EPR were made in direct response to such fears.[118] The most recent government analysis suggests that EPR as it stands will not lead to increased food prices.[119] The move was welcomed by the FDF as a "constructive and pragmatic approach,"[120] but has since argued that it will still lead to food price increases.[121] The Association of Directors of Environment, Economy, Planning and Transport (which represents a local authority perspective) has countered that there is "no requirement for these costs to be passed to the consumer" and that industry have been avoiding the costs of poor and excessive packaging for years," with local authorities taking the financial hit.[122]

112 Valpak, *PackFlow Covid-19 Phase I: Plastic*, October 2020, p 5

113 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs (Northern Ireland), *Extended Producer Responsibility for Packaging: Summary of consultation responses and Government response*, March 2022, pp 18–19

114 Environmental Audit Committee, First Report of Session 2017–19, *Plastic bottles: Turning Back the Plastic Tide*, HC 339, para 47

115 British Retail Consortium (PW0043), pp2–3, Q189

116 Food and Drink Federation (PW0037)

117 British Retail Consortium (PW0043), pp2–3

118 "*UK governments slash packaging waste strategy price tag amid soaring prices*", The Grocer, 22 march 2022

119 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p 7

120 "*Packaging tax: industry groups welcome watered down plans*," The Grocer, 28 March 2022

121 "*Only industry can solve the plastic packaging problem*", Food and Drink Federation press release, 4 August 2022

122 "*Claims that EPR will cost consumers are 'disingenuous', say council bosses*", ENDS Report, 8 August 2022

46. The CIWM is reportedly concerned that the "significant watering-down" of EPR proposals could lead to a less impactful system.[123] Some environmental groups criticised even the initial scope of EPR fees as they only cover the "gate fees" of managing waste (collection, sorting and treatment before recycling) and not the actual "climate cost" of the product, such emissions generated through a recycling or incineration process.[124] Some have suggested that EPR does not therefore fully embrace the "polluter pays" principle."[125]

47. **We understand the logic behind some of the changes the previous Government made to its Extended Producer Responsibility (EPR) proposals in response to the last consultation. We sympathise with the aim of reducing the financial impact on individual producers to avoid an escalation of food prices under EPR for packaging. However, there is a risk that exempting a large number of smaller producers from financial obligations—and no longer covering the costs of commercial waste—could undermine the scheme's aims to make 'polluters pay' and incentivise more sustainable product design.** ***We recommend that the Government should set out a roadmap for lowering the threshold for financial obligations under EPR so that by 2030, producers placing 1 tonne of packaging on the market or more should pay the cost of managing its disposal.***

123 "*Concerns over 'significant watering-down' of EPR proposals*," Circular, 29 March 2022
124 United Kingdom Without Incineration Network (UKWIN) (PW0012)
125 Surfers against Sewage (PW0015)

4 Refill and reuse

48. As discussed in chapter 2,[126] addressing the plastic problem requires doing more than just recycling all our plastic waste: we also need to reduce the total volume produced, as suggested by the waste hierarchy. One way to achieve this is to get multiple uses out of the plastic we produce. In the packaging sector "reuse and refill" models encourage customers either to borrow and return containers from businesses or to bring and refill their own containers with purchased goods, such as dried food or cleaning products.[127] These systems have the potential to be better for the environment as well as help businesses reduce costs.[128] However challenges with logistics, hygiene and consumer behaviours have prevented reuse and refill becoming a mainstream activity. In this chapter we look at how government policies could be used to help overcome these barriers.

Challenges with refill and reuse

49. While many retailers are experimenting with refill and reuse systems, scaling up poses logistical and financial challenges and disruption for supply chains based on a more linear structure.[129] These costs can disincentivise businesses, particularly those with complex, global supply chains,[130] or working in a sector with tight margins and competition,[131] for moving away from single-use packaging or adopting refill and reuse models. According to WRAP, amongst signatories to the UK Plastics Pact, only 5% of packaging is reusable and primarily found in transit packaging rather than consumer packaging.[132]

50. Companies also face challenges getting consumers to engage with refill and reuse models: one witness told us that only an estimated 2% of consumers really use such systems.[133] There are several reasons for this: some consumers are often "too busy" to use these systems[134] and are unwilling to forgo the convenience that buying pre-filled containers provides,[135] or prefer new packaging, potentially due to hygiene concerns.[136] There are also practical challenges with consumers remembering, and being physically able to bring, the packaging with them when they go shopping.[137] All of these present real barriers to the wide spread adoption of refill and reuse models.

EPR and reuse

51. A major mechanism that the government could use to change financial incentives around refill and reuse is the EPR scheme. Previous EPR consultations have stated that

126 See subsection "Wrong priorities."
127 For explainers of the various types of reuse and refill systems see Institute of Grocery Distribution, *How to help consumers adopt reusable packaging*, 2021 and Ellen Macarthur Foundation, *Reuse: Rethinking Packaging*, 2019
128 Green Alliance, *Circular business: what companies need to make the switch*, July 2022, p 7
129 For some examples, see "*From waste stream to mainstream: the rise of refillable products*", The Grocer, 27 April 2021
130 For example, Steven Butts (Morrisons) explained the difficulties they had in removing plastic bags off bananas: Q150
131 Q152; Mineral Products Association (PW0028)
132 WRAP, *The UK Plastics Pact Annual Report 2020/21*, 30 November 2021, p 8
133 Q117
134 Q170
135 The Grantham Centre for Sustainable Futures, University of Sheffield (PW0051) para 2.1
136 Dr Eleni Iacovidou et al. (PW0047), para 3.3, WRAP, *Plastics Tracking Survey 2021*, December 2021, p 40; Q122; Q169
137 WRAP, *Plastics Tracking Survey 2021*, December 2021, p.40; Q214

EPR would introduce refill and reuse "targets or obligations" on producers affected by EPR by 2025. However, there has been no information about what these obligations might look like.

52. EPR fees clearly have the potential to incentivise reusable packaging or even potentially more radical solutions to support reuse systems like universal packaging—containers that can be used by different businesses and help businesses reduce the transportation costs associated with reusable packaging.[138] The latest consultation says that the EPR scheme administrator (SA) will develop "financial incentives" to increase the use of reusable or refillable packaging.[139] However the same consultation document makes it clear that EPR fees will initially be modulated solely according to the **"recyclability"** of packaging, not its reusability**.** This is a change from the original proposals which said that fees would be modulated according to the **"environmental impact"** of packaging. The distinction could be important: it is possible to increase recycling rates while also increasing production and, consequently, the environmental footprint of packaging. This could be less likely with fees that incentivise growth in reusable packaging's share of the market.

53. Several stakeholders have therefore argued that the current form of EPR is a missed opportunity to focus on reuse and refill.[140] When we asked the previous Government about this issue, DEFRA responded that these obligations were in development but it would take time because reuse-friendly policies are "the hardest bit of the system to get right."[141] In the response to the latest consultation, the previous Government found that there was "general support" for the idea of setting some kinds of reuse and refill targets, although respondents were unclear on how this should be approached.[142]

54. **We understand that promoting plastic reuse is a challenging part of this policy area but increasing the uptake of reusable packaging is essential for reducing the total amount packaging consumed in the UK. Government must ensure that any Extended Producer Responsibility system fully incentivises all routes for tackling plastic waste—not just recycling—and should give the greatest incentives to options that are higher up the waste hierarchy: reduction and reuse.**

55. ***The new Government should publish, in 2023/24, its plan for reuse and refill obligations that will be introduced in 2025 under Extended Producer Responsibility (EPR) for packaging, so that businesses can begin the process of adapting their product designs and supply chains. We also recommend that the proposed review of the new EPR scheme, planned previously for 2026/27, is tasked with considering changes to EPR fees that would encourage the use of reusable packaging. This review should also examine the feasibility of using the scheme to encourage more generic/universal packaging.***

138 Q71, Q129; Q214; Q126

139 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Extended Producer Responsibility for Packaging Consultation Document*, March 2021, para 7.6

140 Q129. Similarly, the Somerset Waste Partnership (PW0053), Policy Connect (PW0025) and Greenpeace UK (PW0024) argued that modulated fees should incentivise reuse.

141 Q335

142 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs (Northern Ireland), *Extended Producer Responsibility for Packaging: Summary of consultation responses and Government response*, March 2022, p 64. Some respondents thought reuse systems required complex analyses that are not suitable for the SA; others thought such measures might be anti-competitive or undermine the core purpose of EPR through incentivising production of items that might only be used once.

Other measures to encourage refill and reuse

56. While EPR could be an important lever to support the refill and reuse model, it is not the only option available to government. We heard of several other options including:

a) **Further legislative interventions.** A Plastic Planet suggested following the example of France, where recent legislative proposals will force large retailers to dedicate 20% of their floor space to refill points.[143] A number of witnesses also told us that single use items are too cheap;[144] following this logic, several organisations, called on the Government to use its powers under the Environment Act 2021 to introduce charges on single-use items.[145]

b) **Additional reporting**. Greenpeace proposed combining the Government's plastic and waste reduction targets "with mandatory corporate reporting on plastic reduction", which it argued would encourage a transition to refill and reuse at scale."[146] This might include mandatory corporate reporting on efforts to introduce more circular systems[147] or businesses' plastic footprints.[148]

c) **Improving public awareness and public education.** Given public reluctance about reuse and refill, several stakeholders have called on government to invest in educational programmes and consistent, rewarding messaging for consumers on the environmental benefits of reusables,[149] and address "perceived or existing regulatory barriers" around food hygiene,[150] such as 'busting myths' about hygiene and discolouration of containers.[151]

57. The previous Government indicated willingness to explore some of these options, in particular more comprehensive corporate reporting: for instance, the previous Government launched a consultation on mandatory food waste reporting.[152] In the 2018 Resources and Waste Strategy, DEFRA suggested that it would explore corporate reporting on reuse and repair as well as "resource usage."[153]

58. **Achieving the widespread adoption of reusable packaging and refill would require fundamental changes to a large part of our economy and to the mindset and behaviour of companies and consumers—it will not be possible to deliver this using the Extended Producer Responsibility reforms alone.**

59. ***We recommend that the Government create a reuse taskforce containing representatives from industry and consumer groups. This taskforce should develop to a suite of measures to encourage, incentivise and require businesses and consumers to***

143 Q128; For more information, see "*Supermarkets in France forced to ditch plastic and set up 'refill stations' selling unpackaged goods*," The Times, 1 April 2021
144 Q142; Q213;
145 Q68; Wildlife and Countryside Link (PW0044); AAT (Association of Accounting Technicians) (PW0013); Surfers against Sewage (PW0015); Policy Connect (PW0025)
146 Greenpeace UK (PW0024)
147 Green Alliance, *Circular business: what companies need to make the switch*, July 2022, p 33
148 Greenpeace UK (PW0024), para 1.3.1.2; A Plastic Planet (PW0058); Green Alliance, *Circular business: what companies need to make the switch*, July 2022, p 33
149 British Plastics Federation (PW0042); Q213
150 Leicestershire County Council (PW0057); Q70
151 Environmental Services Association (PW0050); Q213
152 DEFRA, *Consultation on improved reporting of food waste by large food businesses in England*, June 2022
153 DEFRA, *Resources and Waste Strategy*, December 2018, para 2.2.7

adopt more reuse habits and systems. This group should consider measures including charges on single-use products, mandatory reporting on companies' plastic footprints, and how to raise public awareness of reuse schemes through campaigns as well as guidance and incentives for businesses.

5 Waste management infrastructure

60. While Extended Producer Responsibility for packaging has the potential to increase the recyclability of our plastic waste as well as reduce its volume, we need to ensure that we have the recycling facilities available to deal with the waste we do produce. During the inquiry, we repeatedly heard that the UK has insufficient recycling capacity. In this chapter, we look at this infrastructure gap, the barriers to investment and how the UK Government could tackle these problems.

What additional capacity do we need?

61. It will only be possible to meet higher recycling targets for plastic packaging if the UK recycling system has the capacity to process additional waste. Many organisations from the waste management sector told us that capacity issues are limiting recycling rates, encouraging exports of plastic waste. They also noted that it will prevent producers from including more recycled content in their products due to a limited source of recycled plastic.[154] In its 2021 report, WRAP estimated that in 2020 the UK had nearly 750k tonnes of plastic packaging recycling capacity, enough to support a recycling rate around 50%.[155] While estimates vary, we heard that we may need to double domestic sorting and recycling facilities to meet recycling targets over the coming years.[156] Viridor (a waste management business) estimates that we will need around 24 new plastic sorting facilities and 18–22 reprocessing facilities by 2035 and this does not include capacity to process hard-to-recycle plastics (discussed in chapter 6).[157] The previous Government told us that it expects to publish a waste infrastructure roadmap later in 2022.[158]

62. Without enough infrastructure, we were told that the waste management sector will likely resort to exporting more plastics, which we will discuss further in chapter 7.[159] This represents a lost economic opportunity for the UK.[160] Capturing the value of the plastic supply chain could create hundreds or even thousands of jobs in the recycling sector and add an estimated £30 million per year to the UK economy.[161]

Barriers to private sector investment

63. We heard from industry that there is between £0.5 billion and £1 billion of private investment ready to be invested in plastic reprocessing infrastructure, if government created "investment ready conditions."[162] The previous Government itself told us that there could be up to £10 billion.[163] The key barriers to realising this investment appear to be:

154 For instance see Viridor (PW0049); ReNew ELP (PW0038); The Chartered Institution of Wastes Management (CIWM) (PW0046); Q74

155 WRAP, *Plastics Market Situation Report 2021*, 6 October 2021, p 11

156 RECOUP, *UK Household Plastic Packaging Sorting and Reprocessing Infrastructure*, April 2020, pp 26–32; WRAP, *The UK Plastics Pact Annual Report 2020/21*, 30 November 2021, p 17; Viridor | Anthesis, *Bridging the Gap: Ending the UK's Reliance on Plastic Waste Export*, June 2022

157 Viridor | Anthesis, *Bridging the Gap: Ending the UK's Reliance on Plastic Waste Export*, June 2022, p 30 and p 33

158 Q378

159 Q37

160 ReNew ELP (PW0038); Dr Eleni Iacovidou et al. (PW0047); Manchester Metropolitan University (PW0029); Q344; The Chartered Institution of Wastes Management (CIWM) (PW0046)

161 Viridor | Anthesis, *Bridging the Gap: Ending the UK's Reliance on Plastic Waste Export*, June 2022, p 32 and; Green Alliance report?

