

REVIEW OF THE WASTE PREVENTION PROGRAMME FOR ENGLAND 2013: SUMMARY REPORT

The Waste Prevention Programme in England for 2013 was set out in the policy paper 'Prevention is better than cure: The role of waste prevention in moving to a more resource efficient, circular economy'¹. This report provides a review of the existing waste prevention programme: actions undertaken and impacts

About WRAP

WRAP is not-for-profit, working with governments, businesses and citizens to create a world in which we use resources sustainably. Our experts generate the evidence-based solutions we need to protect the environment, build stronger economies and support more sustainable societies. Our impact spans the entire life-cycle of the food we eat, the clothes we wear and the products we buy, from production to consumption and beyond.

This document provides the supporting evidence and analysis for the evaluation of the Waste Prevention Programme in England 2013.

Document reference:

WRAP, 2020, Banbury, Waste Prevention Programme Review, Prepared by Winning Moves

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1.0 Introduction

The Waste Framework Directive (2008/98/EC) required all EU Member States to establish Waste Prevention Programmes by 12 December 2013. This was transposed into domestic legislation through the Waste (England and Wales) Regulations 2011. The Waste Prevention Programme for England, '*Prevention is better than cure: The role of waste prevention in moving to a more resource efficient, circular economy*',² detailed the key actions required to support this transition, including actions for Government. The specific aims of the Waste Prevention Programme 2013 were to:

- encourage businesses to contribute to a more sustainable economy by building waste reduction into design, offering alternative business models and delivering new and improved products and services;
- encourage a culture of valuing resources by making it easier for people and businesses to find out how to reduce their waste, to use products for longer, repair broken items, and enable reuse of items by others;
- help businesses recognise and act upon potential savings through better resource efficiency and preventing waste, to realise opportunities for growth; and
- support action by central and local government, businesses and civil society to capitalise on these opportunities.

Domestic legislation as well as the Waste Framework Directive requires Waste Prevention Programmes to be evaluated every six years. As the Waste Prevention Programme for England was published in December 2013, an evaluation of the Programme is due for completion.

Defra requested support from WRAP (the Waste and Resources Action Programme) in reviewing the Waste Prevention Programme for England 2013, with reference to the Circular Economy Package³ and the Resources & Waste Strategy for England.⁴ This work included a review of the Waste Prevention Programme 2013: actions undertaken and impacts. Winning Moves was commissioned to review the existing Waste Prevention Programme 2013, having evaluated many activities delivered by WRAP on Defra's behalf during 2013-19 that contribute to waste prevention. The review consisted of four elements:

²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/265022/pb14091-waste-prevention-20131211.pdf

³ http://ec.europa.eu/environment/circular-economy/index_en.htm

⁴ <https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england>

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- (i) **Describing the work undertaken to prevent waste in 2013-19:** Confirming the status of policies, programmes and activities cited in the Waste Prevention Programme 2013 and describing what has happened over the last six years.
- (ii) **Assessing the impact and effectiveness of individual measures using existing data (where possible):** A review of existing evaluation evidence covering the impact and effectiveness of each of the policies, programmes and activities cited as part of the Waste Prevention Programme 2013.
- (iii) **Reviewing overall performance on waste prevention:** A review of performance in line with the Waste Prevention Metrics identified by Defra, drawing on the latest available statistics; and
- (iv) **Undertaking stakeholder interviews to fill knowledge gaps:** Interviews with WRAP staff and stakeholders in a position to comment on the effectiveness of the specific policies, programmes or activities within the Programme, particularly where there was limited data/evidence available on their impact and effectiveness.

This a summary of the of the key points from the report developed with Winning Moves, and includes an account of relevant commitments made and action now underway following the launch of the new Resources and Waste Strategy for England in December 2018. At the time of writing Defra are developing a modified Waste Prevention Programme that takes on board this review. Defra intend to publish a modified programme following further stakeholder engagement/consultation as soon as possible. The Covid-19 crisis has necessitated a postponement.

2.0 Waste Prevention Programme Review

Aim of Waste Prevention Programme 2013

The overarching aim of the Waste Prevention Programme for England 2013 was to improve the environment and protect human health by supporting a resource efficient economy, reducing the quantity and impact of waste produced whilst promoting sustainable economic growth.

Themes

Government planned to deliver this by:

- Providing leadership through its own policies and behaviour;
- Supporting action by others, through working in partnership with the industry to drive innovation and culture change;
- Improving the available evidence base to better monitor progress against targets;
- Focusing on priority materials identified at the time, namely food, textiles, paper and board, plastics, and electricals, built environment and chemical and healthcare; and encouraging reuse and repair across the board.

The Waste Prevention Programme 2013 brought together a wide range of measures already in place to prevent waste in England, under a single umbrella, as well as announcing additional measures related to those themes to be taken forward in support of the overarching aims.

Methodology

Working in consultation with WRAP and Defra, Winning Moves identified 28 unique measures⁵ forming the core components of the Waste Prevention Programme 2013. Winning Moves reviewed each of these in turn to understand the actions taken since 2013, the outcomes and impacts of these actions (where these have been assessed) and the current status of the measure.

In reviewing the Waste Prevention Programme 2013, Winning Moves:

⁵ A summary of these measures, including the actions taken, impacts achieved and their current status at the time of writing, can be found in table I of this report.

