



National Audit Office



REPORT

The government's resources and waste reforms for England

Department for Environment, Food & Rural Affairs

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Key facts

6%

percentage of UK greenhouse gas emissions from landfill, energy-from-waste facilities and other waste treatment, including treatment of wastewater, in 2021

2018

publication of government's resources and waste strategy for England

50%

required reduction in the amount of residual waste (excluding major mineral waste) produced per person in England by the end of 2042, from 2019 levels, under a legislative target set under the Environment Act 2021

June 2022

first independent review of government's flagship collection and packaging reforms, which concluded that successful delivery to time appeared unachievable

Over £1 billion

total estimated annual fees that companies that produce packaging or sell packaged goods will pay under a new extended producer responsibility scheme, which is part of government's forthcoming collection and packaging reforms. This is to cover the costs of collecting and sorting packaging waste in the UK, which, for households are currently met by local authorities

Halfway

government's estimate of how far its collection and packaging reforms will take it towards meeting its legislative target for reducing residual waste in England by 2042 if delivered successfully

Summary

1 The amount of household, commercial and industrial, construction and demolition waste we produce and what we do with it has economic and environmental consequences. Local authorities in England spent £4.9 billion on managing waste in 2021-22, £3.8 billion when accounting for income. Disposal of plastic, food and garden waste can release greenhouse gases which contribute to climate change. Disposal and treatment of waste, including wastewater, represented 6% of UK greenhouse gas emissions in 2021. Reducing waste can cut the use of valuable and finite natural resources.

2 In December 2018 government published *Our waste, our resources: a strategy for England* (the Strategy). This set out government's aim to establish a circular economy where products are used again or for longer through reuse, repair and recycling. It contained five strategic ambitions including doubling resource productivity and eliminating avoidable waste of all kinds by 2050, as well as 83 commitments in areas such as improving recycling and waste management, reducing food waste and promoting waste reduction overseas.

3 The government has commitments and requirements in this area that predate the Strategy, including through waste and recycling regulations transposed from EU directives into UK law in 2011, and under the 1990 Environmental Protection Act. In 2021 the Environment Act passed into law, under which the government has set a legislative target to halve the amount per person of residual waste (excluding mineral waste) that is sent to landfill and incineration for England by 2042 compared with 2019 levels. The need to decarbonise the waste sector became more pressing in 2019 when government passed legislation committing the UK to achieving 'net zero' greenhouse gas emissions by 2050.

4 The Department for Environment, Food & Rural Affairs (Defra) has lead responsibility for resources and waste policy within government. Responsibilities for reducing greenhouse gas emissions associated with waste are split: Defra is responsible for emissions from most waste management activities, including landfill and composting, while the Department for Energy Security & Net Zero (DESNZ) is responsible for emissions from energy-from-waste plants. DESNZ is also responsible for emissions from industry, which it expects can partly be tackled through getting more use out of materials. Local authorities are responsible for arranging collection and treatment of household waste. Defra spent more than £130 million on resources and waste work between April 2019 and March 2023, including on grants to other organisations.

5 As part of its work to deliver the strategy, Defra has developed a programme of three interrelated projects, known as the collection and packaging reforms (the reforms), which will bring about major changes to how waste is paid for and collected:

- **The extended producer responsibility for packaging scheme** will require companies that produce packaging or sell packaged products in the UK to cover the full costs of collecting and sorting household packaging waste for recycling. Defra intends that the scheme will include variable fees, depending on the recyclability of the material used.
- **The consistent collections project** will require local authorities, businesses and organisations such as schools and hospitals in England to collect food waste and dry recyclable materials (paper and card, metal, plastic and glass) separately where possible. Local authorities will also need to provide a separate garden waste collection for households.
- **The deposit return scheme** in England, Wales and Northern Ireland will place a redeemable deposit on all single-use plastic and metal drinks containers up to three litres in volume.

Scope of this report

6 This report examines whether Defra is on track to achieve its resources and waste ambitions in a way that represents value for money. It assesses:

- whether government has effective plans to achieve its resources and waste ambitions; and
- whether Defra is on track to successfully implement its main programme, the collection and packaging reforms.