162 Viridor | Anthesis, *Bridging the Gap: Ending the UK's Reliance on Plastic Waste Export*, June 2022, p 43; Qq272–274

163 Q344

a) **A lack of sustainable and stable income**. Reprocessors receive some funding via packaging waste recovery notes (PRNs) which producers are obliged to purchase; but as the value of these fluctuates based on market conditions, they do not provide a consistent revenue stream.[164] It is often the case that income that would be generated during the course of a waste management contract does not cover the costs of initial investment.[165] In addition, the volatile prices of virgin and recycled plastics means that it is often cheaper for producers to buy virgin plastics rather than recycled plastics, making revenues for recycled plastic difficult to predict.[166] This is particularly an issue for low value plastic films and food grade rPET (recycled polyethylene terephthalate): the latter was cheaper than virgin plastics before 2019 but by 2020 cost £350 per tonne more.[167] A lack of predictable, sustainable income makes investment risky. Both Veolia and Viridor (waste management businesses) told us that government should develop policies to spread risk and tackle the volatility of revenue streams.[168]

b) **Domestic processing being more expensive than exporting waste**. The PRN/PERN system (discussed in chapter 3[169]) directs more funding towards exporters than domestic recyclers. Packaging Waste Export Recovery Notes (PERNs) can be claimed on the total weight of exported material, which might include contaminated and other non-recyclable materials, whereas PRNs (Packaging Waste Recovery Notes—used for domestic recycling) are only issued after waste has been recycled, and therefore will only be claimable on easier to recycle plastics.[170] As the British Plastics Federation (BPF) explains, this difference in standards means that domestic reprocessing incurs more sorting costs than exporters do before it is eligible to receive funding via a PRN.[171] Viridor told us that this makes it around 20% cheaper for producers to pay for waste to be processed abroad rather than domestically, which they argue undermines UK based reprocessing efforts."[172]

c) **Uncertainty about where to invest**. Veolia has called for greater certainty about upcoming policies like EPR;[173] similarly Viridor argues that government needs to set a clear "long term trajectory" for plastics."[174] Such information will indicate to investors which kinds of plastics will be allowed on the market so the sector understands the type and scale of recycling facilities needed.

164 Viridor (PW0049)
165 Q253
166 Q13; Green Alliance (PW0033) para 1.4.3; Veolia (PW0045); Viridor (PW0049) ; ReNew ELP (PW0038); Wildlife and Countryside Link (PW0044); Dr Eleni Iacovidou et al. (PW0047); Environmental Services Association (PW0050);
167 WRAP, *Plastics Market Situation Report 2021*, 6 October 2021, p 14 and p 3
168 Veolia (PW0045); Viridor (PW0049)
169 Paragraphs 28–29
170 Peel L&P (PW0034)
171 British Plastics Federation, *Proposal for Growth of the UK Plastics Recycling Sector in a Circular Economy*, 2017, p 9
172 Viridor (PW0049)
173 Veolia (PW0045)
174 Viridor | Anthesis, *Bridging the Gap: Ending the UK's Reliance on Plastic Waste Export*, June 2022, p 40.

Plastic Packaging Tax

64. In addition to EPR (discussed above), the other major government policy to encourage investment in the recycling sector is the Plastic Packaging Tax (PPT). The PPT, introduced in April 2022, charges £200 per metric tonne on plastic packaging manufactured in or imported into the UK, unless it contains 30% or more recycled content. The aim is to demand for recycled plastics by making the use of virgin plastics more expensive.

65. We heard that PPT has sent a clear message to the market about the need for more recycled content and encouraged some investment in recycling infrastructure,[175] although there has been some debate over whether the tax rate is currently high enough to allow recycled plastic to effectively complete with virgin plastics.[176] Some of the evidence we have taken has put forward some recommended changes to the PPT to ensure its effectiveness.

The need for modulation and escalation

66. We heard that the 30% recycled content target may not be suitable for all sectors. Some sectors argued that they will find the 30% target unachievable in the short term despite best efforts; the BPF told us that "50% of all plastic packaging will be unable to use recycled content due to regulatory and technical issues and a lack of supply".[177] Sectors such as food[178] and cosmetic industries—which must follow higher hygiene standards—might find it particularly difficult to find enough high quality recycled material, with the Cosmetic, Toiletry and Perfumery Association arguing that the tax may "unfairly discriminate" against their sectors and lead to higher prices for consumers.[179] Conversely, for other sectors, we were told that the 30% threshold was not a stretching enough target.[180] For example, recycled bottles, which usually use PET plastic, can already achieve a recycled content greater than 30%.[181]

67. To address these issues, stakeholders have proposed that the exemption level of recycled plastic should be re-set at different levels for different sectors, and that the tax should become more challenging over time: either by gradually increasing the tonnage charge over time or by increasing the amount of recycled content required to maintain tax exemptions.[182] Our predecessor Committee made similar recommendations in its 2019 report entitled "Plastic food and drink packaging."[183] Viridor suggested that an "initial two to three percentage point per year plastic content escalator would align the tax with the 60% recycled target in the Resources and Waste Strategy and send a powerful investment signal."[184] Bright Blue, a think tank, similarly recommended getting to a 35%

175 Q87; Q95; ReNew ELP (PW0063)
176 Green Alliance (PW0033), para 1.4.3; Peel L&P (PW0034); Qq196–197
177 British Plastics Federation (PW0042)
178 Q193
179 CTPA (PW0019)
180 AAT (Association of Accounting Technicians) (PW0013); Surfers against Sewage (PW0015) para 2.1.5; Wildlife and Countryside Link (PW0044)
181 Wildlife and Countryside Link (PW0044)
182 For instance, the case for this was set out by Green Alliance (PW0033); Environmental Services Association (PW0050); Viridor (PW0049); Peel L&P (PW0034); Devon County Council (PW0054); Wildlife and Countryside Link (PW0044) and The Chartered Institution of Wastes Management (CIWM) (PW0046); Q258, Q288, Q293. Q87; Viridor (PW0049); Veolia (PW0045);
183 Environment, Food and Rural Affairs Committee, Sixteenth Report of Session 2017–19, *Plastic food and drink packaging*, HC 2080, 12 September 2019, paras 36–37
184 Viridor (PW0049)

threshold as soon as possible, followed by subsequent annual increases.[185] The Mineral Products Association, fearing difficulties for suppliers in the construction industry, called for additional thresholds to be set at 10 and 20% to encourage sectors where 30% is unachievable.[186]

68. The then Government response to the Plastic food and drink packaging report did not commit to changing the design of the tax.[187] However, the previous Government recently appeared to be more open minded about reform. During an evidence session, the former DEFRA Minister, Jo Churchill MP, suggested that escalating the tax in the future could be a "logical step" once recycling infrastructure had been developed.[188]

Verification

69. There have also been concerns about how the PPT is to be enforced. This is because producers' compliance with the PPT would be based on self-reporting. Given how difficult it is to analyse the recycled content of products after they have gone to the market,[189] witnesses told us that government might not be able to identify or generate sufficient evidence to verify or challenge claims.[190] Green Alliance, SUEZ (another waste management organisation) and the BPF said this was a particular risk for imported goods and called for a robust "verification system" to be developed. The BPF highlight that there are certification and audit systems in Europe that could be used to help.[191]

70. The previous Government published PPT guidance on how businesses can measure recycled content, conduct due diligence checks of their plastic supply chains and comply with the relevant regulations,[192] although recent media reports suggest that businesses may not be properly engaging with the tax or guidance.[193] When we asked DEFRA about how compliance would be monitored, the Department stated that this was more in the "purview" of HM Treasury, and they did not know the full details. However, DEFRA asserted that the Treasury could challenge businesses, as they can do for other taxes, to make sure they have the necessary documentation or proof to show a product has 30% recycled content.[194]

71. **We welcome the introduction of the Plastic Packaging Tax (PPT) which is expected to increase demand for recycling plastic material and re-encourage investment in the recycling sector as it grows to meet this demand. We call upon the new Government to commit to maintaining and developing this fiscal measure.**

72. **However, there is a risk that PPT, as currently designed, will not deliver against its intended objectives. A flat 30% recycled content requirement may well prove too easy**

185 Bright Blue (PW0018)
186 Mineral Products Association (PW0028)
187 Environment, Food and Rural Affairs Committee, First Special Report of Session 2019–21, *Plastic food and drink packaging: Government Response to the Committee's Sixteenth Report of Session 2017–19*, HC 207, pp 4–5
188 Q349
189 Green Alliance (PW0033)
190 Q116; Q134; Q136; Dr Eleni Iacovidou et al. (PW0047)
191 Q98; Green Alliance (PW0033); British Plastics Federation (PW0042)
192 HM Revenue and Customs, *Work out the weight of packaging for Plastic Packaging Tax*, last updated 22 March 2022; HM Revenue and Customs, *How to make due diligence checks for Plastic Packaging Tax*, last updated 5 April 2022
193 "*Plastic packaging tax sees 'surprisingly low' registration numbers in first month*", ENDS report, 15 August 2022; "*Is anyone prepared for the plastic packaging tax?*" ENDS report, 17 March 2022
194 Q346

for some sectors to achieve while acting as an unavoidable financial penalty in sectors with no viable alternatives, encouraging producers to swap to more environmentally damaging options. ***We recommend that the Plastic Packaging Tax (PPT) should be modulated with different, stretching targets tailored to different sectors and including partial exemptions for recycled content levels below the level at which a full exemption is granted, but above 10%. The Government should also set out a timetable for increasing the percentage of recycled material needed to attract total exemption from the tax to further stimulate demand for recycled plastics. The first such increase should come into force by 2025.***

73. ***To ensure the tax is delivering its intended impacts, the Government should publish an analysis of the impact of the tax by the end of financial year 2023/4. This evaluation should test the effectiveness of its verification systems and evaluate whether the tax rate is high enough to bring about the behaviour changes needed amongst producers whilst protecting low-income households. The tax should also be benchmarked against comparable international initiatives.***

Other proposals to encourage investment

74. The PPT is not the only proposal which will encourage investment in the recycling sector. For example, EPR and the introduction of consistent waste collections by local authorities[195] should produce more and better-quality sorted waste, allowing reprocessors to produce quality, more valuable, recyclate.[196] Most stakeholders we heard from were confident that the previous Government's reforms in this area would increase investor confidence in the recycling sector[197] but the waste management industry is keen for the Government to provide more long-term stability to revenues to make investment less risky and more viable.[198] As it will also take time for private investment to kick in following the introduction of EPR, a deposit return scheme and consistent waste collections, many stakeholders expressed concern that there will be an investment gap in recycling capacity and a lack of high quality recyclate to meet demand:[199] further interventions have been proposed to tackle this problem.

Filling in the investment gap: ringfencing raised funds

75. One criticism of Extended Producer Responsibility (EPR) is that is does not provide a mechanism to channel funding to the reprocessing sector—something that the current PRN/PERN system[200] does achieve. Both EPR and the Plastic Packaging Tax (PPT) will generate sizeable sums of money: the latter alone is expected to raise over £200 million per year.[201] However none of the funds raised will be earmarked for infrastructure investment. According to Richard Hudson (Chartered Institute for Wastes Management) this is a "big disappointment", that he regarded as a "backward step". He said that revenue from the PPT could have been used to provide an early "boost" and "backfill" for investment.[202] Other

195 The latest consultation on consistent waste collections can be found at: DEFRA, *Consultation on Consistency in Household and Business Recycling in England*, May 2021

196 Q10

197 For instance, SUEZ UK (PW0017) para 5.2; Environmental Services Association (PW0050), para 1.1; The Chartered Institution of Wastes Management (CIWM) (PW0046); Peel L&P (PW0034); Q75

198 Veolia (PW0045); Viridor (PW0049)

199 CTPA (PW0019); Q84, Q94; Q190; Q193

200 Discussed in chapter 3

201 HM Revenue and Customs, 'Introduction of Plastic Packaging Tax from April 2022,' 20 July 2021

202 Q86

representatives from the plastics and waste management sector agree that revenue from the tax should be used to help, particularly for the next wave of recycling technologies.[203] They could, for instance, be used to invest in new technologies that could tackle plastics that are currently hard to recycle: these are discussed further in chapter 6.

76. When asked about ringfencing funds for recycling infrastructure, the previous Government stated that "future revenues raised from the Plastic Packaging Tax and the Packaging Producer Responsibility reforms will enable investment to address single-use plastics, waste and litter."[204] When we asked this question directly to the Department, the then Minister did not reject the notion, although she highlighted that the novel nature of the PPT meant that revenues were hard to predict. A representative from the department added that a "Budget footnote" suggested that "some of the money would be used to improve recycling and tackle litter" but acknowledged however that it is not hypothecated.[205] While the previous Government had not announced any plans to ringfence funds from EPR or the PPT prior to the change of Prime Minister, it did recently announce that the packaging waste recovery note / packaging export recovery note system (PRN/PERN) would be continuing for a number of years in tandem with EPR. We have discussed the problems with this dual running above (in Chapter 3[206])—and recommended a limited period for this legacy arrangement—however, the approach would continue to direct some funding to the recycling industry, albeit inconsistent and time-limited.

Making income more secure

77. The waste management industry is keen for reprocessing and sorting facilities to have enough stable income to be attractive to investors. Viridor and Renew ELP (a chemical recycling business) believed that contracts for waste management infrastructure should be longer.[207] As the price of recycled plastic is a particular issue, there have also been calls from industry for "price stabilising" systems, such as guaranteed gate fee revenues[208] or Contracts for Difference (CfD), currently used by BEIS to support low-carbon electricity generation.[209] Under these arrangements, producers enter into a contract with a government owned company which agrees to pay the difference between an agreed (strike) price and the market price for the duration of the contract. In return the producer agrees to not be paid more than the strike price.[210]

78. According to a recent analysis by Viridor, DEFRA has been "explicit that it expects current or planned policy to provide sufficient clarity and incentives for the market to provide the necessary scale and quality of recycling and reprocessing capacity."[211] When we asked the previous Government about how it intended to ensure that investors got the payback they expected from recycling infrastructure, the response demonstrated confidence that the current programme of policy initiatives and reforms would provide the "certainty" investors needed. The Department noted that contractual arrangements were

203 Q94; Qq102–104
204 PQ 7891 [Plastics: Taxation] 24 May 2022
205 Qq364–365
206 Subsection "Continuation of the packaging recovery note system."
207 Q284; Viridor (PW0049); ReNew ELP (PW0038)
208 Viridor | Anthesis, *Bridging the Gap: Ending the UK's Reliance on Plastic Waste Export*, June 2022, p 40
209 Veolia (PW0045); Environmental Services Association (PW0050);
210 More information can be found on Low Carbon Contracts Company, ' What is a Contract for Difference (CfD)?', accessed 22 September 2022
211 Viridor | Anthesis, *Bridging the Gap: Ending the UK's Reliance on Plastic Waste Export*, June 2022, p 8

the responsibility of local authorities but added that the certainty provided by upcoming Government reforms might allow local authorities to offer longer contracts.[212]

Simplifying the plastics market

79. The plastics market is highly complex with multiple types of plastics and several grades and mixtures of each:[213] during our evidence session, the then DEFRA Minister told us that there are over 1,000 types of plastics.[214] Creating a less diverse plastics market, and collecting more homogenous bulk polymers, could make it easier to invest in recycling infrastructure, as it is easier to predict the make-up of waste. It could also facilitate development of closed-loop recycling infrastructure, seen by many as an important step towards a more circular economy[215] because this relies on keeping very similar plastics together, which will be easier with less plastic diversity.[216] Several academics and some waste management representatives have therefore called for a simplification,[217] standardisation[218] or "rationalising"[219] of the market—including the additives used as well as the range of polymers and grades of plastics[220]—to help 'streamline' waste management processes.[221]

80. EPR fees, if well-designed, should ensure that multi-material or multi-polymer products—which are difficult to recycle—face higher fees, encouraging producers to design out their use, which should go some way towards rationalising the market.[222] However, according to the Government's Resources and Waste Strategy Evaluation Plan, rationalisation is not an explicit aim of EPR,[223] despite calls for it to be so from the Environmental Services Association (ESA),[224] and it does not appear that there is anything in EPR to prevent many different, but equally recyclable products, being placed on the market.