- Undertook desktop research to identify and review information available in the public domain;
- Discussed and reviewed unpublished information from Defra and WRAP;
- Interviewed key contacts within WRAP, Defra, HMRC and Innovate UK, each of whom were responsible for measures set out in the Waste Prevention Programme 2013;
- Conducted 15 external stakeholder interviews to receive feedback on the Programme.

Findings

Across the six years since the programme was published in 2013, significant improvements were made by Defra and industry partners in measuring and monitoring waste, especially within the commercial and industrial sector.

The latest data, which are for 2017, show that overall waste arisings in England are at similar levels to those observed in 2013. However, waste arisings per unit of GVA have decreased, continuing a previous downward trend. A similar trend has been observed in the economy's total raw material consumption, indicating that the UK economy is continuing to grow faster than material consumption and waste arisings.

Winning Moves' review of evidence looking at the impact of individual measures indicates that at least 387,000 tonnes of waste have been prevented in total since 2013 as a result of actions taken by organisations collaborating with Government, including approximately 103,000⁶ tonnes that would not have been prevented in the absence of Government's intervention. It was projected at the time the review was completed that actions which were being taken in the context of the Courtauld 2025 agreement would have prevented a further 2.7 million tonnes of waste by end-2019 from 2015, including 624,000⁷ tonnes that would not have been prevented in the absence of the agreement. Subsequent to this review, WRAP published the Courtauld 2025 progress report, suggesting that reductions in food waste and greenhouse gas emissions were in line with the projection during 2015-18⁸.

Food and packaging waste account for the vast majority of the waste prevented since 2013, with earlier Courtauld Agreements encouraging and supporting significant action to prevent food and packaging waste in both the grocery retail sector and food manufacturing supply chain. The ongoing Courtauld 2025 agreement aims at further reducing food waste overall, and also includes targets to reduce household food waste where there has been limited progress to date. This will continue to be supported by a wider programme of work led by

⁶ See Section 4

⁷ See Section 4

⁸ <https://wrap.org.uk/content/courtauld-commitment-2025-milestone-progress-report>

WRAP to shift societal attitudes towards food waste and encourage reductions in household food waste.

The introduction of a 5p charge on all single-use plastic carrier bags distributed by large retailers has also been a particular success, leading to a reduction of over 90% in the total number of single use carrier bags issued.

Progress on reducing the environmental impacts of clothing is being made through the Sustainable Clothing Action Plan or SCAP. This is a voluntary industry agreement, convened by WRAP with funding from Government and industry, involving over 80 signatories and supporters from across the clothing supply chain working towards challenging environmental targets relating to water, carbon and waste. Subsequent to the completion of the evaluation, on 19 December 2019, WRAP published the SCAP results for 2012-2018⁹. These showed that signatories had reduced their water and carbon footprints by 18.1% and 13.4% respectively against a target of 15% per tonne of clothing placed on the market in the UK by 2020. The water target has therefore been exceeded and signatories are on track to meet the carbon target.

However, the target to reduce waste across the supply chain has proven more challenging, and progress to date has been limited with a 1.4% reduction recorded against a target reduction of 3.5% per tonne of clothing. WRAP is working with signatories to achieve more progress in reducing waste in the supply chain by the end of the agreement. The SCAP consumer-facing Love Your Clothes campaign continues to provide information to consumers about how to pass on unwanted clothing for reuse and prevent it being thrown away. This has contributed to a 4% reduction in waste to landfill or incineration against a 15% reduction target. However, there was still 336,000 tonnes of clothing disposed of in the household residual waste in 2017, and therefore destined for landfill or incineration.

The Sustainable Electricals Action Plan (subsequently renamed the Electrical and Electronic Equipment Sustainability Action Plan or esap), was a voluntary agreement involving organisations and businesses from across the electrical and electronics supply chains. Over 80 businesses and organisations worked with WRAP, with funding from Government, as part of esap. The Plan resulted in various outputs such as general guidance on how to improve product durability¹⁰, including Better Appliances Guidance¹¹ to help businesses procure and build more durable products at various price points. This information and

⁹ <https://www.wrap.org.uk/sites/files/wrap/SCAP%202020%20progress%20report.pdf>

¹⁰ <http://www.wrap.org.uk/sustainable-electricals/esap/product-durability/guidance-improve-product-durability>

¹¹ <https://eproducttechguide.wrap.org.uk/>

guidance is freely available on the WRAP website. The impact of outputs produced under esap is unknown.

Unfortunately, it was not possible to agree targets for the voluntary agreement in such a diverse sector. In addition, a proposal to move esap from a Government-funded model to one partially funded by businesses, similar to SCAP 2020 and Courtauld 2025, was unsuccessful. In part this was due to the global nature of businesses in this sector not being able to prioritise a UK plan. The Government funded work as part of esap was suspended in 2018. WRAP continued to conduct work on individual projects with industry partners for instance around minimising product returns.

Government has published several guidance documents for community reuse partnerships since the launch of the Waste Prevention Programme 2013, granting a significant amount of money for research on sustainable business models with reports being published (see Table), and supporting networking events with the participation of financial institutions and organisations willing to invest in resource efficiency. However, there was consensus among stakeholders interviewed during the review that legislative action to set reuse targets and Key Performance Indicators (KPIs) for local authorities (as is already the case for recycling) would be important, if not necessary, to achieving the desired levels of growth in the reuse sector.