The report does not cover Defra's ambition to tackle waste crime, which was subject to a separate National Audit Office (NAO) report in 2022.¹

¹ Comptroller and Auditor General, *Investigation into government's actions to combat waste crime in England*, Session 2021-22, HC1149, National Audit Office, April 2022.

Key findings

Planning for achieving government's resources and waste ambitions

7 Government did not achieve its target to recycle 50% of waste from households by 2020 but did achieve other waste targets. Between 2011-12 and 2018-19, the rate of household recycling in England plateaued, remaining between 43% and 44%. Government's 2018 Strategy was its first major statement on recycling and reducing waste since 2007. It set out that government would not introduce major changes for recycling until 2023 because of the time needed to consult, design and fund the reforms. Household recycling rates in England remained under 44% for the two years after the Strategy's publication for which there are data. The government failed to achieve its target, originating in an EU directive, for the UK to recycle 50% of waste from households by 2020. It exceeded its 2020 target to reduce the amount of biodegradable municipal waste sent to landfill, and it exceeded its 2020 target for the recovery of non-hazardous construction and demolition waste (paragraphs 1.3 and 1.7 to 1.9).

8 Four and a half years on from its 2018 Strategy, Defra has still not developed effective long-term delivery plans that set out how it will achieve its ambitions for resources and waste. Defra expects that its collection and packaging reforms will play an important role in achieving its resources and waste ambitions, but they will not be enough on their own. Its latest published analysis suggested that these reforms could take it halfway towards its legislative target for reducing the amount of residual waste that is sent to landfill and incineration by the end of 2042, and more than three-quarters of the way towards its target for increasing recycling rates by 2035. Defra is in the process of updating its analysis of the impact of the collection and packaging reforms as it finalises their scope and to reflect delays to their expected implementation. Defra has other work under way and planned, beyond the collection and packaging reforms, which it expects will contribute to achieving its resources and waste ambitions. However, its long-term delivery planning is not as well developed as we would expect. It has not yet identified a clear outline path to achieving all of its resources and waste ambitions: it does not know when decisions about new interventions need to be made by in order to ensure realistic timeframes for design, testing and implementation, nor does it know, in broad terms, what sequencing of interventions is likely to produce most benefit over the long-term (paragraphs 1.13 to 1.16 and Figure 4).

9 Without an effective long-term delivery plan it is more difficult for government and businesses to prepare for the investment and regulatory changes that will be required, and for Defra to make well-informed decisions about prioritising its work on resources and waste. The long timeframes for some of government's resources and waste ambitions mean that Defra cannot plan every step in detail now. It will need to refine its plans as circumstances change and as its understanding of what works develops. It remains important, however, to establish a clear critical path setting out what new interventions are likely to be needed, and when. That way government – both central and local – can plan the resources they will need to deliver effectively and businesses can plan for changes to, for example, their production processes. Defra has continued work on most of the 83 commitments in its resources and waste strategy since 2018, identifying 13 commitments as priorities, and putting three on hold. Without a clear outline plan it cannot be confident that it is making the most effective use of the time and money it spends on its work on resources and waste. It also runs the risk of leaving critical decisions too late, which could mean it costs more or fails to meet its ambitions. Some businesses told us that uncertainty about Defra's plans causes difficulties, for example in making the case for investment (paragraphs 1.10 to 1.12, 1.17 and 1.18).

10 Defra has not yet set out how the waste system as a whole needs to change to meet its multiple objectives and targets. Defra is working on, although it has not yet published, a waste infrastructure 'roadmap' to identify the waste capacity needed in England to 2035. Determining how the waste system needs to change is complicated by the multiple objectives and targets that government has for the waste sector. In 2022, the Office for Environmental Protection used waste as a case study to illustrate how difficult it was for them to identify all Defra's relevant targets for an environmental issue and to see how they relate to one another (paragraphs 1.4, 1.23 and 1.24).

11 While Defra publishes some useful waste metrics, it is not yet able to effectively assess overall progress on waste and resources because of weaknesses and limitations in its performance information. In November 2022 Defra carried out an assessment of progress against the commitments in its 2018 Strategy. This concluded that six of its 13 priority commitments were on track. However, it told us that this judgement was based on progress against the latest agreed timetable, rather than against its original expectations, and Defra did not have clear milestones or deadlines to inform all of these judgements. Nine out of 23 indicators in its November 2022 progress monitoring report were almost three years out of date at publication, for 2019 or earlier. Commercial and industrial waste represents around one-fifth of total waste generated but Defra does not yet have a robust methodology for determining how much of it is recycled (paragraphs 1.11, 1.25 and Figure 3).