81. The previous Government had indicated that it might provide stronger market signals to improve the efficiency of the plastics market and had been consulting on extending its bans on some unnecessary or problematic single-use plastics or introducing

212 Q363; Q366
213 Q236
214 Q321
215 A 'closed loop' recycling system is where recyclate is used to manufacture another product in the same product category as that of the original material. This process limits contamination from different materials, allowing multiple recycling "cycles" before its quality degrades too much. By better preserving the value of the material, it can be an effective way to slow the 'downcycling' of products into less and less valuable materials, which will eventually need to be disposed of.

Many stakeholders want to see more closed-loop recycling facilities in the UK as this is closer to a circular economy for plastics: for instance, National Association of Waste Disposal Officers (PW0059), PW0014, Professor Richard Thompson OBE FRS (Professor of Marine Biology at University of Plymouth) (PW0027);
216 Martin Burgess et al., "*The future of UK plastics recycling: One Bin to Rule Them All*," Resources, Conservation and Recycling, vol 164, January 2021; Royal Society of Chemistry, *The Future of Recycling*, accessed 4 October 2022
217 Qq226–227
218 Martin Burgess et al., "*The future of UK plastics recycling: One Bin to Rule Them All*," Resources, Conservation and Recycling, vol 164, January 2021
219 Q258; Q293;
220 Q238; Martin Burgess et al. "*The future of UK plastics recycling: One Bin to Rule Them All*," Resources, Conservation and Recycling, Volume 164, January 2021, 105191; Royal Society of Chemistry, *The Future of Recycling*, accessed 4 October 2022
221 Manchester Metropolitan University (PW0029)
222 Q324
223 DEFRA, *Resources and Waste Strategy Evaluation Plan*, August 2020 p 45
224 Q258

further charges for their use.[225] However no further announcements or information had materialised prior to the change of Prime Minister, and some witnesses argued that these initiatives did not "get to the heart of the issue"[226] given the focus on a relatively small range of commonly littered, single use items.[227] When we asked about the previous Government's position on further simplifying the range of plastics on the market, the then Minister seemed open to other "legislative measures to rationalise the number of plastics used in products". The Minister suggested that before this step could be taken, more work must be done, potentially at an international scale, to ascertain which plastics are the "poorest to recycle".[228]

82. **We welcome the previous Government's efforts, through the Plastic Packaging Tax and other reforms, to increase the demand for recycled plastics and thereby its aim to make the recycling sector more investable in the long run, helping the UK boost its recycling capacity. However, further action is needed to increase the capacity of the recycling sector more quickly—particularly in the short term—and supply manufacturers with the recycled materials that government wants and needs them to use. We are not convinced that the aggregated current measures alone will resolve the problem of cheaper virgin plastics and unstable returns on investment which hinders investor confidence.**

83. ***We call on the new Government to commit to its predecessor's welcome decision to use some of the money generated via its reforms to support investment in recycling capacity. We recommend that the expected infrastructure roadmap—anticipated in late 2022—provides detailed information about how much investment will be provided over what time scale, and identify key areas of government and private investment. As a minimum, it must deliver at least as much investment as the current Packaging Waste Recovery Note system generates for the sector.***

84. ***We also recommend that, by the end of 2023, the new Government conduct a feasibility study of other mechanisms to encourage investment, including measures to rationalise the plastics market and introduce price-stabilising mechanisms for plastic recyclate, similar to those used for renewable energy.***

225 DEFRA, *Consultation on proposals to ban commonly littered single-use plastic items in England*, November 2021
226 Q55
227 Q111
228 Q381

6 Recycling "difficult" plastics

85. As we argued in the last chapter, the UK needs to increase its recycling capacity. However, to process all the waste we produce, it may not be sufficient just build more mechanical recycling plants. This is because some waste plastics are difficult to manage using only mechanical recycling facilities. In this chapter we consider the role that other technologies—primarily compostable plastics and "non-mechanical" or "chemical" recycling—might play in the future of our recycling infrastructure.

The limits of mechanical recycling

86. Almost all plastic recycling in the UK is "mechanical" recycling: this is where plastics are washed, shredded or milled then melted and turned into pellets, which can then be used to create new plastic products. Under this treatment, the polymers that make up the plastic stay the same.[229] Mechanical recycling is currently the cheapest and most environmentally friendly recycling method. However, there are limits to how often plastics can be recycled mechanically before they can no longer be reused and can only be incinerated. This means that mechanical recycling cannot be our sole disposal solution for plastic waste long term if we are to create a truly circular economy.

87. Mechanical recycling can also struggle with many flexible plastics and films. While it is possible to recycle some via mechanical recycling, UK infrastructure in particular is not set up to cope with them, either because it cannot easily sort it from other waste, it is contaminated by food (which damages mechanical recycling systems) or it is made up of multiple layers of different polymers, making them difficult to recycle.[230] WRAP states that these plastics pose a huge problem for recycling capacity and a major barrier to improving recycling rates, accounting for a fifth of consumer packaging but only 6% of which is collected for recycling.[231] This is because, according to a 2019 survey, only 14% of local authorities offer a kerbside collect service for films.[232] WRAP believes that an extra 170kt of recycling capacity for plastic films needs to come online to meet the target of having a 70% plastic packaging recycling rate by 2025.[233] Getting a handle on the flexible plastic problem is essential for creating a circular economy for plastics.

88. As part of Government reforms to local waste collections, local authorities will be required to collect flexible plastics and films: this is expected to come into effect for non-household waste by the end of 2024/25 and for household waste, by March 2027.[234] In the meantime, the Government and WRAP are working with industry to prepare waste management infrastructure in England for these changes.[235] The Government is also supporting initiatives looking into the problems of flexible plastics, such as the Flexible Plastic Fund's FlexCollect project[236] and the Circular Economy for Flexible Packaging programme.[237] Members of the UKPP are also, on a voluntary basis, working to make

229 Royal Society of Chemistry, *Mechanical recycling*, accessed 22 September 2022
230 TIPA (PW0035) paras 2.0–2.7; RECOUP, *UK Household Plastics Collection Survey 2020*, 2020, p 20
231 WRAP, *The UK Plastics Pact Annual Report 2020/21*, November 2021, p 9 and 13
232 RECOUP, *UK Household Plastics Collection Survey 2020*, 2020, p 7
233 WRAP, *Plastics Market Situation Report 2021*, October 2021, p 13
234 DEFRA, *Consultation on Consistency in Household and Business Recycling in England*, May 2021
235 DEFRA, *Consultation on Consistency in Household and Business Recycling in England*, May 2021, pp 69–72
236 "*UK's largest flexible plastic household collection and recycling pilot launches*" Circular, 19 May 2022; "*FPF FlexCollect - the UK's biggest flexible plastic household collection and recycling pilot goes live*", Ecosurety, 19 May 2022
237 CEFLEX, 'A circular economy for flexible packaging', accessed 22 September 2022

flexible plastics more recyclable by aligning product designs to industry agreed guidelines and retailers are introducing flexible plastic collection points in their stores.[238] Nonetheless, kerbside recycling is expected to be the main solution[239] and, since this is dominated by mechanical recycling technology, there remain serious technical challenges with hard-to-recycle but necessary plastics that mechanical recycling either cannot process or cannot process in a way that maintains a plastic's value for reuse.[240] For these kinds of plastics, other disposal routes must be explored.

Chemical recycling and compostable plastics: another solution?

89. The main current alternatives to mechanical recycling are currently landfill and, increasingly, incineration—usually as part of energy from waste (EfW) facilities. Witnesses have told us that EfW will be an interim approach to managing hard-to-recycle plastics and might become more sustainable as carbon capture technologies develop.[241] However incineration remains a poor outcome from a waste hierarchy perspective and has significant impact on air quality. Environmental organisations have called for measures to disincentivise incineration, including an incineration tax[242] or a ban on building new incineration plants, a measure the Scottish Government has implemented.[243] However both the Government and waste management organisations told us that such moves could lead to more landfill, a worse outcome, as alternatives to incineration are limited.[244] Instead, many witnesses from the plastic and waste management industries said that chemical recycling and compostable plastics, combined with mechanical recycling,[245] were likely required to wean the UK off exports and incineration.[246]

Compostable plastics

90. A compostable plastic is a type of biodegradable plastic which breaks down in specific home or industrial composting conditions into biomass, water and gases (like carbon dioxide and methane). The term "biodegradable" is a more general term for plastics that breakdown in the environment, a term that many stakeholders felt was unhelpful because all material usually biodegrades, including plastics, but the problem is the length of time the process can take and environmental impact of what it biodegrades into. Witnesses argued that the term biodegradable should not be encouraged in discourse around the plastics market.[247]

91. Our predecessor Committee's Report on "Plastic Food and Drink Packaging" concluded that compostable plastics were problematic because the organic recycling sector lacks the infrastructure to process them and consumers are often confused about

238 WRAP, *The UK Plastics Pact Annual Report 2020/21*, November 2021, p 10 and 13
239 Q172
240 Pew Charitable Trusts and SYSTEMIQ, *Breaking the Plastic Wave*, 2020, p 32; TIPA (PW0035); ReNew ELP (PW0038)
241 Q287; The Chartered Institution of Wastes Management (CIWM) (PW0046); Environmental Services Association (PW0050)
242 Q72
243 "*Putting limits on incineration capacity*," Scottish Government press release, 16 June 2022
244 Qq287–288; Q375
245 Proponents of chemical recycling and compostable plastics were keen to stress to us that composting, chemical and mechanical recycling can complement each other and specialise in different types of plastic waste generated in the UK: for instance see Q237; Q10
246 Q72; Q74; Q92; British Plastics Federation, *Recycling Roadmap*, January 2021, chapter 2.4
247 Q199

how to dispose of such packaging. The then Committee recommended that it only be used in closed-loop environments with a dedicated disposal and collection service.[248] We have heard similar evidence about UK infrastructure in this inquiry.[249] We have also heard that composting is lower on the waste hierarchy than mechanical recycling, and, as the Government has suggested, is less circular and more linear[250] with a lot of the value of the plastic lost as greenhouse gas emissions.[251] Professor Miodownik (UCL) also highlighted that the compostable market is currently a "Wild West" of packaging, with many different types produced and various claims made about their environmental credentials.[252]

92. Despite these misgivings, there appears to be an emerging consensus that compostable packaging could serve a purpose in specific, targeted applications.[253] The Ellen MacArthur Foundation, A Plastic Planet, the British Plastics Federation and the UCL Plastic Waste Innovation Hub all argued that compostable plastics are "likely to play an important but small role in the future of sustainable packaging,"[254] particularly hard-to-recycle, but necessary plastic products contaminated by food waste.[255] While there are question marks over the impact on long term soil health,[256] various studies do appear to show that compostable packaging, produced to the right standard, can be effectively disposed of alongside food waste[257]—an approach already followed in Italy, Ireland and Spain.[258] Redirecting food waste remaining on plastics into composting could also close the loop on food waste, a major greenhouse gas emitter, and help to generate more fertiliser and improve soil health.[259] Finally, as many consumers erroneously dispose of food-contaminated flexible plastics into their organic and food waste streams compostable solutions could help the organic recycling sector, which current spends around £7.26 million per year trying to remove and dispose of conventional plastics that have contaminated their waste streams.[260]

Chemical recycling

93. There has recently been increased interest in the potential of "non-mechanical" or "chemical" recycling. This is an umbrella term for several technologies that use heat or chemical processes to break apart the polymer chains of plastic. This enables some of the plastic waste feedstock to return back into its chemical building blocks to create effectively "new" plastics.[261]

248 Environment, Food and Rural Affairs Committee, Sixteenth Report of Session 2017–19, *Plastic food and drink packaging*, HC 2080, 12 September 2019, para 83
249 Green Alliance (PW0033) para 4.4; UCL Plastic Waste Innovation Hub (PW0036); Q202
250 Q317; Qq351–352; Royal Society of Chemistry, *Compostable and biodegradable plastics*, accessed 22 September 2022
251 "Where compostable packaging fits in a circular economy," Ellen Macarthur Foundation, 26 May 2022; Royal Society of Chemistry, *Compostable and biodegradable plastics*, accessed 22 September 2022
252 Q203
253 Ellen Macarthur Foundation, *A Vision of a Circular Economy for Plastic*, accessed 22 September 2022; A Plastic Planet, *The Compostable Conundrum*, last updated October 2021
254 UCL Plastic Waste Innovation Hub (PW0036)
255 WRAP, *Considerations for compostable plastic packaging*, 6 February 2020; A Plastic Planet, *The Compostable Conundrum*, last updated October 2021; British Plastics Federation (PW0042)
256 The Grantham Centre for Sustainable Futures, University of Sheffield (PW0051); Q202; Q218
257 Q231
258 TIPA (PW0035); REA (PW0064)
259 TIPA (PW0035); A Plastic Planet, *The Compostable Conundrum*, last updated October 2021 p 4 and 9
260 TIPA (PW0035); Q231
261 Royal Society of Chemistry, *Chemical recycling*, accessed 22 September 2022

94. Chemical recycling has been hailed by some as the start of an "infinite recycling system"[262] or a path to "full circularity" for plastics[263] particularly previously deemed unrecyclable.[264] It also has the advantage of creating brand-new high-quality plastics, particularly recycled food-grade plastics which must adhere to strict standards,[265] that mechanical recycling cannot achieve in the long run. Proponents of chemical recycling also cite a growing amount of evidence suggesting that the overall environmental impact of the process is better than EfW.[266] Future technologies—like enzyme-based chemical recycling[267]—may also prove to be more efficient. However as with all newer technologies, a lot of the initial claims about chemical recycling have yet to be proved at scale and there is currently a lack of real-word information on its impacts.[268]

95. There have also been criticisms of chemical recycling's potential environmental repercussions, particularly due to the use of toxic chemicals and the greenhouse gas emissions associated with some chemical recycling processes.[269] It has also been highlighted that chemical recycling technologies do not recycle 100% of the plastic input—significant percentages can become either residual waste or are used for fuel, rather than becoming new plastic, although this does vary widely according to the technology in question.[270]

96. There is, however, a potential common ground between proponents and critics. For instance, WWF was reticent about chemical recycling when speaking to us,[271] but it has produced a set of principles for chemical recycling that offer a potential approach that the Government, and the sector as a whole, could take.[272] According to these principles, if chemical recycling is limited to only necessary plastics and situations where no other cleaner recycling solution is possible then it should be explored.