The Waste Prevention Programme 2013 included limited action on construction and transportation waste (cars) – two of the priority waste streams identified in the Circular Economy Package. Similarly, there was limited action under the Waste Prevention Programme 2013 to reduce the use of hazardous materials. The Resources and Waste Strategy commits to action on construction using a public-private collaborative initiative, the Green Construction Board. The Board has established a Working Group to develop a Zero Avoidable Waste roadmap. Opportunities to prevent waste in both these sectors are currently being considered by Defra, alongside other priority areas covered in the Waste Prevention Programme 2013, in developing a new Waste Prevention Programme.

Other significant achievements include taking forward and publishing relevant research through Defra's Action-based Research Projects. This explored amongst other things the potential and barriers from new business models such as leasing for example in relation to children's buggies and car seats.

Government was also successful in identifying a set of metrics for monitoring progress in waste prevention. Progress is recorded in Section 4. Monitoring is ongoing.

Factors influencing Success

The evidence available for inclusion in the review suggests the Waste Prevention Programme 2013 was most successful where Government and industry worked in partnership to prevent waste. In areas where less progress was made, stakeholder feedback indicates that this was often due to limited uptake by industry and/or where the measures were insufficient in addressing the fundamental barriers to preventing waste, for instance the Waste Prevention Loan Fund. There were also some cases where projects that were successful at the pilot stage for instance some of the Innovation in Waste Prevention Fund projects, were not continued or rolled out further due to lack of ongoing funding or because Government's focus was diverted to other issues.

Resources & Waste Strategy – ongoing action

In addition to the actions in the Waste Prevention Programme, government has a wider programme of work on resource efficiency linked to delivery of the Resources & Waste Strategy (December 2018).

Through the Environment Bill government is seeking to introduce new provisions to place obligations on producers which will result in the prevention of waste. For instance:

- seeking powers that will enable the introduction of ecodesign, Extended Producer Responsibility (EPR) and consumer information requirements that provide accurate information to consumers, to drive the market towards more resource efficient products.
- to place charges on single-use plastic items to encourage a shift toward more reusable products

Government plans to review and consult on applying EPR and other measures to five new waste streams - textiles, bulky waste including furniture, certain construction and demolition materials, tyres and fishing gear - by 2025, and two of them by 2022. In common with the proposed packaging EPR scheme these are expected to not only facilitate collection and processing of products but also to incentivise waste prevention.

Defra is supporting the UK Plastics Pact - a collaborative initiative to stimulate innovative new business models to reduce the total amount of plastic packaging and help build a stronger recycling system. Led by WRAP and set up in partnership with the Ellen MacArthur Foundation, its members cover the entire plastics value chain. Its targets include 100% of plastics packaging to be reusable, recyclable or compostable by 2025.

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Defra is supporting innovative resource efficiency projects through an £18 million fund - the Resource Action Fund. Administered by WRAP the Fund will help prevent and redistribute surplus food as well as measures to address litter and prevent other waste streams.

Industry bodies and the wider business sector are also taking action possibly prompted by the direction of travel indicated by government strategies and programmes. These include multi-sectoral collaborative projects such as through Business in the Community's Circular Economy Taskforce and product-related initiatives such as on hard to treat products like mattresses. In addition, venture capital funds such as Circularity Capital have been established and working on funding businesses and projects that operate in the waste prevention and recycling space.

Government's plans will be developed further as part of a new Waste Prevention Programme, for consultation in 2020.

3.0 Summary of measures and status

Table 1 summarises the government measures cited in the Waste Prevention Programme 2013. For each, it confirms whether the measure was implemented, summarises the actions taken and associated outcomes and impacts where known. It also indicates whether action is complete, ongoing, has been superseded by other measures, or if insufficient information is available to assess the position.

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Table 1: Measures cited in the Waste Prevention Programme for England 2013

Policy / programme / activity to prevent waste	Action taken and outcomes (where complete/known)	Current status
1. Mandate a 5p charge on single-use plastic bags	A mandatory minimum 5p charge was introduced in October 2015 for large retailers (250+ employees). Defra data for 2018-19 shows the number of single-use plastic carrier bags issued has fallen by more than 90% (over 7.1 billion bags less) since the charge was introduced.	WPP commitment complete. Work on a proposal to extend the single-use carrier bag charge to all retailers and to increase the minimum charge to 10p is ongoing. Defra consulted on this in December 2018. A summary of responses has not been published at the time of writing but will be published in due course.
2. Clarify how the definition of waste can be applied to reuse and repair activities	WRAP's Household Waste Recycling Centre Guidance includes guidance on provision for reuse. (See also initiatives outlined under action 11) Additional draft guidance was developed by a Government/Industry working group for operators at household waste recycling centres with the objective of increasing reuse. This was not published as a standalone document. However revisions were made to the Definition of Waste Guidance published on gov.uk in May 2016	The Resources & Waste Strategy contains a commitment to address the barriers to reuse at HWRCs. As part of this the draft guidance for operators of household waste recycling centres produced by the working group is being revisited for suitability for publication/further incorporation into existing guidance. Further details on plans to encourage reuse, including at HWRCs, will be included in the new Waste Prevention Programme for England.
3. Explore, with industry, how 'individual producer	This measure was explored and Government has monitored examples of voluntary take-back	The Resources & Waste Strategy outlines plans for reform of the existing EPR schemes for packaging waste; end-of-life