12 Defra launched a project in 2018 to improve its data on waste through a digital waste tracking system. This system will join up and digitise the way that waste transfers are recorded. In October 2022 the Committee of Public Accounts criticised the project's slow progress as it was not yet at pilot stage four years after it was launched. In December 2022, Defra signed a contract with the IT supplier for the waste tracking service. Defra expects that the supplier will start testing a first part of the waste tracking service with a small group of users in summer 2023, building on prototype work that Defra has already carried out. In its November 2022 business case for the project, Defra anticipated that the full waste tracking system will be built by April 2025. We have not carried out a detailed review of the waste tracking project, but previous NAO work has found that a key challenge for large digital programmes is understanding the level of risk associated with a project's aims and ambitions. We have found that departments have often taken longer to deliver programmes than originally scheduled, due to insufficient or unrealistic scoping and planning (paragraphs 1.26 to 1.28).

13 Defra is not in a position to set a target for tackling waste at source, which creates risks that this is not getting the priority that it merits. Government considers that most of the damage to the environment from waste could be avoided at the design and production stages by considering the materials used in production and the ease with which products can be reused or repaired. Defra also considers that improving resource efficiency (the use that is drawn from raw materials before they are discarded) could help businesses become resilient to critical raw materials shortages. Defra considered setting a long-term statutory target for resource efficiency in 2022. It decided not to because it did not yet have a reliable way of measuring such a target. Defra also recognised it had more to do to build its understanding of the impacts and risks of potential policy interventions to ensure that a target in this area would be achievable. Without these foundations in place, resource efficiency may receive less attention than tackling residual waste, which does have a measurable statutory target. Defra has taken action since 2018 to improve waste prevention and resource efficiency, including through a £13.9 million grant scheme for resource efficiency projects, and by introducing bans on certain single-use plastic items. However, the lack of an effective long-term plan means that Defra cannot show whether it is doing enough on waste prevention and resource efficiency to put it on track to achieve its overall ambitions in the most cost-effective way. Many of the stakeholders we spoke to from the waste sector, local authorities and environmental groups told us they were concerned that government had not given waste prevention and re-use sufficient priority. Defra issued a draft plan for waste prevention in England for consultation in March 2021. It has not yet published a final version, despite anticipating that it would do so by mid-September 2021 (within three months after the consultation closed). In January 2023, Defra re-committed to publish a new programme for minimising waste and increasing resource efficiency in England (paragraphs 1.2, 1.6, 1.19 to 1.22).

The collection and packaging reforms

14 Defra did not do enough to put in place essential aspects of programme management when it set up the collection and packaging reforms programme.

Between 2019 and 2021, Defra's preparations for delivering the reforms included consulting on the three projects, supporting the production of the Environment Bill, producing a high-level delivery plan and establishing a programme board. In both June and September 2022, however, the Infrastructure and Projects Authority (IPA) carried out an assurance review of the programme and concluded that successful delivery of the programme to time appeared unachievable. By this point, four years after committing to introduce the collection and packaging reforms, Defra had not secured the resources and expertise that would be necessary to succeed within the agreed timeframes. Defra did not have detailed delivery plans that reflected the scale and complexity of the three projects (extended producer responsibility, consistent collections, and the deposit return scheme). Despite the dependencies between the three projects, it was not managing the collection and packaging reforms as an integrated programme. Defra's approach to realising the benefits of the programme was under-developed (paragraphs 2.8, 2.13 to 2.16 and 2.22).

15 These weaknesses in set-up, as well as factors outside Defra's control, have led to delays. Defra has delayed the introduction of an extended producer responsibility scheme from 2023 to 2024, and the consistent collections project and deposit return scheme from 2023 to 2025. Defra told us that these delays are partly because the one-year Spending Reviews in 2019 and 2020 limited its ability to plan the reforms. Progress was also affected by the COVID-19 pandemic, as Defra paused some of its engagement with stakeholders during 2020 (paragraphs 2.6 and 2.15).