How can government better support these technologies?

97. Public expenditure is supporting research in these sectors, including a £20 million allocation to three chemical recycling plants through UK Research and Innovation.[273] However, there have been calls for the Government to make its stance clearer or more supportive for these technologies by:

262 "*The world's first 'infinite' plastic*," BBC News, 12 May 2021
263 Q78
264 Manchester Metropolitan University (PW0029); Q78; Q79
265 WRAP, *Report to the Defra Packaging Collections Recycling Working Group on the Implementation of Plastic Film-Flexibles Recycling Within Consistency Policy* December 2020, p 8, 11; Neste, 'Why chemical recycling,' accessed 21 July 2022; Consumer Goods Forum, *Chemical Recycling in a Circular Economy for Plastics*, April 2022, p 8; Qq76–81
266 ReNew ELP (PW0038); Q76; Q234
267 Q235; Q317
268 "*Could chemical recycling be a silver bullet?*" ENDS report, 18 August 2022
269 TIPA (PW0035)
270 TIPA (PW0035); Chemical Recycling Europe, '10 Questions and Answers to Better Understand Chemical Recycling', accessed 22 September 2022; Eunomia, *Chemical Recycling: State of Play*, December 2020; Royal Society of Chemistry, *Chemical recycling*, accessed 22 September 2022
271 Q17
272 WWF, *WWF Position: Chemical Recycling Implementation Principles*, January 2022
273 The UKRI Smart sustainable plastic packaging challenge has put £20 million towards three chemical recycling plants, including the ReNew ELP plant in Teeside [PQ 35890 [Plastics: Waste Disposal] 27 July 2021 and *ReNew ELP receive £4.42million grant from Innovate UK*, ReNew ELP press release, accessed 12 January 2022; "*UKRI funding puts UK at the forefront of plastic recycling*," UKRI press release, 16 October 2020]. It is also sponsoring research into plastics that will look into the "economic and environmental impact of mainstreaming compostable packaging" ["*Plastic packaging innovations receive £30 million boost from UKRI*", UKRI press release, 2 March 2022].

- **Lowering the fees that these technologies will incur.** Fees under EPR and the Plastic Packaging Tax (PPT) are currently expected to treat compostable plastics the same as traditional virgin plastics while government waits for more evidence on their environmental impact.[274] While experts have told us that it makes sense to tax a material, like compostable plastics, until a suitable disposal system is set up,[275] there are fears that this might discourage investment in a potentially useful area of development for the future,[276] and some have called for reducing the fees on compostable packaging that meets government-approved standards.[277] Similarly, WRAP and stakeholders in the plastics industry have argued that chemically recycled plastics should not be subject to fees under the Plastic Packaging Tax;[278] and, since this evidence was taken, the previous Government changed the rules to exempt chemically recycled plastic from the PPT,[279] despite the fact that compostable plastics will still be taxed. Others have argued that, where fees do apply to these technologies, the receipts should be ringfenced for allocation to further research.[280]

- **Setting out a clearer vision for each industry:** While compostable packaging does feature in government targets, proponents believe that industry or government guidelines should set out when compostable packaging is most appropriate: either mandating their use for certain applications or providing green and red listing guidance for product designers.[281] ReNew ELP (a chemical recycling business) told us that the Government needs a "holistic vision" covering both mechanical and chemical recycling,[282] highlighting that the chemical recycling sector is barely mentioned in the 2018 Resources and waste strategy:[283] it is only briefly referenced as a "potential" stop-gap technology while 'difficult-to-recycle' plastics are designed out of circulation entirely,[284] but does not mention it as a solution for when even normally recyclable plastics have lost their value. The Government told us that it should be in a position to make decisions on its position on chemical recycling in two years' time following the evaluation of four projects.[285]

- **Ensuring that regulations and infrastructure match-up:** ReNew ELP and WRAP have identified ways in which the chemical recycling sector could be better supported, particularly in relation to accessing to quality feedstock[286]

274 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Extended Producer Responsibility for Packaging Consultation Document*, 24 March 2021, p 11
275 Q202; Q226
276 National Association of Waste Disposal Officers (PW0059), para 6.3
277 REA (PW0064) TIPA (PW0035). There are a number of standards for composting, including a harmonised European standard, British Industry Standards BS 14995 and BS EN13432 and an international standard for home composting.
278 Q10; Q84; WRAP, Redesigning the plastics system – the role of non-mechanical recycling, August 2022,
279 "*The plastic tax is failing just three months after launch. How can it be revived?*" The Grocer, 4 July 2022
280 National Association of Waste Disposal Officers (PW0059); Q236; REA (PW0064); ReNew ELP (PW0038)
281 A Plastic Planet, *The Compostable Conundrum*, last updated October 2021; REA (PW0064); TIPA (PW0035)
282 ReNew ELP (PW0038)
283 Q236
284 DEFRA, *Resources and Waste Strategy*, December 2018, p 79
285 Q373
286 WRAP, *Non-Mechanical Recycling of Plastics*, October 2019, p 15. ReNew ELP stated that access to plastic feedstock has been one of their biggest issues: mechanical recyclers have so far been unwilling to separate out plastics that might be suitable for chemical recycling and there are no standards for residual waste plastics that could encourage businesses to divert it away from incineration: ReNew ELP (PW0063); Q228

and ensuring consistency across the various regulatory regimes that affect the sector.[287] We heard calls for government to regulate compostable plastics so that only acceptable standards are used and a set disposal stream—like food waste—is identified. Such clarity will help the organic recycling sector adapt current infrastructure, which is currently ill-equipped to decompose compostable packaging, but could be.[288] The importance of clear labelling was also stressed which specify to consumers, in plain English, how to dispose of such items i.e. using terms like "put into food waste bin" rather than use confusing terms like "compostable" to allow compostable waste to reach appropriate facilities for processing.[289]

98. **There is no technological silver bullet to resolve the challenges of recycling plastic waste. We welcome the work of the previous Government and industry to strengthen the mechanical recycling sector. However, it appears likely that this will need to be supported by other technologies in order to create a circular economy and sustainably manage flexible and other hard-to-recycle plastics. This is likely to involve the application of chemical recycling and compostable packaging in distinct areas where mechanical recycling is not a good solution: such as potentially using compostable packaging for food-contaminated products.**

99. ***By 2023, the Government should update its infrastructure roadmap to set out its plan for the future role of chemical recycling and composting within our plastics economy and waste management system. In particular, the Government must make a decision, based on the latest evidence about their impact on soil health, on the role of compostables, so that the organic recycling sector can adapt alongside the mandatory collection of food waste in 2024/25. If they are to be encouraged, the Government should adapt national targets to reflect their expected use. Product labelling must also be standardised to clearly indicate to consumers how they should dispose of compostable plastics and prevent them from contaminating other plastic waste streams. Labels should avoid unhelpful terms like 'biodegradable'.***

100. ***The Government need to publish clear, evidence-based criteria for how Extended Producer Responsibility fees and the Plastic Packaging Tax will apply to new technologies, including compostable plastics and chemical recycling. We recommend the hypothecation of income raised from fees on compostable plastics and chemical recycling to research the most promising versions of these technologies or the development of appropriate recycling infrastructure.***

101. ***Finally, we recommend that the Government should consider the merits of introducing an incineration tax, designed to drive up demand for—and therefore attract private capital investment in—alternative waste disposal methods once they are viable, including mechanical, chemical and composting recycling facilities.***

287 WRAP and National Interdisciplinary Centre for the Circular Chemical Economy, *Non-technical challenges to non-mechanical recycling*, April 2021; ReNew ELP (PW0063)

288 Q232; WRAP, *Considerations for compostable plastic packaging*, 6 February 2020, p.9; Green Alliance (PW0033), para 4.4; REA (PW0064); UCL Plastic Waste Innovation Hub (PW0036); National Association of Waste Disposal Officers (PW0059)

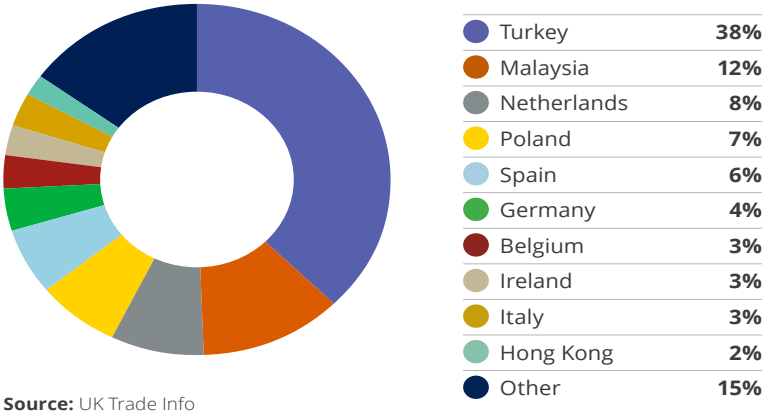
289 Q199; Q201; TIPA (PW0035)

7 International plastics

The current state of UK plastic waste exports

102. The UK is heavily reliant on exports for managing plastic waste.[290] Recent estimates suggest that the UK exports around 60% of its packaging waste.[291] As discussed in chapter 5,[292] this is due to a lack of UK recycling capacity and because it is cheaper to export waste plastics than processing it domestically. China was historically the main recipient of global plastic waste exports; however, this ended when China introduced strict new import rules in 2018 to better protect the environment and human health.[293] Since then, Turkey has become the most common destination for UK plastic waste exports,[294] as illustrated in the diagram below:

UK recovered plastic export destinations in 2020



Source: UK Trade Info

Source: WRAP, ***Market Situation Report 2021: Plastic Packaging,*** 2021, p 16

290 WRAP, *Plastics Market Situation Report 2021*, 2021, p 11
291 Valpak, *PackFlow Covid-19 Phase I: Plastic*, October 2020, p 8; British Plastics Federation (PW0042)
292 Paragraph 63
293 Environmental Investigation Agency, *The Truth Behind Trash*, September 2021, p 4
294 British Plastics Federation, *Recycling Roadmap*, January 2021, p 22

Regulation of exported plastic waste

103. International rules on the shipping of hazardous waste are contained within the UN Basel Convention, with the Environment Agency responsible for enforcing these and other regulations on waste shipments from England. The Agency has published guidance on the controls that apply when exporting waste plastic, which vary according to the category of waste and whether the destination country is a member of the OECD.[295] The Basel Convention[296] sets out three main categories of plastic waste:

- **Green list**, which largely refers to single polymers almost free from contamination;
- **Y48**, which covers most mixtures of plastic waste; and
- **Amber list**, which refers to plastic waste that does not meet either of these requirements, including hazardous plastic waste.[297]

104. The Basel Convention was established, in 1992, largely in response to incidents in which hazardous waste, from wealthier countries, was dumped in developing countries—where poor environmental and health and safety standards created serious risks of pollution and the emission of dangerous gasses, with implications for both the environment and human health.[298] As a result, at the heart of the Basel Convention is the stricture that only 'green list' or 'Y48' waste can be shipped to non-OECD countries.[299] Since January 2021, importers must give 'prior informed consent' for any non-green list shipments, meaning the exporter must obtain proof that the importer has agreed to accept the waste and dispose of it responsibly.[300]

105. Despite this regulatory framework, the UK has a serious problem with waste crime, estimated to cost the UK economy around £1bn per year.[301] Illegal practices used by rogue operators include misdescribing hazardous shipments as 'green list' or concealing mixed waste to avoid the need to obtain consent and dispose of more complex waste that would otherwise be costly to deal with.[302] In a speech on 12 April 2022, Environment Agency (EA) Chief Executive Sir James Bevan emphasised the damage waste crime does to society given its link to organised crime, "trafficking of drugs, guns and people; theft; tax evasion; violence and intimidation" and the widespread and significant harm it causes to people and the environment.[303] He has previously described the increasing threat of waste crime as 'the new narcotics'.[304]

295 Environment Agency, *Guidance on importing and exporting waste plastic*, last updated 4 October 2021. Equivalent guidance for Wales, Scotland and Northern Ireland is issued by their respective authorities: Natural Resources Wales (*Guidance on Importing and Exporting Waste*, last updated 4 November 2021); the Scottish Environment Protection Agency (*Transfrontier Shipment of Waste*, accessed 4 August 2022); and the NI Department of Agriculture, Environment and Rural Affairs (*The transfrontier shipment of waste*, last updated 3 December 2021)

296 Secretariat of the Basel Convention, 'Text of the Convention', accessed 23 September 2022

297 Secretariat of the Basel Convention, 'Text of the Convention', accessed 23 September 2022

298 *Environmental crime*, POSTnote 547, Parliamentary Office of Science and Technology, January 2017

299 Environment Agency, Guidance on importing and exporting waste plastic, accessed 18 July 2022

300 Environment Agency, *Guidance on importing and exporting waste plastic*, last updated 4 October 2021

301 Environment Agency, 'Speech: Crackdown on waste crime: Time to stop trashing our future,' 12 April 2022

302 National Audit Office, *Investigation into government's actions to combat waste crime*, HC 1149, 27 April 2022, p 6

303 Environment Agency, 'Speech: Crackdown on waste crime: Time to stop trashing our future,' 12 April 2022

304 DEFRA, *Independent review into serious and organised crime in the waste sector*, November 2018, p 4

106. While these waste export regulations, as well as the current system of Packaging Waste Export Recycling Notes (PERNs—discussed in chapter 3[305]), are meant to ensure waste is exported sustainably, the UK has long been referenced in the media and independent studies as a substantial source of illegal hazardous waste exports—for example, the 2018 Independent Review of Serious and Organised Crime in the Waste Sector found that in the UK "… waste exports provide ample opportunity for organised criminals to operate at scale, with a veil of legitimacy and with limited probability of detection."[306] Similarly, the Public Accounts Committee consider that the Environment Agency "is not doing enough to prevent the illegal export of waste."[307] The National Audit Office, in its 2022 investigation into waste crime in England, found that the Environment Agency did not know the scale of illegal exports, but it did intercept between 200 to 450 containers per year containing non-compliant waste exports.[308] Many of the witnesses for this inquiry, and other commentators, are concerned that plastic waste originating from the UK is still being illegally dumped and burned abroad.