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<p>responsibility' can be implemented</p>	<p>systems initiated by businesses such as that led by the National Bed Federation to reduce mattress waste and schemes for recycling coffee cups.</p> <p>The measure has since been superseded by the Extended Producer Responsibility (EPR) reform agenda in Resources & Waste Strategy. EPR makes producers responsible for the full net costs of managing their products at the end of their useful life, encouraging greater reuse and recycling.</p>	<p>vehicles; batteries and accumulators; and waste electrical and electronic equipment. It also commits to review and consult on measures such as EPR for five new waste streams – textiles; bulky waste; certain materials in the construction and demolition sector; vehicle tyres and fishing gear. Action on this is ongoing.</p>
<p>4. Introduce a government-wide 'swap' shop</p>	<p>The "Reuse of Government Assets Pilot" ran for 18 months between April 2016 and October 2017. It encouraged the reuse of stationery, equipment, and furniture across 14 Government departments. It resulted in the following financial, environmental and societal benefits:</p> <ul style="list-style-type: none"> • £103,000 saved in procurement costs • 55 tonnes of CO₂e emissions avoided • 26 tonnes of waste diverted from landfill • over £10,000 worth of surplus equipment donated to the wider public sector • over £24,600 worth of surplus equipment donated to charity. 	<p>The pilot project was delivered successfully, however there has been no subsequent rollout of a longer-term on-line solution for handling surplus office equipment within Government. The Government Property Agency does operate a "swap shop" but this is being delivered via an online platform.</p>
<p>5. Develop the Sustainable Electricals Action Plan (subsequently renamed the Electrical and Electronic</p>	<p>WRAP partnered with over 80 businesses in the electrical and electronics supply chain to identify opportunities for business growth through the adoption of more sustainable business practices.</p>	<p>Government-funded activity for esap ceased in 2018. It was not possible to agree targets for such a diverse sector, and a proposal to move from a Government-</p>

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<p>Equipment Sustainability Action Plan or esap)</p>	<p>The Electrical and Electronic Equipment Sustainability Action Plan (esap) was launched in 2014 and focussed action around improving the durability of products; minimising product returns; increasing reuse and recycling and adopting more efficient business models. It resulted in various outputs including product durability guidance, the Better Appliances Guides and input into the EU Life+ funded resource efficient business models work, the REBus project (which included a gadget take back scheme operated by Argos). The outputs from esap are available on the WRAP website, though their impact is unknown.</p>	<p>funded model to one partially funded by businesses, similar to SCAP 2020 and Courtauld 2025, was unsuccessful. In part this was due to the global nature of businesses in this sector not being able to prioritise a UK plan. WRAP continued to work with the sector on bespoke projects e.g. relating to product returns.</p> <p>Plans for encouraging waste prevention in the electricals sector will be covered in the new Waste Prevention Programme for England.</p>
<p>6. Support the Greening Government Commitments (GGCs)</p>	<p>The pre-existing Greening Government Commitments continued with a series of ambitious targets to reduce greenhouse gas (GHG) emissions, domestic flights, waste, paper and water. The Commitments also aim to improve how Government buys or procures its goods and services to ensure they deliver the best full-life value for money, whilst reducing environmental impacts.</p> <p>The latest GGC Annual Report (April 2017 to March 2018) reported:</p> <ul style="list-style-type: none"> • a 40% reduction in total waste generated, compared to the 2009-2010 baseline. 	<p>Ongoing. Since 2018, the Greening Government programme has been overseen by Defra. In May 2019, the Environmental Audit Committee launched an Inquiry into the GGCs. This was subsequently incorporated into the EAC's Net Zero Government Inquiry. If an inquiry on this subject is held in the future, the Committee may refer to the evidence already gathered.</p>

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	<ul style="list-style-type: none"> • 55% reduction in paper use compared to a 2009-2010 baseline. • Savings worth an estimated £24.3m were achieved through reduced waste in 2017-18 alone. • The majority of Government departments have either a specific sustainable procurement policy or wider sustainability policy in place. 	
<p>7. Increase confidence in reused goods by introducing a reuse quality standard or similar mechanism</p>	<p>WRAP developed a draft Re-use Standard in 2013 with the aim to increase customer confidence in used products. It proposed a framework of generic standards and product-specific requirements for preparing products for re-use. Industry consultation in autumn 2013, supplemented by research with consumers and businesses, found that there was no demand or desire for a generic reuse standard.</p>	<p>This review identified a number of schemes and standards designed for reuse organisations that are currently running. These include a new voluntary standard developed by the charity retail sector for textile recyclers wishing to deal with them. The Textile Recycling Universal Standard or TRUST was launched on 9 September 2019 with the aim of raising standards, ensuring compliance with all necessary legislation and best practice standards straddling health and safety, business practice, labour, environmental standards and transport.</p> <p>The Resources & Waste Strategy (Dec 2018) committed to exploring whether product assurance schemes would boost consumer confidence and stimulate the market for</p>