16 Defra has taken steps to place the programme on a firmer footing, but some key elements of effective programme management are still not in place. Defra has implemented or is working towards implementing the IPA's recommendations. It has increased the number of staff delivering the programme and has brought in consultants to support the planning of the programme. However, it still has 22 vacancies in its programme team against a required headcount of 151. Defra is developing detailed delivery plans for each of the three projects within the programme and is producing a programme-wide business case, which should improve its understanding of the interdependencies between the projects. It has also begun to develop plans for ensuring that the programme's benefits are delivered, but this work remains at an early stage (paragraphs 2.8, 2.13, 2.14, 2.21 and 2.22).

17 Defra has taken action to mitigate the risk of unsuccessful delivery but the risk of not delivering to the latest timetable is still high. Time pressures led to Defra deciding to implement the extended producer responsibility scheme in phases rather than launching the full scheme in one go. When it made the decision to delay the introduction of this scheme to 2024, it expected that the scheme administrator – a new organisation that Defra plans to establish within the public sector to administer payments from companies to local authorities – would be fully operational in time for the start of that financial year (April 2024). As part of managing risk, Defra has since delayed this to October 2024 to give it more time to design how the organisation will work, and to recruit the specialist skills and the staff it will need. However, this is still an ambitious timetable. Defra has around 15 months from the publication of this report to create an entirely new organisation, appoint its senior staff, fully staff it and design and roll out any training and systems they need. There is little contingency in the timetable because the scheme administrator will need to process payments as soon as it is set up for the 2024-25 financial year. Defra told us that it intends to set review points when it will assess progress and decide whether to proceed as planned or to make a change to the programme's schedule or scope. It has also started a project to identify the main barriers and challenges to successful delivery that will require ministers' involvement to resolve (paragraphs 2.17 to 2.19).

18 Delays and a lack of clarity about Defra's plans have added to the challenge of achieving the expected benefits from the reforms. The success of the collection and packaging reforms depends on businesses and consumers changing their behaviour by producing less, and recycling more, waste. There are significant challenges to achieving these benefits. For example:

- a core objective for the extended producer responsibility scheme is to incentivise producers and retailers to use fewer and more easily recyclable materials in their packaging. However, some businesses we spoke to told us that lack of clarity about Defra's plans has discouraged them from investing in changes to products and processes in advance of the scheme coming into force; and
- local authorities do not yet know how payments through the extended producer responsibility scheme will affect their overall funding. This could mean that many local authorities start the process of procuring new lorries and bins at the same time, once the funding implications are clear. This could put pressure on supply chains and mean it takes longer than Defra expects for all local authorities to collect waste as required (paragraphs 2.3, 2.20 and Figure 8).

19 Defra still does not have a full understanding of the nature and extent of the changes that will be required to realise the benefits it expects from the reforms.

The benefits of the collection and packaging reforms, such as improving recycling, minimising waste and reducing greenhouse gas emissions, require businesses, consumers and households to change their behaviour substantially. Defra has not yet developed a full understanding of the nature and extent of the behaviour change that will be required; nor has it produced a plan for how it will ensure that the benefits of the programme are realised. Without this there are risks that it loses focus on benefits in the run-up to launching the schemes, and that the reforms fail to achieve the levels of recycling, waste reduction and greenhouse gas emissions savings that are needed. Defra has plans to evaluate and monitor progress on the reforms, including to collect data on performance from one year after implementation of each project. Defra will need to use these data to develop an early understanding of whether the reforms are prompting the changes it expects and take swift action if not (paragraphs 2.10, 2.11, 2.20 and 2.22).

20 Defra has much more to do to improve businesses' confidence in the reforms.

As part of ensuring that the reforms are a success Defra must build strong relationships with the businesses affected. This includes waste management companies who need to invest in the necessary new recycling infrastructure, as well as retailers and other businesses who will be taking on the cost of managing household packaging waste. Some businesses we spoke to told us that Defra's communication with them had been patchy: businesses' views were taken into account during consultation on the reforms, but they felt unclear about the detailed delivery plans, as well as being asked to respond to requests from Defra in very little time. Since the end of 2022, Defra has developed an improved stakeholder management approach but the fact it has not yet developed detailed delivery plans to share with stakeholders makes the task of improving relations more difficult (paragraphs 2.20, 2.21 and Figure 8).