107. Such activity particularly affects marginalised people in poorer countries where waste imports can be seen as a lucrative source of income.[309] Waste that is mismanaged or disposed of in unregulated ways can pose a serious threat to local health; it is estimated that every 30 seconds, one person dies from diseases caused by mismanaged waste.[310] It can also cause a variety of economic, social and health impacts including land and water degradation, air pollution and food chain contamination.[311] Greenpeace's May 2021 "Trashed" report[312] highlights significant evidence of British plastic waste being dumped and burned across the Adana province in southeast Turkey. We heard from Greenpeace about the wide range of toxic chemicals—linked to various health problems including cancer, liver disease, skin lesions and abnormal foetus development—which had been found in ash and soil samples from the Adana dump sites.[313] Nihan Temiz Ataş, Biodiversity Project Lead at Greenpeace Mediterranean, described the environmental and human health impacts as "irreversible and shocking"[314]. She also told us that the levels of some toxins were "the highest ever reported in the soil in Turkey, 200,000 times the control sample"[315] and that "80% of the plastics waste that we found on the field belonged to the UK."[316]

Tackling mismanagement

108. Given these alarming accounts of the damage UK waste exports are causing, witnesses to our inquiry suggested two primary solutions: more robust enforcement of existing rules on the export of waste; and banning or heavily restricting what can be exported and where it can be shipped.

305 Paragraph 28-29
306 DEFRA, *Independent review into serious and organised crime in the waste sector*, November 2018, p 9
307 Public Accounts Committee, *Government Actions to Combat Waste Crime*, HC33, 8 September 2022, p 7, para 6
308 National Audit Office, *Investigation into government's actions to combat waste crime in England*, HC 1149, 27 April 2022, paras 1.8, 1.9, 1.12
309 "*Plastic waste is hurting women in developing countries – but there are ways to stop it*," The Conversation, 22 October 2021
310 Tearfund, *No Time To Waste*, 2019, page v
311 Environmental Investigation Agency, *The Truth Behind Trash*, September 2021, p10
312 Greenpeace, *Trashed*, May 2021
313 Greenpeace, *Game of Waste*, February 2022, pp 15–16
314 Q245
315 Q245
316 Q247

Better compliance and enforcement activities

109. Viridor and the ESA estimated that only between 5 and 10% of their shipments were inspected by the EA.[317] Several waste management organisations, as well as the National Audit Office, Environmental Investigation Agency (EIA) and the Environmental Services Association (ESA) have all concluded that this is not enough: inspection and other compliance and enforcement activity must be improved to prevent illegal plastic waste exports.[318] This will likely require better resourcing of the EA.

110. The previous Government told the Environmental Audit Committee that the EA, as the Department's largest agency, was "generously resourced."[319] The figure below, from the NAO, shows how the total grant-in-aid funding available to the EA for all its environmental protection activities has reduced by over 50% since 2010, mainly through a major reduction of the non-ringfenced element—which is not usually used for waste crime enforcement activities—but also a decrease in generic enforcement funding, which sometimes is used to enforce waste crime regulations.[320] Although a ring-fenced element for waste crime enforcement was introduced in 2011, this has remained unchanged since 2018, and is being incorporated into the Agency's core funding from 2022/23.[321] The EA has committed to continue allocating £10 million to waste crime enforcement in 2022/23,[322] although it has not indicated what will happen after then.

317 Q261; Q262

318 Environmental Investigation Agency, *The Truth Behind Trash*, September 2021, p 5; Environmental Services Association, *Counting the Cost of UK Waste Crime*, 2021, p 4; National Audit Office, *The packaging recycling obligations*, HC 1386, 23 July 2018, pp 9–9; SUEZ UK (PW0017) para 5.4; The Chartered Institution of Wastes Management (CIWM) (PW0046)

319 Oral evidence taken before the Environmental Audit Committee, HC (2022–23) 478, Q40

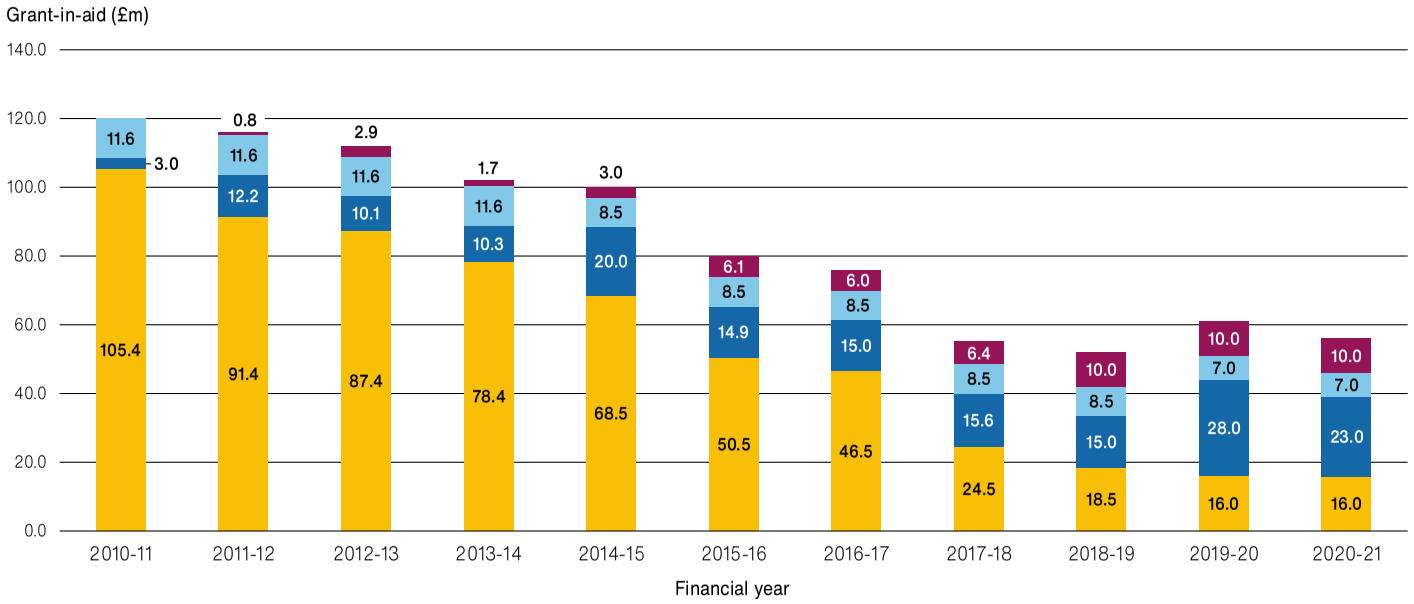
320 Environment Agency (PW0066)

321 National Audit Office, *Environmental compliance and enforcement*, HC243, 24 May 2022, p 32, para 58

322 Environment Agency (PW0066)

Figure 7

Grant-in-aid funding to the Environment Agency for environmental protection, 2010-11 to 2020-21



Notes

1 The Environment Agency has enforcement responsibilities for a range of sectors including agriculture, industry and waste management. This includes enforcement associated with the regulation of industrial facilities, storm overflows and fisheries, as well as in response to serious pollution incidents and waste crime.

2 Figures are in nominal terms.

3 This grant-in-aid funding is for the Environment Agency's environment and business Directorate. The Environment Agency also receives grant-in-aid associated with its flood and coastal risk management.

Source: National Audit Office analysis of Environment Agency data

Source: National Audit Office, *Environmental compliance and enforcement*, HC 243, 24 May 2022, p 17

111. While some compliance activities can be funded through charge income (charges on polluters for a permit or a service that the EA provides), there has been a significant drop in grant-in-aid funding. Furthermore the EA told us that it unable to compensate for any drop in income for enforcement—charge income can only be used to fund regulatory activities.[323] Sir James Bevan, Chief Executive of the EA, has argued that the Agency should be allowed to use some the income it receives from regulating the legitimate waste industry "to fight the criminals which damage it."[324] Otherwise, as Sir James told us, the EA has to adopt a "very targeted approach" for enforcement which is a "a function of resourcing".[325] Funding for tackling waste crime was raised by the 2018 Independent review into serious and organised crime in the waste sector, which recommended that government should find other sources of income to fund enforcement efforts, such as allowing the EA to charge more fees to cover these costs.[326]

112. We heard from Jacob Hayler, Executive Director of the ESA, that it was currently far too easy for would-be waste criminals to obtain a licence, citing the example of an ESA consultant "who registered their dead dog as a waste carrier"[327]. The Government is currently consulting on reforms to the waste carrier, broker and dealer regime in England which would replace the current registration requirements with a permit system and enhance the background checks needed to operate in the waste sector.[328] We also heard that while some businesses do carry out due diligence checks to ensure that exports are recovered as sustainably as possible, that is difficult to do when brokers are involved or waste (or post-recycling residual waste) moves between organisations, particularly in foreign countries.[329] In addition, the UK Government, along with the devolved governments, also plans to introduce mandatory digital waste tracking[330] along with Extended Producer Responsibility (EPR) reforms that will potentially require exporters to provide more evidence that waste exported abroad is actually recycled.[331]

113. Together, these reforms have the potential to help deter criminal activity by increasing transparency around the movement of waste consignments. However, several commentators have made the point that these reforms will not tackle those waste handlers that choose to operate wholly outside of the system, adding that only a higher level of funding for enforcement will make a significant change to waste crime in England.[332]

114. **While upcoming Government reforms to the regulation of waste carrier registration and the introduction of digital waste tracking both have the potential to help combat the dumping of UK waste in foreign countries, the current level of compliance and enforcement activity by the Environment Agency does not appear**

323 Oral evidence taken before the Environmental Audit Committee, HC (2022–23) 478, Q38
324 Environment Agency, 'Speech: Crackdown on waste crime: Time to stop trashing our future,' 12 April 2022
325 Oral evidence taken on 17 May 2022, HC (2022–23) 221, Q56
326 DEFRA, *Independent review into serious and organised crime in the waste sector*, November 2018, p 29
327 Q264
328 DEFRA, *Consultation on the reform of waste carrier, broker, dealer registration in England*, 21 January 2022
329 Q257; Qq259–260; Policy Connect (PW0025) p 3; Greenpeace, *Game of Waste*, February 2022, p 29; Environmental Investigation Agency, *The UK's Trade in Plastic Waste*, June 2021, p 4
330 DEFRA, Scottish Government, Department of Agriculture, Environment and Rural Affairs, Welsh Government, *Consultation on the introduction of mandatory digital waste tracking*, January 2022
331 Q387; Under EPR, "Exporters will be required to obtain evidence that shipments were received at the final destination sites and must obtain evidence of recycling by the overseas reprocessor": DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p 57
332 "*Can the Environment Agency ever overcome waste crime?*" ENDS Report, 3 March 2022

to be up to the challenge posed by organised criminal gangs increasingly seeking to circumvent the current export regime. ***We recommend that the Environment Agency's compliance and enforcement capacity is strengthened to enable more thorough checks of plastic waste exports. To fund this the Government should allow the Environment Agency to reinvest some of the charge income it collects from regulating the waste industry into enforcement capacity. This would be compatible with a recommendation made by the 2018 Independent Review into waste sector crime which called on government to review how the enforcement of waste crime is funded, potentially through broader fee incomes.***

Sanctions

115. Where an exporter is found to have illegally exported waste, the sanctions that can be applied by the EA are as set out in the Transfrontier Shipment of Waste Regulations 2007 (TFS).[333] These range from a warning or formal caution to a variable monetary penalty or prosecution. The EA's Enforcement and Sanctions Policy sets out four objectives, as follows:

- Stop illegal activity from occurring or continuing
- Put right environmental harm or damage, also known as restoration or remediation
- Bring illegal activity under regulatory control, and so in compliance with the law
- Punish an offender and deter future offending by the offender and others[334]

116. The Agency's policy is to focus prosecutions on the most serious cases, and to use advice, guidance or warning letters in other cases.[335] The National Audit Office have concluded that the current approach to "sanctions and prosecutions for committing waste crime may not be acting as effective deterrents".[336] Similarly, Jacob Hayler told us: "There is a low likelihood of being caught. The penalties are pitifully low, even when you do get caught. You might get a four-figure fine when you have a six- or seven-figure profit. It is ridiculous and completely out of balance".[337] Data from the EA confirms that only ten fines have been issued since 2010 and the majority of these were four- or five-figure sums.[338] The Public Accounts Committee, in its recent report on Government Actions to Combat Waste Crime, described the current approach to waste crime as being ""closer to decriminalisation".[339]

117. Exporters can also apply for accreditation from the EA on a voluntary basis in order to be able to issue PERNs (explained in chapter 3).[340] Both the British Plastics Federation[341] and ReNew ELP[342] suggest suspending an organisation's accreditation while and

333 Environment Agency, *Transfrontier Shipment of Waste Regulations 2007*, last updated 31 December 2020
334 Environment Agency, *Enforcement and Sanctions Policy*, updated 17 March 2022
335 National Audit Office, *Investigation into government's actions to combat waste crime in England*, 27 April 2022, p 9
336 National Audit Office, *Investigation into government's actions to combat waste crime in England*, HC1149, 27 April 2022, p 14, para 23
337 Q264
338 Environment Agency (PW0066)
339 Public Accounts Committee, *Government Actions to Combat Waste Crime*, HC33, 8 September 2022, p 6, para 4
340 Environment Agency (PW0066). PERNs are explained further in chapter 3, paragraph 28
341 British Plastics Federation (PW0042) p 6
342 ReNew ELP (PW0038) p 4

investigation is underway and cancelling it "for a meaningful length of time" if fraud is revealed. Data from the EA confirms that they also rarely use their power to suspend the accreditation of exporters; only two suspensions, and no cancellations, of accreditation have occurred in relation to breaches of the TFS since 2012.[343]

118. **We heard that waste crime is a low risk, high reward endeavour and that current punishments are insufficient to deter illegal activity, contrary to the objectives of the EA's Enforcement and Sanctions policy.** ***We recommend that sanctions for companies caught breaking the rules on exporting plastic waste be considerably strengthened to make them at least comparable to the level of profit made from illegal waste exporting so as to act as a genuine deterrent. The Environmental Agency should also routinely suspend or cancel accreditation for any exporter involved in serious waste export fraud.***

Proposed export ban

119. Better enforcement cannot be the sole solution to mismanaged exports. The ESA and WWF (World Wildlife Fund) both highlighted that it is difficult to monitor the full chain of custody for waste once it is abroad and passed between several waste handling brokers and reprocessors.[344] Even when exports are legally processed abroad, poorly regulated recycling facilities and working conditions can have serious consequences human health through exposure to dangerous chemicals and emissions.[345] Although the previous Government has suggested that more evidence will be required of exporters to demonstrate that waste has been disposed of appropriately, several groups have called for greater restrictions on what plastic waste can be exported, such as a ban on exporting mixed plastics or total export bans with exemptions for wastes that have gone through a degree of processing already.[346] The Conservative Party's 2019 manifesto committed to "banning" the export of plastic waste to non-OECD countries,[347] and the previous Government provided for powers to introduce such a ban in the Environment Act 2021.[348] The then Minister for Agri-Innovation and Climate Adaptation, Jo Churchill MP, confirmed to us that: "[The Government] will be consulting later this year [2022] on stopping exports to non-OECD countries".[349]