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		<p>remanufactured goods. Following the RWS Government is seeking new government powers through the Environment Bill to set resource efficiency standards for products to help drive a shift in the market towards products that last longer, and can be re-used, repaired and recycled more easily.</p>
<p>8. Support the Courtauld Commitment</p>	<p>There has been a series of voluntary agreements with food businesses and consumer campaigns since 2007. The latest of these, the Courtauld 2025 agreement set a target of a 20% per capita reduction in food waste between 2015 and 2025.</p> <p>Between 2007 and 2018, there was a 27% reduction in food waste per capita. In total household food waste had a 31% reduction in the total amount of food thrown away that could have been eaten per capita.</p> <p>Latest figures, from 2018, show that food surplus redistribution has nearly doubled to 55,857 tonnes.</p> <p>Note: since this review was completed WRAP has reported on the savings over 2015-18. For further information, see</p>	<p>Ongoing. The agreement continues to work along the entire food chain to reduce the environmental impact of UK food and drink.</p> <p>The Resources & Waste Strategy set out additional policy commitments to cut down food waste and deliver UN Sustainable Development Goal 12.3, which seeks to halve global food waste at consumer and retail levels by 2030. Specific targets set out in the strategy are to eliminate avoidable food waste by 2050 and to work towards eliminating food waste to landfill by 2030. To help with this government will:</p> <ul style="list-style-type: none"> • Introduce mandatory annual reporting of food surplus and waste by food businesses of an appropriate size, subject to consultation in 2020.

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	<p>https://wrap.org.uk/content/courtauld-commitment-2025-milestone-progress-report</p>	<ul style="list-style-type: none">• Seek legal powers in the Environment Bill so that producer responsibility obligations can be applied to prevention of food waste and redistribution of food in the future, if progress to reduce food waste is insufficient.• Coordinate a Food Waste Action Week focused on citizen food waste• Drive delivery using a £15m pilot fund under the Resource Action Fund being administered by WRAP. This includes action to help redistribute more surplus food through overcoming barriers such as lack of equipment or skills, aid behaviour change in consumers and help businesses Target, Measure and Act on their surplus and waste.• Defra has appointed Ben Elliot as Food Surplus and Waste Champion. The Champion is working with key businesses and individuals who have signed a pledge to take action on food waste.• Support WRAP campaigns such as Love Food Hate Waste which supports consumers to reduce food waste.
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<p>9. Support the voluntary Hospitality and Food Service Agreement</p>	<p>HaFSA continued to be supported, aiming to reduce food and associated packaging waste in the Hospitality and Food Service Sector by 5%. It ran between 2012 and 2015. The waste prevention target was exceeded, and actions taken by HaFSA signatories led to the prevention of approximately 25,000 tonnes of waste, of which 10,000 are attributable to the agreement.</p>	<p>Ceased in 2015, with ongoing work to support the Hospitality and Food Service sectors being incorporated into Courtauld 2025</p>
<p>10. Support the Sustainable Clothing Action Plan (SCAP)</p>	<p>The SCAP is a voluntary agreement, supported by WRAP, with over 80 signatories and supporters from across the clothing supply chain including brands, retailers, charities, textile collectors and recyclers. It represents more than 58% of UK clothing retail sales by volume. The latest SCAP report (https://www.wrap.org.uk/content/scap-2020-progress-report), released on 19 December 2019, shows that between 2012 and 2018 signatories have reduced their water and carbon footprints by 18.1% and 13.4% respectively against a target of 15% per tonne of clothing by 2020, and waste across the product life cycle by 1.4% against a target of 3.5%. There has also been a reduction in clothing waste to landfill and incineration between 2012 and 2017 of 4%, against a target to reduce it by 15% per tonne of clothing by 2020.</p>	<p>SCAP is ongoing to the end of 2020. Discussions are underway on what a new voluntary agreement for the future may look like.</p> <p>In line with the Resources & Waste Strategy (and mentioned against point 3 above), the government is exploring options for extended producer responsibility and other measures to five new waste streams including textiles.</p> <p>Powers are being sought through the Environment Bill to enable government to introduce ecodesign and consumer information requirements that provide accurate information to consumers, and drive the market towards more resource efficient products, including clothing.</p>

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		<p>In addition, as part of the Resource Action Fund, WRAP is offering a total of £1.5 million in grants to support projects that provide innovative ways for textile waste to be recycled or re-used, keeping it out of landfill or incineration so that it remains a valuable resource.</p> <p>https://www.wrap.org.uk/content/textiles-recycling-and-re-use-small-scale-grant</p>
11. Facilitate partnership working across the supply chain to encourage greater reuse and repair	<p>WRAP undertook a significant programme of work with Local Authorities and Third Sector organisations to encourage partnership working to increase reuse. Outputs included the Household Waste Prevention Hub and the Partnerships Are Key to Success in reuse (PAKTS) initiative. Examples of successful partnerships are present across the country, though the impacts of this programme of work are unknown.</p>	<p>The dedicated WRAP reuse programme has closed but the information and case studies are still available on WRAP's website and there are some good examples of partnership working present across the country. There is a commitment in the Resources & Waste Strategy to encourage reuse through Household Waste Recycling Centres (HWRCs), for instance through contracts with charities.</p>
12. Support the Circular Economy Task Force	<p>The Green Alliance Circular Economy Taskforce was launched in 2012 and it brings together a group of CEOs and other senior executives committed to delivering a high impact programme to bring the circular economy to life. It is a business led</p>	<p>Ongoing. Noted that the Task Force would welcome more regular involvement from Government officials.</p>