21 There are inherent uncertainties about the scale of the benefits of the deposit return scheme. The impact assessment for the deposit return scheme showed that most (more than 90%) of the benefits that Defra expects are based on an estimate of the value to society of reducing litter, and this is inherently difficult to determine. In addition, the appraisal of the scheme assumes that it will result in an 85% reduction in litter from drinks containers. Defra was planning to use Scotland's deposit return scheme as an opportunity to learn lessons, but the launch of this has now been delayed until at least October 2025, which is when Defra plans to launch its scheme. While there are time and cost implications, it is good practice to pilot projects before committing to significant investment, particularly where the scale of the planned benefits is uncertain. Defra has no current plans to test the scheme through piloting (paragraphs 2.10 to 2.12).

Conclusion

22 In December 2018 government set strategic long-term ambitions to reduce waste and make more efficient use of raw materials. Four and half years on, Defra is delivering some projects and planning others, but it still does not know what it needs to do to achieve its ambitions over the long term. It cannot plan every step in detail over such long time-frames. However, it should know, in outline, what new policy interventions may be needed, their respective contributions, and when the main decision points will be. The UK missed its 2020 recycling target after nearly a decade of stalled recycling rates. The main reforms it has taken forward so far, on collection and packaging, have been delayed. Defra took too long to put in place essential elements of good programme management, and some elements are still lacking. A lack of clarity has made it hard for businesses and local authorities to prepare for the changes they will need to make.

23 Defra must now establish firmer foundations for its work on resources and waste. It should develop a coherent approach to securing its ambitions across the waste management sector, rather than relying primarily on a project-by-project perspective. In addition, it needs to address weaknesses in the reforms that are in progress, and build on these lessons to set up future waste projects and programmes more effectively. If Defra takes these steps it will be in a much stronger position to ensure that government achieves its ambitions, and the considerable benefits to taxpayers, consumers, businesses and the environment are secured.

Recommendations

24 Defra should:

a **develop a clear outline path to achieving all of its resources and waste ambitions in a way that gives it a clear overview of:**

- when key decisions need to be made by in order to ensure realistic timeframes for the design, testing and implementation of new policies;
- what sequencing of interventions is likely to produce most benefit; and
- how the waste sector as a whole needs to change to meet government's multiple objectives and targets;

- b determine**, with HM Treasury and DESNZ's support:
 - **the likely cost implications of different options**, in broad terms, for businesses, consumers and the taxpayer;
 - **where the main dependencies between policy interventions are likely to be**; and
 - **how government will manage common or overarching success factors** such as business and public engagement;
- c engage external stakeholders fully and promptly in its outline plans for future resources and waste interventions to give them as much clarity as possible about the direction of travel**, so that companies have confidence to invest in the changes to business models and waste infrastructure capacity that are needed;
- d ensure that it develops and maintains a good understanding of the risks associated with collecting sufficiently meaningful, good-quality, and consistent data through digital waste-tracking**;
- e carry out a review of the deposit return scheme**, including:
 - updating its evidence on the likely take-up of the deposit return scheme, and the proposed benefits, including the impact of the scheme on amounts of litter from drinks containers, and drawing on any evidence available from pilots carried out in Scotland; and
 - deciding whether, based on that review together with evidence from wider international experience, and an assessment of the impact on timetables and costs, a pilot scheme would be beneficial to protect value for money.
- f improve its approach to managing the risks associated with the collection and packaging reforms by establishing clear criteria for its review points**. This will help Defra make informed decisions about whether to go ahead with the schemes, based on a clear view of the risks to delivery and the strength of contingency plans; and
- g carry out a lessons-learned exercise in advance of the formal evaluation of the reforms to determine practical steps that could be taken to help avoid the challenges it has faced recurring in its future resources and waste work**. This should include an analysis of how Defra will ensure it improves its approach to:
 - setting programmes up well at the outset with a clear programme vision, and integrated delivery plans; and
 - securing in good time the resources and expertise it will require to deliver the programme to the agreed timeframes.