120. A non-OCED ban would prevent exports to countries such as Hong Kong and Malaysia, which handled around 14% of UK exported plastic waste between them in 2020. However, it would not impact the over 80% of UK exports that went to OECD countries in 2020. Nor would it affect exports to Turkey, where we have seen widespread evidence of mismanaged exports.[350] This trend toward OECD exports looks likely to continue with recent figures from the Basel Action Network suggesting the proportion of UK plastic waste exports to non-OECD countries has shrunk even further.[351]

343 Environment Agency (PW0066)
344 Q257; Q44.
345 '*"It's As If They're Poisoning Us": The Health Impacts of Plastic Recycling in Turkey*,' Human Rights Watch, 21 September 2022
346 WRAP, *Plastics Market Situation Report 2021*, 6 October 2021, p 18; Q256
347 *Conservative Party Manifesto 2019*, p 43
348 Environment Act 2021, Part 3, Section 62 (3) (1A) (c)
349 Q362
350 Environmental Investigation Agency, *The Truth Behind Trash*, September 2021, p 18, fig. 9
351 "*UK plastic waste exports 'fell by 13%' in 2021*," Letsrecycle.com, accessed 9 August 2022

121. Several witnesses such as Greenpeace, the Association of Accounting Technicians, Policy Connect and A Plastic Planet argue that a ban on exports to non-OECD countries is insufficient and the Government should instead ban all plastic waste exports.[352] Megan Randles (Greenpeace UK) referred to criminal behaviours and the lack of enforcement capacity mentioned above, telling us that "the only solution […is…] a ban and a holistic reduction strategy,"[353] adding: "It will be impossible to unpack every single bale at every single port."[354] Ms Randles argued that there should be a ban on all OECD exports by 2025. Viridor's Dr Tim Rotheray and Jacob Hayler of the ESA also agreed there should be a total ban on plastic waste exports, with Dr Rotheray arguing it should come into force in five years' time to allow the necessary domestic capacity to be built.[355]

122. In his April 2022 speech on waste crime, Sir James Bevan similarly called on the UK to set itself the "challenge" to process all waste at home and end all exports.[356] While Sir James subsequently made clear that he was "expressing a personal view",[357] he argued that a total export ban would be beneficial as it would make it "a lot harder for criminals whose modus operandi is to hide crimes in legitimate waste export processes… It also would be good for the country's reputation, because we really are hurting ourselves internationally by being seen as a country that is essentially dumping our waste on other countries."[358]

123. Not all groups agree that all exports of plastic waste should stop; even some environmental organisations are willing to accept it as long as waste is processed correctly.[359] SUEZ told us that the Government "should not look to stop international trading of plastics because this would distort the market and raise prices for consumers,"[360] while the ESA, in written evidence, suggested that "exports of clean, single-grade plastics are part of a sustainable and circular plastics system and should not be undermined by export restrictions" but that exports "should be of plastics which have been processed to meet an end of waste standard."[361] DEFRA told us that "Where the UK cannot currently recycle materials economically, exports can help ensure those materials are recycled rather than landfilled or incinerated."[362]

124. **Exporting waste will always be vulnerable to crime and while the UK must strengthen enforcement efforts, not every bad batch of exported waste will be caught. Many stakeholders have called on the UK to work towards a ban on all plastic waste exports. Waste management sector representatives believe this could be achievable in only a few years. We believe that a requirement to process all waste domestically will provide a strong market signal to secure investment in domestic recycling infrastructure and support efforts to reduce and reuse more plastics. *We recommend a ban on all exports of UK plastic waste by the end of 2027. The Government should publish a roadmap to achieve this by March 2023, setting out milestones towards this target (such as preliminary bans on unsorted or unprocessed waste plastics), as well as***

352 Greenpeace (PW0024) para 1.2; Association of Accounting Technicians (PW0013) p 2; Policy Connect (PW0025) p 2; A Plastic Planet (PW0062) p 1
353 Q264
354 Q265
355 Q269
356 Environment Agency, 'Speech: Crackdown on waste crime: Time to stop trashing our future,' 12 April 2022
357 Oral evidence taken on 17 May 2022, HC (2022–23) 221, Q59
358 Oral evidence taken on 17 May 2022, HC (2022–23) 221, Qq59–60
359 Q38; Q53
360 SUEZ (PW0017)
361 Environmental Services Association (PW0050) para 5.2
362 DEFRA (PW0061) p 8

a plan for increasing UK domestic reprocessing capacity.

International agreements

125. Plastic pollution is a global issue whose impacts do not respect national boundaries. It is estimated that, on current trends, global plastic waste is forecast to almost triple by 2060.[363]

126. There are some existing international initiatives affecting plastic waste flows and treatment, including the Basel Convention and the World Trade Organisation's Informal Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade (IDP).[364] However, over recent years there have been increasing calls from many stakeholders[365] for a global treaty to tackle plastic waste, covering the whole lifecycle of plastics, from production to waste management. In March 2022, the UN Environment Assembly (UNEA) established an Intergovernmental Negotiating Committee (INC) to draft "a legally binding instrument, which would reflect diverse alternatives to address the full lifecycle of plastics, the design of reusable and recyclable products and materials, and the need for enhanced international collaboration to facilitate access to technology, capacity building and scientific and technical cooperation"[366] by 2024. The treaty has been compared to the Paris Agreement on climate change because it takes a bottom-up approach, consisting of commitments from individual countries.[367]

127. The UNEA announcement was widely welcomed in principle,[368] although questions have been raised about exactly how the deal would work, including how the treaty will be financed[369] and which specific elements will be legally binding.[370] Several commentators have stressed the importance of the inclusion of legally binding targets, with George Riddell, Trade Strategy Director at Ernst & Young LLP, arguing that committing to targets early in the negotiation process would be a key way the UK could show leadership in this area.[371] He also pointed to various precedents in international agreements for legal mechanisms to ensure compliance.[372] The Ellen MacArthur Foundation and Dr Carolyn Deere Birkbeck, Director of the Forum on Trade, Environment and the Sustainable Development Goals have also called for legally binding targets to be included alongside national action plans.[373]

128. We asked the then Minister what role the UK would play in shaping the proposed treaty.[374] Jo Churchill MP confirmed to us that "the UK has become a founding member of

363 OECD, *Global Plastics Outlook: Policy Scenarios to 2060*, Executive Summary, 3 June 2022
364 "*New initiatives launched to intensify WTO work on trade and the environment*," WTO, 17 November 2020
365 Plasticstreaty.org, 'Scientists' Declaration on the Need for Governance of Plastics Throughout their Lifecycles,' accessed 8 August 2022 and "*Global brands call for world-wide 'treaty' to cut plastic production*" Circular, 17 January 2022
366 "*Historic day in the campaign to bet plastic pollution: Nations commit to develop a legally binding agreement*," UN Environment Programme press release, 2 March 2022
367 Q300
368 "*World leaders agree to draw up 'historic' treaty on plastic waste*," The Guardian, 2 March 2022
369 Nordic Council of Ministers, 'Global agreement to prevent plastic pollution: Exploring financing needs and opportunities,' February 2022
370 "*WWF commends UN Environment Assembly's watershed decision to start negotiations for a global plastics treaty*", WWF press release, 2 March 2022
371 Q300
372 Q299
373 "*A new UN treaty to address plastic pollution*," Ellen MacArthur Foundation, August 2021; Q302
374 *Conservative Party Manifesto 2019*, p 42

the High Ambition Coalition to End Plastic Pollution that will aim to maintain high levels of ambition throughout the upcoming negotiations, expected to commence formally in November 2022".[375] However, when asked specifically whether the UK's position was to support legally binding targets, the then Minister said: "Not at this time[…] we have to be mindful of the unintended consequences when we set targets,"[376] and referred to the fact that the negotiations were being led by Rwanda and Peru.[377]

129. **We are pleased that the previous Government signed the UK up to the UN Environment Assembly agreement working towards a global treaty to tackle plastic pollution, and welcome the UK's founding membership of the related High Ambition Coalition within the forthcoming negotiations. However, we believe that, without the inclusion of legally binding targets, the treaty risks being ineffective in tackling one of the biggest environmental threats our planet faces.** ***We urge the new Government to reaffirm commitments to the UN Environment Assembly (UNEA) initiative to deal with plastic pollution and to the High Ambition Coalition supporting the process. We also recommend that the new Government plays a leading role in future UNEA negotiations by pushing for legally binding targets to be included in the treaty.***

375 Letter from (then-)Minister Churchill to the Committee regarding Plastic Waste, dated 6 June 2022, p 2
376 Q390
377 Q389

8 Improving data systems

130. A recurring theme during this inquiry was a lack of data on the volume, type and life cycles of plastic put on the market. This absence of robust information means:

a) **Government cannot accurately measure progress**. For example, the previous EFRA Committee inquiry into Plastic Food and Drink packaging concluded that there is no clear picture of how much plastic waste gets recycled.[378] This situation does not appear to have changed. Environmental organisations highlighted that we simply do not have the data to understand our current recycling situation,[379] with A Plastic Planet estimating that the statistics from 2019 revealed a "missing" 900,000 tonnes of plastics where we do not how they were treated at their end of life.[380]

b) **The waste management sector cannot readily know how much, and what type of, recycling capacity to invest in**. Packaging currently reveals little to waste management about its composition, including the chemicals and additives it contains[381] which makes it difficult to recycle efficiently. We heard that a lack of accurate waste management data makes it hard to gain an "accurate picture of material flows" and prevents the identification of local waste processing capacity gaps.[382]

c) **Businesses cannot easily understand and realise the reclaimable value of used plastic**. To bring about a circular economy, we need to ensure that packaging becomes a "valuable asset" to be used again and again, rather than disposed of.[383] Kevin Vyse (ProAmpac RAP) told us that the value of packaging should be made clearer to all users across the supply chain. Helping businesses and consumers understand its value could help users see packaging as a commodity worth trading and reusing, rather than disposing of.[384]

d) **Decision-makers cannot conduct robust or credible life cycle assessments (LCAs).** Life cycle assessments are a "critical tool" that "allow a practitioner to understand design trade-offs or traits that drive superior environmental performance."[385] LCAs will vital for policymakers and businesses in making the decisions we call for in this report, such as which materials should replace plastics,[386] choosing when to adopt new technologies such as chemical recycling[387] and when reusable products are preferable over single-use items.[388] However, we

378 Environment, Food and Rural Affairs Committee, Plastic food and drink packaging, Sixteenth Report of Session 2017–19, *Plastic food and drink packaging*, HC 2080, 12 September 2019, paras 16–17

379 Q13

380 Q115

381 Q238

382 Peel L&P (PW0034)

383 The Grantham Centre for Sustainable Futures, University of Sheffield (PW0051)

384 Q131; Dr Eleni Iacovidou et al. (PW0047)

385 Institute of Grocery Distribution, *Best practice guide for packaging lifecycle assessment*, 27 July 2022 p 10

386 Professor Richard Thompson OBE FRS (Professor of Marine Biology at University of Plymouth) (PW0027); Q24; Qq64–65; Environmental Industries Commission (EIC) (PW0022)

387 WWF, *WWF position: chemical recycling implementation principles*, January 2022; Eunomia, *Chemical Recycling: State of Play*, 8 December 2020; Qq371–372

388 Reloop and Zero Waste Europe, *Reusable vs single use packaging: a review of environmental impacts*, December 2020; Patricia Megale Coelho, Blanca Corona, Roland ten Klooster, and Ernst Worrell, "Sustainability of reusable packaging–Current situation and trends," Resources, Conservation & Recycling: Volume 6, May 2020; British Plastics Federation (PW0042); RECOUP (PW0039)

have heard that LCAs can be unreliable and difficult to compare:[389] this is partly caused by a lack of reliable data[390] or neglecting certain metrics and consumer behaviours like littering.[391]

Given these problems, some stakeholders have called for more routine collection of robust granular data—both for plastic packaging put on market as well as waste plastic collection and treatment.[392]

Improving information flow: better reporting, labelling and tracking

131. WWF called for a more "granular level of detail" about the different polymers used in packaging. They saw the introduction of EPR for packaging, and the new reporting requirements they will include, as an opportunity to ensure that such information is sent to the scheme operator.[393]

132. EPR will include labelling reforms which are discussed below. Better labelling of products will primarily help consumers at the point of disposing an item. While useful, there are limits on relying on it further down supply chain, as labels can be separated from the packaging itself and there a limit on how much information they can convey. Another proposal is a product "tracking" system, which embeds key information within the packaging itself using a fluorescent tracer or digital watermark. As well as potentially providing more data on product usage throughout its life cycle,[394] it could also enable digital or otherwise more efficient sorting systems.[395] Enhanced sorting could redirect packaging to the best recycling, composting, reuse or disposal system; reduce cross-contamination; provide better data on material flows; and keep similar value waste items together (such as food-grade plastics).[396] This could allow the development of more efficient 'closed loop' recycling which would preserve the value of recycled plastics and slow their degradation.[397] There are several companies developing systems to mark plastic for enhanced sorting techniques.[398]

389 Alupro (PW0020) paras 2.1–2.4; Q218

390 The Grantham Centre for Sustainable Futures, University of Sheffield (PW0051); Peel L&P (PW0034)

391 Q65; Grantham Centre for Sustainable Futures (PW0051); Alupro (PW0020); Qq139–140; Peel L&P (PW0034); Grantham Centre for Sustainable Futures (PW0051); Q219

392 Peel L&P (PW0034); Green Alliance (PW0033), Q7; Q9

393 Q9

394 Q272. Megan Randles, speaking to the Committee on behalf of Greenpeace, noted that the environment sector is keen on "product passports" that enables tracking of a product throughout its life cycle.

395 The British Plastics Federation has called for the introduction of digital sorting systems, based on product marking and robotics: British Plastics Federation (PW0042). Similar proposals have been suggested by Peel L&P (PW0034) and Royal Society of Chemistry, *The Future of Recycling*, accessed 27 September 2022.

396 Qq224–225; Q228; UCL Plastic Waste Innovation Hub (PW0036); ReNew ELP (PW0038); Martin Burgess et al. "*The future of UK plastics recycling: One Bin to Rule Them All*," Resources, Conservation and Recycling, Volume 164, January 2021, 105191;

397 Royal Society of Chemistry, *The Future of Recycling*, accessed 4 October 2022. Closed loop recycling is where a waste product is recycled back into a similar product to retain its quality and slow the "downcycling" of plastics.

398 "*The plastic sorting challenge*", Chemistry World, 4 May 2020; "*Is sorting sorted?*" Eco-plastics in packaging, accessed 27 September 2022

Government reforms

EPR: a better understanding of the plastic market?