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	initiative, with no formal involvement from Government.	
13. Deliver a 2-year waste prevention community partnership fund	Community-based organisations working in partnership were invited to apply for grant funding of £5,000 to £50,000 from the Innovation in Waste Prevention Fund. It was delivered between 2014-15 and funding was provided to 16 projects. As a result, 241 tonnes of waste were diverted from landfill, 239 volunteers were recruited, 24.8 FTE jobs were created, over £90k of income was generated and 2,836 low income households were helped. Details are published on the WRAP website at https://www.wrap.org.uk/collections-and-reprocessing/collections-and-sorting/re-use/guidance/innovation-waste-prevention-fund-england	Complete.
14. Support the National Health Service and schools in preventing waste	Insufficient information available.	
15. Support innovation in design through research and development funds allocated by the Technology Strategy Board (now known as Innovate UK)	As part of Innovate UK's five-year programme £20m was allocated to 97 projects between 2011 and 2016. The main focus was on waste reduction and reuse of materials, design and supply chain collaboration. The programme was fully funded by BEIS. Innovate UK does not track the impact of	Complete.

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	<p>their individual programmes; hence, there is no quantitative evidence on the programme's impact.</p>	
<p>16. Continue the Waste Prevention Loan Fund (WPLF)</p>	<p>The WPLF aimed to increase waste prevention and capacity for re-use and repair in England. Any material stream was eligible for application. Businesses developing new opportunities were offered loans of between £100,000 and £1 million. Interest in the Fund was lower than expected. No loans were awarded from the fund and the scheme closed in 2014. Anecdotal evidence suggests a combination of factors: stakeholders reported the fund was focussed too much on innovation and new business models but felt the main problem to be addressed in the reuse sector was a lack of capacity and shortage of stock. In addition, businesses reported a range of support available with less restrictive criteria.</p>	<p>Scheme closed.</p> <p>However, grant funding opportunities are being made available for resource efficiency projects, for instance through the £18 million Resource Action Fund. This aims to help divert, reduce and better manage waste in relation to food, plastics, textiles, recycling infrastructure and litter.</p>
<p>17. Improve the information available to banks to promote the benefits to business of waste prevention and 18. Improve access to financial resources for businesses</p>	<p>A series of networking events were planned to connect food waste treatment businesses and banks. No additional activity was undertaken as part of the Waste Prevention Programme 2013 as trade bodies were already organising similar events and WRAP decided to promote those events rather than duplicate efforts.</p>	<p>No further action planned.</p>

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<p>19. Develop a postcode locator for householders to use to find reuse and repair services</p>	<p>WRAP's Recycling Locator widget was populated with recycling data from different sources and was updated with LA recycling schemes' information at least once a year. It was partially updated to incorporate reuse and repair activities with reuse organisations being encouraged to input data themselves. However, with no systematic approach for gathering and updating information the widget was never very comprehensive for reuse and repair.</p>	<p>The Recycling Locator is available at www.recyclenow.com;</p>
<p>20. Support training of local authority officers on advising businesses about resource efficiency</p>	<p>A series of training events were delivered for local authorities on waste prevention/resource efficiency over a 2-year period. This ceased when WRAP's standalone reuse programme ended due to reduced funding.</p>	<p>No further action planned.</p>
<p>21. Develop metrics for businesses, local authorities & civil society to monitor progress on waste prevention</p>	<p>A suite of seven metrics was developed by the end of 2014 to monitor waste arisings and changes over time. These metrics are used as indicators of progress on waste prevention and published in the Digest of Waste and Resource Statistics (https://www.gov.uk/government/collections/digest-of-waste-and-resource-statistics).</p> <p>The seven data sets chosen are: Raw Material Consumption per unit of GDP; Waste arising per unit of gross value added for the commercial and industrial sector; Waste arisings by sector (construction and demolition, commerce, industry,</p>	<p>Complete. Monitoring is ongoing, and progress is recorded in Section 4. Methodological improvements over time mean care should be taken in interpreting apparent year-on-year changes during 2013-present. The approach is expected to be sufficiently consistent going forward to allow for comparisons to be made in future.</p>

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	<p>household); Waste from households; Hazardous waste arisings by sector; Gross value added of the repair and reuse sector; and GHG emissions from landfill.</p>	<p>The Resources & Waste Strategy recognises that high quality data and information are essential in effective policy making and calls for further action to develop a new approach to data on resources and waste. It also contains a suite of indicators to measure progress against the Strategy's objectives. With respect to waste prevention, this strategy sets the following new indicators: Tonnes of raw material consumption per capita; £ GVA per tonne of raw material consumption; Tonnes of waste generated per capita; and Tonnes of residual waste generated per capita.</p>
<p>22. Support action-based research pilot studies testing resource-efficient products and business models</p>	<p>Defra invested £1.2 million over the period 2013-2015 in the Action Based Research Programme. This research was about understanding how growth can continue without the unsustainable resource and materials use it often entails. It included work on exploring the potential for Community Supported Fisheries; Influencing the sustainable habits of consumers through businesses; Piloting shared resource efficiency manager models in SME manufacturers; Piloting a nursery equipment Product Service System;</p>	<p>Completed. The reports outlining the findings of the projects have been published on Defra's R&D portal (http://randd.defra.gov.uk/).</p> <p>Project EV0532: Community Supported Fisheries</p> <p>Project EV0535: Influencing the Sustainable Habits of Consumers</p> <p>Project EV0534: Pilot for a Nursery Equipment Product Service System</p>

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	<p>Developing strategies to improve design and testing for clothing longevity; and understanding motivations for product disposal.</p>	<p>Project EV0548: Piloting shared resource efficiency manager models</p> <p>Project EV0553: Strategies to improve design and testing for clothing longevity</p> <p>Project EV0554: Dirt, Damage, Servicing and Repair: Understanding motivations for product disposal</p>
<p>23. Establish a baseline for commercial and industrial waste arisings to monitor waste prevention progress</p>	<p>There was significant work with the industry to improve data and reporting quality, and new methodology was agreed in 2018.</p> <p>Priority was given to improving the methodology for measuring C&I waste by finding new data sources, rather than establishing a baseline. Performance over time has been reported, but improvements to the methodology over time mean that historic year on year comparisons must be treated with caution.</p>	<p>Whilst work on improving the methodology and data quality is ongoing, the methodology used at present has reached an equilibrium and significant changes are not expected in the foreseeable future.</p>
<p>24. Support roll-out of the Electronic Duty of Care (EDoC) system to enable easy capture of data on business waste</p>	<p>EDoC was launched in January 2014. It is an online system which allows businesses to record how their waste is handled digitally. Uptake of the system was limited. The main reasons for this appear to be that there is no legal requirement to use EDoC and some businesses already have their own digital systems.</p>	<p>Ongoing. The Resources & Waste Strategy included a proposal to mandate the digital recording of waste movements, subject to consultation. This will improve the coverage, quality, accuracy and timeliness of data on secondary materials. Following completion of the evaluation, in October 2019 two technology companies (digital</p>

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		<p>specialists Anthesis and waste analytics company Topolytics) were selected to build prototypes for the UK's first comprehensive digital waste tracking system. They will receive grant funding as part of the government's £20million GovTech Catalyst fund which supports the development of innovative solutions to public sector problems.</p> <p>Related more generally to the availability of raw and secondary materials, the Resources & Waste Strategy outlines work with the Office for National Statistics to develop the National Materials Datahub. This is an ambitious long-term project still in its early stages.</p>
<p>25. Conduct research into the opportunities and challenges of the repair sector</p>	<p>Some research was undertaken by WRAP which focused mainly on estimating the size of the clothing repair market in the UK looking solely at the professional clothing repair market. A short summary of the research was included in the Valuing Our Clothes: the Cost of UK Fashion report.</p>	<p>Complete.</p>
<p>26. Support the Product Sustainability Forum (PSF)</p>	<p>The PSF was a collaboration of retail institutions and companies based in the UK, working together to measure, improve and communicate the</p>	<p>The PSF has ended but its work contributed to the development of Courtauld 2025, focusing stakeholder</p>

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	environmental performance of the grocery and home improvement products.	effort on improving the sustainability of the food and drink chain in the UK, including key global supply chains.
27. Continue to work with industry through the Green Construction Board (GCB) working group	Government has continued to engage with the GCB.	<p>Ongoing. The Resources & Waste Strategy contains a commitment to develop plans to increase resource efficiency and minimise waste in the construction sector, working with the GCB. The GCB have produced an interpretation of zero avoidable waste in construction (February 2020), and are currently working on a roadmap on how the industry will get there.</p> <p>In line with the Resources & Waste Strategy (and mentioned against point 3 above), Government will also work with the construction industry in preparation for reviewing and consulting on EPR for certain construction materials.</p>
28. Continue to work with and influence the European Commission to ensure that we promote resource efficiency whilst minimising burdens on business.	Government continued to work with and influence the European Commission, and on the wider international stage through the G7 and G20 on resource efficiency since publication of the Waste Prevention Programme 2013. Examples include the G7 Alliance for Resource Efficiency and G7 Ocean Plastics Charter.	Ongoing.

4.0 Performance in reducing waste – individual measures

For many activities in the Waste Prevention Programme 2013 there is no quantitative evidence of their impact. Table 1 outlines the confirmed or projected impact of the actions for which there is evidence.

Evaluation evidence at the time of Winning Moves completing the initial analysis suggested that approximately 387,000 tonnes of waste had been prevented between 2013 and 2019 as a result of actions in the Waste Prevention Programme. Besides measures that were complete, there were other measures that were still ongoing, thereby still generating impacts. Actions taken by signatories of the Courtauld Commitment (CC) 2025 are still in progress and the agreement's targets of reducing food and drink waste, on a per capita basis, by 20% are expected to be met by 2025. At the time of completing the initial analysis (December 2019), in this context, and assuming an even distribution of the agreement's expected total impact across its duration (2015-2025), approximately 2.7m tonnes of waste was projected to be prevented by 2019 as a result of actions taken by signatories of CC2025. These figures have now been confirmed and further information can be found at <https://wrap.org.uk/content/courtauld-commitment-2025-milestone-progress-report>

Additionally, interviews with stakeholders including signatories to CC2025, conducted by Winning Moves indicate that an estimated 103,000 tonnes of waste would not have been prevented in the absence of policies and measures that were part of the Waste Prevention Programme 2013. Similarly, it is estimated that, of the 2.7m tonnes that were projected to be prevented by 2019 as a result of actions taken by signatories of CC2025, 624,000 tonnes of waste would not have been prevented in the absence of CC2025. The Courtauld Agreements account for the majority of the total waste prevention impact, highlighting their importance in reducing food waste under the Waste Prevention Programme 2013. A more detailed explanation of the methodology used and assumptions made is included below Table 2.