133. Under current producer responsibility regulations for packaging, only those businesses that handle 50 tonnes of packaging per year, with a turnover of £2 million or more, must report the amount of packaging they put on the market. Our predecessor EFRA Committee recommended that this threshold be lowered to one tonne "to enable more accurate data gathering on how much plastic packaging waste the UK produces and how much is recycled."[399]

134. The latest EPR proposals will require producers handling over 25 tonnes of packaging to report on the packaging they put on the market, including information about the type of packaging, its recyclability and ideal methods of disposal. While an improvement on the 50 tonne threshold, 25 tonnes falls far short of the recommendation of 1 tonne and could mean that a significant percentage of packaging will not be counted.[400] Not much detail has been published either about the other information that will be required under these reforms, although the Government "expects" plastic polymer types to be included in data submissions.[401] It does not mention the value, or other attributes (like amount of recycled content, hygienic properties and so forth) that would affect its value.

135. ***We reiterate our recommendation that reporting requirements under Extended Producer Responsibility for packaging should cover those businesses producing one tonne or more of packaging in order to capture as much data as possible. The Government must ensure that requirements upon producers to provide information are comprehensive and includes full details about the type and quality of the plastics put on the market. This will help encourage businesses handling and disposing of packaging to capture and reuse these products and materials.***

Labelling and digital waste tracking

136. Under EPR proposals, the Government is looking create a clearer labelling system to help consumers dispose of packaging appropriately. This will be based on the "Recycle Now" mark and all packaging will say either "recycle" or "do not recycle". These labels will be mandatory from 31 March 2026 for all packaging types, except plastic films and flexible plastics where the deadline is 31 March 2027.[402] In addition, the Government is looking at developing better eco-labelling systems for other types of products.[403] The Environment Act 2021 has given the government the power to require producer to provide information

399 Environment, Food and Rural Affairs Committee, Sixteenth Report of Session 2017–19, *Plastic food and drink packaging*, HC 2080, 12 September 2019, para 17.

400 According to an analysis of 2019 data, around 13% of packaging put on the market is produced by businesses that do not have reporting obligations under current regualtions: Valpak, *PackFlow Covid-19 Phase I: Plastic*, October 2020, p.45

401 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p 22

402 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs, *Packaging and packaging waste: introducing Extended Producer Responsibility - Summary of responses and Government response*, March 2022, p.29

403 The Government committed to this in DEFRA, *Resources and Waste Strategy*, December 2018, p 53; In May 2021, the Government said it was " developing an evidence base of existing voluntary schemes and the effectiveness of eco-labelling" (PQ 2244 [Ecolabelling] 17 May 2021)

about the materials that make up a product; the expected lifespan and disposal method of the product; and whether it can be repaired or maintained, on labels.[404] There is currently no further information setting out the detail of how these powers will be used.

137. The UK Government, along with the Welsh and Scottish Governments and the Northern Ireland Executive, has also announced steps to improve data collection at the waste management end of the plastics supply chain. Digital waste tracking reforms (expected to be in place by 2024) will provide us with more data on what happens to waste from the point it becomes waste onwards. The policy aims to simplify current data collection systems, provide more comprehensive data and tackle waste crime. At the time of writing, a consultation on the reforms had closed, and a summary of responses expected in Autumn 2022.[405]

138. The sector appears to be broadly supportive of the proposals although there are concerns about some of the complications it could cause.[406] We note that these reforms are running parallel to the EPR reporting requirements: EPR is described in the latest consultation as an "associated reform."[407] There is no suggestion that data generated under EPR will be linked to data collected in the digital waste tracking system. Witness have also called for the data from the waste tracking system to be publicly available, to help reprocesses make investment decisions, although they acknowledged that some data may need to be anonymise or aggregated for commercial reasons.[408]

139. The previous Government appeared to be sending mixed signals on a more comprehensive tracking or marking system for plastic packaging. Work was taking place on developing "product passports" for larger, longer lasting products, like white goods to "support reuse and extraction of secondary materials."[409] However we were told that that government did not see a role for a similar system for packaging as it is primarily composed of "single-use" items.[410] However the response to the most recent EPR consultation suggested that brand owners could be expected to provide "recycling enablers" on their packaging such as "detectable inks that allow for enhanced sorting and reprocessing,"[411] which sounds very much like a product marking system. In its evidence to the Committee, the previous Government did acknowledge that it would be best to track plastic products "through the system" and "through its life cycle".[412]

140. **Better data is essential for delivering a circular economy. More effective information will enable an understanding of the scale of the problems faced, the composition of the**

404 Environment Act 2021, Schedule 6

405 DEFRA, Scottish Government, Department of Agriculture, Environment and Rural Affairs, Welsh Government, *Consultation on the introduction of mandatory digital waste tracking*, January 2022

406 Due to this reform being late announced later during the inquiry process, we did not take much evidence on these proposals. However some sector comment was reported in "*'Real time' digital waste tracking will be challenging for the sector*" Materials Recycling World, 18 February 2022; "*The value of data digitalisation and the recycling systems of tomorrow*", Packaging Gateway, 15 February 2022

407 DEFRA, Scottish Government, Department of Agriculture, Environment and Rural Affairs, Welsh Government, *Consultation on the introduction of mandatory digital waste tracking*, January 2022, p 3

408 Q283

409 As outlined in DEFRA, *Waste Prevention Programme for England: Towards a resource efficient economy - Consultation version*, March 2021, p 26

410 Q357

411 DEFRA, Welsh Government, Scottish Government, Department of Agriculture, Environment and Rural Affairs (Northern Ireland), *Extended Producer Responsibility for Packaging: Summary of consultation responses and Government response*, March 2022, p 22

412 Q326; Q344

plastics put on the market and what systems are needed to help society dispose of or recycle products more sustainably. Upcoming government reforms are a good start and particularly we welcome previously announced plans to bring forward a simple, mandatory "Recycle" "Do not recycle" labelling systems for plastic waste: this will communicate clear information to consumers.

141. **However, the incoming Government needs to join up its existing proposals for data collection under Extended Producer Responsibility for packaging and waste tracking to create a unified system. The previous Government's argument—that such a system is less useful for 'single-use items' like packaging—is flawed. Packaging needs to be valued so that it reused, retained and recycled in the most efficient ways possible.** ***The new Government should follow up on its predecessor's proposal that "recycling enablers" could be a mandatory part of Extended Producer Responsibility for packaging and work with industry to develop a comprehensive marking system that will integrate with digital waste tracking in the future. As well as providing data on the life cycle of plastic packaging and how it is used and disposed of, this marking system should openly share information about the nature of plastics on the market. This will help all stakeholders in the supply chain understand and maximise the value of such material and create the most efficient recycling system for them.***

Annex: List of acronyms

BPF – British Plastics Federation

BRC – British Retail Consortium

CfD – Contracts for Difference

CIWM – Chartered Institute for Wastes Management

CTPA – Cosmetic, Toiletry and Perfumery Association

DEFRA – Department for Environment, Food and Rural Affairs

EA – Environment Agency

EfW – Energy from Waste

EIA – Environmental Investigation Agency

EPR – Extended Producer Responsibility

ESA – Environmental Services Association

FDF – Food and Drink Federation

LCA – Life Cycle Assessment

NGO – Non-Governmental Organisation

OECD – Organisation for Economic Co-operation and Development

PERN – Packaging (Waste) Export Recovery Note

PET – Polyethylene Terephthalate

rPET – Recycled Polyethylene Terephthalate

PPT – Plastic Packaging Tax

PRN – Packaging (Waste) Recovery Note

PVC – Polyvinyl Chloride

RSC – Royal Society of Chemistry

TFS – Transfrontier Shipment of Waste Regulations 2007

UCL – University College London

UKPP – UK Plastics Pact

UN – United Nations

UNEA – United Nations Environment Assembly

WRAP – Waste and Resources Action Programme

WWF – World Wildlife Fund

Conclusions and recommendations

Plastic waste targets and ambitions

1. Despite progress in reducing the use of some problematic plastics and plastic products and creating an uplift in recycled content in new plastic production, progress in tackling plastic waste appears to have slowed in recent years. Current initiatives are clearly not driving progress as effectively as possible. Some of the definitions and metrics for the targets driving change need to be improved to make them: clearer and less ambiguous; more ambitious and measurable; and more reflective of the waste hierarchy with a strong focus on reducing the amount of plastic waste created in the first place. However, with this focus comes the need to ensure that plastics are not replaced by possibly more impactful materials as plastic usage is reduced in the future. (Paragraph 23)

2. *We recommend the 2042 target for the elimination of plastic waste should be reaffirmed by the new Government but, crucially, without the qualifier "avoidable". The goal would be clearly defined as ensuring that all plastic waste is recycled, reused or composted by 2042. The new Government should also set out two-year milestones to drive progress towards this target.* (Paragraph 24)

3. *We also recommend that other government targets be revised to reflect and implement the waste hierarchy. These changes should cover:*

    - *Reducing the volume of plastic that is put on the market. Where plastic is replaced with other materials, the new Government should commit to monitoring whether those replacement materials are more sustainable.*
    - *Reuse targets to increase the market share of reusable plastic products, particularly packaging.*
    - *Recycling rate targets that measure how much packaging is actually recycled, rather than whether it is theoretically recyclable.* (Paragraph 25)

4. *The new Government should commit to reporting on progress against all these targets annually. We also recommend that the Government should devise mechanisms to enforce these targets either through an existing regulator or upcoming reforms.* (Paragraph 26)

Extended producer responsibility for packaging

5. The introduction of Extended Producer Responsibility (EPR) for packaging is a welcome reform that has the potential to drive progress towards a more sustainable plastics economy. However, the lack of information about the EPR fee scheme and the two-year delay in implementation mean that achieving meaningful change in packaging design in the short term is unlikely. Despite the former Minister's assurances that the scheme will be fully operational by 2024, we cannot see how that can be the case if the modulated fees that underpin the scheme will not fully be in

place until 2025. To make progress towards 2025 targets, the delivery of EPR needs to be expediated and information for businesses provided well in advance to give them time to adapt. (Paragraph 34)

6. *We recommend that the new Government reaffirms its commitment to Extended Producer Responsibility for packaging and a re-accelerated process to implement the system in order to meet the targets set for 2025. This requires publication of a consultation on EPR fees and any accompanying guidance in early 2023 and the introduction of the fee system by 2024.* (Paragraph 35)

7. We agree that it is best to continue the Packaging Waste Recovery Note (PRN) system in the short term to ensure some continued funding for the reprocessing sector. Government should ensure that any temporary dual-running system, and the added complexity it brings, does not become permanent. We welcome the previous Government's proposal for a taskforce to help navigate the way to a full EPR system in the future but we are concerned about the lack of a clear timetable for this change. (Paragraph 39)

8. *We recommend that the Government develops a clear exit strategy for any dual running of Extended Producer Responsibility (EPR) alongside a legacy Packaging Waste Recovery Note system. This exit strategy should be published no more than a year after EPR is introduced. This strategy should explain how we will arrive at a comprehensive EPR system that covers the total costs of managing plastic waste—including commercial waste. This would be an appropriate job for the previously proposed EPR Taskforce.* (Paragraph 40)

9. We understand the logic behind some of the changes the previous Government made to its Extended Producer Responsibility (EPR) proposals in response to the last consultation. We sympathise with the aim of reducing the financial impact on individual producers to avoid an escalation of food prices under EPR for packaging. However, there is a risk that exempting a large number of smaller producers from financial obligations—and no longer covering the costs of commercial waste—could undermine the scheme's aims to make 'polluters pay' and incentivise more sustainable product design. *We recommend that the Government should set out a roadmap for lowering the threshold for financial obligations under EPR so that by 2030, producers placing 1 tonne of packaging on the market or more should pay the cost of managing its disposal.* (Paragraph 47)

Refill and reuse

10. We understand that promoting plastic reuse is a challenging part of this policy area but increasing the uptake of reusable packaging is essential for reducing the total amount packaging consumed in the UK. Government must ensure that any Extended Producer Responsibility system fully incentivises all routes for tackling plastic waste—not just recycling—and should give the greatest incentives to options that are higher up the waste hierarchy: reduction and reuse. (Paragraph 54)

11. *The new Government should publish, in 2023/24, its plan for reuse and refill obligations that will be introduced in 2025 under Extended Producer Responsibility (EPR) for packaging, so that businesses can begin the process of adapting their product*

designs and supply chains. We also recommend that the proposed review of the new EPR scheme, planned previously for 2026/27, is tasked with considering changes to EPR fees that would encourage the use of reusable packaging. This review should also examine the feasibility of using the scheme to encourage more generic/universal packaging. (Paragraph 55)

12. Achieving the widespread adoption of reusable packaging and refill would require fundamental changes to a large part of our economy and to the mindset and behaviour of companies and consumers—it will not be possible to deliver this using the Extended Producer Responsibility reforms alone. (Paragraph 58)

13. *We recommend that the Government create a reuse taskforce containing representatives from industry and consumer groups. This taskforce should develop to a suite of measures to encourage, incentivise and require businesses and consumers to adopt more reuse habits and systems. This group should consider measures including charges on single-use products, mandatory reporting on companies' plastic footprints, and how to raise public awareness of reuse schemes through campaigns as well as guidance and incentives for businesses.* (Paragraph 59)

Waste management infrastructure

14. We welcome the introduction of the Plastic Packaging Tax (PPT) which is expected to increase demand for recycling plastic material and re-encourage investment in the recycling sector as it grows to meet this demand. We call upon the new Government to commit to maintaining and developing this fiscal measure. (Paragraph 71)

15. However, there is a risk that PPT, as currently designed, will not deliver against its intended objectives. A flat 30% recycled content requirement may well prove too easy for some sectors to achieve while acting as an unavoidable financial penalty in sectors with no viable alternatives, encouraging producers to swap to more environmentally damaging options. *We recommend that the Plastic Packaging Tax (PPT) should be modulated with different, stretching targets tailored to different sectors and including partial exemptions for recycled content levels below the level at which a full exemption is granted, but above 10%. The Government should also set out a timetable for increasing the percentage of recycled material needed to attract total exemption from the tax to further stimulate demand for recycled plastics. The first such increase should come into force by 2025.* (Paragraph 72)

16. *To ensure the tax is delivering its intended impacts, the Government should publish an analysis of the impact of the tax by the end of financial year 2023/4. This evaluation should test the effectiveness of its verification systems and evaluate whether the tax rate is high enough to bring about the behaviour changes needed amongst producers whilst protecting low-income households. The tax should also be benchmarked against comparable international initiatives.* (Paragraph 73)

17. We welcome the previous Government's efforts, through the Plastic Packaging Tax and other reforms, to increase the demand for recycled plastics and thereby its aim to make the recycling sector more investable in the long run, helping the UK boost its recycling capacity. However, further action is needed to increase the capacity of the recycling sector more quickly—particularly in the short term—and supply

manufacturers with the recycled materials that government wants and needs them to use. We are not convinced that the aggregated current measures alone will resolve the problem of cheaper virgin plastics and unstable returns on investment which hinders investor confidence. (Paragraph 82)

18. *We call on the new Government to commit to its predecessor's welcome decision to use some of the money generated via its reforms to support investment in recycling capacity. We recommend that the expected infrastructure roadmap—anticipated in late 2022—provides detailed information about how much investment will be provided over what time scale, and identify key areas of government and private investment. As a minimum, it must deliver at least as much investment as the current Packaging Waste Recovery Note system generates for the sector.* (Paragraph 83)

19. *We also recommend that, by the end of 2023, the new Government conduct a feasibility study of other mechanisms to encourage investment, including measures to rationalise the plastics market and introduce price-stabilising mechanisms for plastic recyclate, similar to those used for renewable energy.* (Paragraph 84)

Recycling "difficult" plastics

20. There is no technological silver bullet to resolve the challenges of recycling plastic waste. We welcome the work of the previous Government and industry to strengthen the mechanical recycling sector. However, it appears likely that this will need to be supported by other technologies in order to create a circular economy and sustainably manage flexible and other hard-to-recycle plastics. This is likely to involve the application of chemical recycling and compostable packaging in distinct areas where mechanical recycling is not a good solution: such as potentially using compostable packaging for food-contaminated products. (Paragraph 98)

21. *By 2023, the Government should update its infrastructure roadmap to set out its plan for the future role of chemical recycling and composting within our plastics economy and waste management system. In particular, the Government must make a decision, based on the latest evidence about their impact on soil health, on the role of compostables, so that the organic recycling sector can adapt alongside the mandatory collection of food waste in 2024/25. If they are to be encouraged, the Government should adapt national targets to reflect their expected use. Product labelling must also be standardised to clearly indicate to consumers how they should dispose of compostable plastics and prevent them from contaminating other plastic waste streams. Labels should avoid unhelpful terms like 'biodegradable'.* (Paragraph 99)

22. *The Government need to publish clear, evidence-based criteria for how Extended Producer Responsibility fees and the Plastic Packaging Tax will apply to new technologies, including compostable plastics and chemical recycling. We recommend the hypothecation of income raised from fees on compostable plastics and chemical recycling to research the most promising versions of these technologies or the development of appropriate recycling infrastructure.* (Paragraph 100)

23. *Finally, we recommend that the Government should consider the merits of introducing an incineration tax, designed to drive up demand for—and therefore attract private capital investment in—alternative waste disposal methods once they are viable, including mechanical, chemical and composting recycling facilities.* (Paragraph 101)

International plastics

24. While upcoming Government reforms to the regulation of waste carrier registration and the introduction of digital waste tracking both have the potential to help combat the dumping of UK waste in foreign countries, the current level of compliance and enforcement activity by the Environment Agency does not appear to be up to the challenge posed by organised criminal gangs increasingly seeking to circumvent the current export regime. *We recommend that the Environment Agency's compliance and enforcement capacity is strengthened to enable more thorough checks of plastic waste exports. To fund this the Government should allow the Environment Agency to reinvest some of the charge income it collects from regulating the waste industry into enforcement capacity. This would be compatible with a recommendation made by the 2018 Independent Review into waste sector crime which called on government to review how the enforcement of waste crime is funded, potentially through broader fee incomes.* (Paragraph 114)

25. We heard that waste crime is a low risk, high reward endeavour and that current punishments are insufficient to deter illegal activity, contrary to the objectives of the EA's Enforcement and Sanctions policy. *We recommend that sanctions for companies caught breaking the rules on exporting plastic waste be considerably strengthened to make them at least comparable to the level of profit made from illegal waste exporting so as to act as a genuine deterrent. The Environmental Agency should also routinely suspend or cancel accreditation for any exporter involved in serious waste export fraud.* (Paragraph 118)

26. Exporting waste will always be vulnerable to crime and while the UK must strengthen enforcement efforts, not every bad batch of exported waste will be caught. Many stakeholders have called on the UK to work towards a ban on all plastic waste exports. Waste management sector representatives believe this could be achievable in only a few years. We believe that a requirement to process all waste domestically will provide a strong market signal to secure investment in domestic recycling infrastructure and support efforts to reduce and reuse more plastics. *We recommend a ban on all exports of UK plastic waste by the end of 2027. The Government should publish a roadmap to achieve this by March 2023, setting out milestones towards this target (such as preliminary bans on unsorted or unprocessed waste plastics), as well as a plan for increasing UK domestic reprocessing capacity.* (Paragraph 124)

27. We are pleased that the previous Government signed the UK up to the UN Environment Assembly agreement working towards a global treaty to tackle plastic pollution, and welcome the UK's founding membership of the related High Ambition Coalition within the forthcoming negotiations. However, we believe that, without the inclusion of legally binding targets, the treaty risks being ineffective in tackling one of the biggest environmental threats our planet faces. *We urge the new Government to reaffirm commitments to the UN Environment Assembly (UNEA)*

initiative to deal with plastic pollution and to the High Ambition Coalition supporting the process. We also recommend that the new Government plays a leading role in future UNEA negotiations by pushing for legally binding targets to be included in the treaty. (Paragraph 129)

Improving data systems

28. *We reiterate our recommendation that reporting requirements under Extended Producer Responsibility for packaging should cover those businesses producing one tonne or more of packaging in order to capture as much data as possible. The Government must ensure that requirements upon producers to provide information are comprehensive and includes full details about the type and quality of the plastics put on the market. This will help encourage businesses handling and disposing of packaging to capture and reuse these products and materials.* (Paragraph 135)

29. Better data is essential for delivering a circular economy. More effective information will enable an understanding of the scale of the problems faced, the composition of the plastics put on the market and what systems are needed to help society dispose of or recycle products more sustainably. Upcoming government reforms are a good start and particularly we welcome previously announced plans to bring forward a simple, mandatory "Recycle" "Do not recycle" labelling systems for plastic waste: this will communicate clear information to consumers. (Paragraph 140)

30. However, the incoming Government needs to join up its existing proposals for data collection under Extended Producer Responsibility for packaging and waste tracking to create a unified system. The previous Government's argument—that such a system is less useful for 'single-use items' like packaging—is flawed. Packaging needs to be valued so that it reused, retained and recycled in the most efficient ways possible. *The new Government should follow up on its predecessor's proposal that "recycling enablers" could be a mandatory part of Extended Producer Responsibility for packaging and work with industry to develop a comprehensive marking system that will integrate with digital waste tracking in the future. As well as providing data on the life cycle of plastic packaging and how it is used and disposed of, this marking system should openly share information about the nature of plastics on the market. This will help all stakeholders in the supply chain understand and maximise the value of such material and create the most efficient recycling system for them.* (Paragraph 141)

Formal minutes

Tuesday 1 November 2022

Members present

Sir Robert Goodwill, in the Chair

Kirsty Blackman

Ian Byrne

Geraint Davies

Dr Neil Hudson

Robbie Moore

Mrs Sheryll Murray

Draft Report (The price of plastic: ending the toll of plastic waste) proposed by the Chair, brought up and read.

Ordered, That the Chair's draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 141 read and agreed to.

Summary agreed to.

Annex agreed to.

Resolved, That the Report be the Third Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available (Standing Order No. 134).

Adjournment

Adjourned till Tuesday 8 November 2022 at 2.00 p.m.

Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the inquiry publications page of the Committee's website.

Tuesday 30 November 2021

Paula Chin, Sustainable Materials Specialist, WWF-UK; **Adrian Whyle**, Resource Efficiency Senior Manager, Plastics Europe; **Susan Evans**, Senior Policy Advisor, Green Alliance — Q1–72

Barry Turner, Director of Plastics and Flexible Packing Group, British Plastics Federation; **Richard Hudson**, Technical Manager, Chartered Institute of Waste Management; **Dr Adam Read**, External Affairs Director, Suez — Q73–113

Tuesday 7 December 2021

Sian Sutherland, Co-founder, A Plastics Planet; **Jude Allan**, Chair, IOM3 Packaging Society; **Kevin Vyse**, Head of Technical, ProAmpac RAP — Q114–148

Andrew Opie, Sustainability and Food Director, British Retail Consortium; **Steven Butts**, Head of Corporate Responsibility, Wm Morrison Supermarkets Ltd; **Hellen Stirling-Baker**, Founder of Small Stuff, and Lead Board member for Sustainability, British Independent Retailers Association — Q149–197

Tuesday 18 January 2022

Professor Andrew Dove, Professor of Chemistry, School of Chemistry, University of Birmingham; **Kathy Page**, Programme Manager, Environment, Science Policy Unit, Royal Society of Chemistry; **Professor Rachel Rothman**, Professor of Sustainable Chemical Engineering, Co-Director Grantham Centre for Sustainable Futures, University of Sheffield; **Professor Mark Miodownik**, Professor of Materials & Society, University College London — Q198–222

Richard Daley, Managing Director and CTO of chemical recycling company, ReNew ELP; **Professor Michael Shaver**, Director, Sustainable Materials Innovation Hub, Professor of Polymer Science, University of Manchester; **Jenny Grant**, Head of Organics and Natural Capital, The Association for Renewable Energy and Clean Technology (REA); **Steve Fletcher**, Professor of Ocean Policy and Economy and Director of Revolution Plastics, University of Portsmouth — Q223–243

Tuesday 22 March 2022

Nihan Temiz Atas, Biodiversity Project Lead, Greenpeace Mediterranean — Q244–251

Megan Randles, Political Campaigner, Greenpeace UK; **Dr Tim Rotheray**, Director of ESG and External Affairs, Viridor; **Jacob Hayler**, Executive Director, Environmental Services Association — Q252–294

Dr Carolyn Deere Birkbeck, Director, Forum on Trade, Environmental Sustainability; **George Riddell**, Trade Strategy Director, Ernst & Young LLP — Q295–313

Tuesday 10 May 2022

Jo Churchill MP, Minister for Agri-Innovation and Climate Adaptation, Department for Environment, Food and Rural Affairs; **Chris Preston**, Deputy

Director, Resources and Waste, Department for Environment, Food and Rural Affairs; **Steve Molyneux**, Deputy Director, Waste Regulation, Environment Agency Q314–394

Published written evidence

The following written evidence was received and can be viewed on the inquiry publications page of the Committee's website.

Inquiry numbers are generated by the evidence processing system and so may not be complete.

1 A Plastic Planet (PW0062)

2 A Plastic Planet (PW0058)

3 AAT (Association of Accounting Technicians) (PW0013)

4 Alupro (PW0020)

5 Bright Blue (PW0018)

6 British Glass (PW0016)

7 British Plastics Federation (PW0042)

8 British Retail Consortium (PW0043)

9 CTPA (PW0019)

10 Calliafas, Mr Peter (Advisory, Independent) (PW0001)

11 Devon County Council (PW0054)

12 Environment Agency (PW0066)

13 Environmental Industries Commission (EIC) (PW0022)

14 Environmental Services Association (PW0050)

15 Food and Drink Federation (PW0037)

16 Frugalpac Ltd (PW0021)

17 Green Alliance (PW0033)

18 Greenpeace UK (PW0024)

19 Iacovidou, Dr Eleni (Lecturer in Environmental Management, Brunel University London); Dr Olwenn Martin (Lecturer in Global Challenges, Brunel University London); Dr Lesley Henderson (Reader in Sociology and Communications, Brunel University London); Dr Norman Ebner (Research Fellow, Oxford University); Mr John Barwise (Director of Quality of Life Environment Management and Communications Consultancy, Quality of Life Environment Management and Communications Consultancy); and Dr Spyridoula Gerasimidou (Post-doctoral researcher, Brunel University London) (PW0047)

20 Kimberly-Clark (PW0032)

21 Law Society of Scotland (PW0030)

22 Leicestershire County Council (PW0057)

23 Manchester Metropolitan University (PW0029)

24 McDonald's UK (PW0023)

25 Mineral Products Association (PW0028)

26 Nappy Alliance (PW0026)

27 National Association of Waste Disposal Officers (PW0059)

28 OBE, Professor Richard Thompson (Professor of Marine Biology, University of Plymouth; and Professor of Marine Biology, University of Plymouth) (PW0027)

29 Paper Cup Alliance (PCA) (PW0041)

30 Peel L&P (PW0034)

31 Policy Connect (PW0025)

32 REA (PW0064)

33 RECOUP (PW0039)

34 ReNew ELP (PW0063)

35 ReNew ELP (PW0038)

36 Royal Society of Chemistry (RSC) (PW0056)

37 SUEZ UK (PW0017)

38 Somerset Waste Partnership (PW0053)

39 Surfers against Sewage (PW0015)

40 Symphony Environmental Technologies Plc (PW0065)

41 TIPA (PW0035)

42 Tetra Pak (PW0031)

43 The Chartered Institution of Wastes Management (CIWM) (PW0046)

44 The Department for Environment, Food and Rural Affairs (PW0061)

45 The Grantham Centre for Sustainable Futures, University of Sheffield (PW0051)

46 The Urology Trade Association (PW0040)

47 UCL Plastic Waste Innovation Hub (PW0036)

48 United Kingdom Without Incineration Network (UKWIN) (PW0012)

49 Veolia (PW0045)

50 Viridor (PW0049)

51 Wildlife and Countryside Link (PW0044)

List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the publications page of the Committee's website.

Session 2022–23

Number	Title	Reference
1st	Australia FTA: Food and Agriculture	HC 23
2nd	Pre-appointment hearing for the Chair-designate of the Environment Agency	HC 546
1st Special	Tree Planting: Government Response to the Committee's Third Report of Session 2021–22	HC 323
2nd Special	Labour shortages in the food and farming sector: Government Response to the Committee's Fourth Report of Session 2021–22	HC 412
3rd Special	Australia FTA: Food and Agriculture: Government Response to the Committee's First Report	HC 700

Session 2021–22

Number	Title	Reference
1st	Moving animals across borders	HC 79
2nd	Environmental Land Management and the agricultural transition	HC 78
3rd	Tree planting	HC 356
4th	Labour shortages in the food and farming sector	HC 713
5th	Pre-appointment Hearing: Chair of Ofwat	HC 1253

Session 2019–21

Number	Title	Reference
1st	COVID-19 and food supply	HC 263
2nd	Pre-appointment hearing for the Chair-Designate of the Office for Environmental Protection (OEP)	HC 1042
3rd	The UK's new immigration policy and the food supply chain	HC 231
4th	Flooding	HC 170
5th	Air Quality and coronavirus: a glimpse of a different future or business as usual	HC 468
6th	Public Sector Procurement of Food	HC 469
7th	Covid-19 and the issues of security in food supply	HC 1156
8th	Seafood and meat exports to the EU	HC 1189