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Table 2: Overview of attributed impact of Waste Prevention Programme actions

Activity	Achieved impact (tonnes prevented)	Projected impact (tonnes prevented)
Courtauld Commitment 3	93,193	
Courtauld Commitment 2025		623,642
Hospitality and Food Service Agreement (HaFSA)	9,766	
Government Swap-shop	26	
Innovation in Waste Prevention Fund	214	
Total	103,199	623,642

Table 2 Methodology

The impact of changes implemented by signatories in terms of the Courtauld agreements and HaFSA is averaged out across all years of the agreement¹² and is also assumed to continue for another three years after the agreement has ended. Interviews with signatories were conducted to estimate deadweight, i.e. proportion of impact that would have been achieved even in the absence of the agreement. Hence, the figures represent both the total impacts of actions taken by signatories (i.e. before attribution) and attributed impact (i.e. accounting for the assessment of deadweight). According to the aforementioned assumptions, between 2013 and 2019:

- The Courtauld Commitment 3 led to 362,667 tonnes of waste prevented. Interviews with signatories and analysis based on their responses suggest that at least 26% of this impact is fully attributable to the agreement, i.e. it is estimated that 93,193 tonnes of waste would not have been prevented with in the absence of the agreement.
- The Courtauld Commitment 2025 was projected to lead to approximately 2.7m tonnes of waste prevented by 2019. Interviews with signatories suggest that at least 23% of this impact is fully attributed to the agreement, i.e. 623,642 tonnes of waste would not have been prevented in its absence. WRAP's monitoring data and conversations with signatories show that a great deal of the agreed actions are in the process of implementation. However, so far, the same data show that there has been no observed decrease in food waste resulting from these actions to date. As signatories are implementing the agreed actions, it is assumed that they will eventually lead to the projected decrease in food waste. But, for the time being, these figures are projections based on the assumption that CC2025's targets will be fully met by 2025 and that the agreement's total impact is evenly distributed across its duration (2015-2025).

¹² To ensure value for money calculations pertaining to different time periods arrive at the same conclusion, it was agreed for the purpose of the 2010-15 and 2015-20 assessments that both the costs and benefits should be averaged over the course of the agreement.

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Winning Moves has also estimated a benefit-to-cost ratio for the two agreements. Benefit-to-cost ratios take into consideration actions other than waste prevention, including diversion from landfill to recycling. However, for both the CC3 and CC2025, waste prevention accounts for the main bulk of the total benefits arising from them, as it is associated with significant cost and carbon savings. Winning Moves estimated that the benefit-to-cost ratio was:

- 2.28 for CC3's packaging target. Note: this includes CC2, which ended in 2012, before Waste Prevention Programme came into effect.
- 10.58 for CC3's supply chain target. As with the packaging target, this also includes CC2.
- 4.56 for CC2025 (based on projected costs and impacts for the entire period 2015-2025).

HaFSA's estimated waste prevention impact amounts to 24,278 tonnes of waste. Interviews with signatories suggest that 40% of the total impact can be fully attributed to the agreement, i.e. 9,766 tonnes of waste would not have been prevented in the absence of the agreement. As is the case for the Courtauld agreements, Winning Moves also estimated a benefit-to-cost ratio for the Hospitality & Food Service programme, which includes the Online Resource Centre activity. Given that the Online Resource Centre's estimated impacts were low, this ratio largely reflects HaFSA's activity between 2012 and 2015. Winning Moves estimated that the benefit-to-cost ratio for the Hospitality and Food Service programme area as a whole was 0.86.

The Sustainable Clothing Action Plan has been successful in reducing the carbon and water footprint of signatories, but less progress has been made in reducing waste across the supply chain, or waste to landfill, to date. Signatories are now focusing their efforts on improving performance in this area by the end of the agreement in 2020.

The 5p charge on single-use plastic carrier bags has led to a sharp drop in the amount of such bags distributed by large retailers. The number of single-use plastic carrier bags issued has fallen by more than 90% (over 7.1 billion bags less) since the charge was introduced in October 2015.

The impact assessment conducted by Winning Moves followed a bottom-up approach and was based on telephone interviews with the beneficiaries of WRAP's activity. In these, beneficiaries were asked to confirm and quantify movements towards waste prevention resulting from the support they had received from WRAP. Data from the telephone interviews was extrapolated to estimate the overall impact of measures across a number of Key Performance Indicators, including waste prevention. Apart from the actions already mentioned above, analysis of historical evaluation data shows that other activities sponsored by WRAP/Defra, which were not necessarily within the scope of any of the measures listed in the WPP, have also contributed to waste prevention impacts during 2013-19. Winning Moves estimates that their combined impact amounts to a further 36,000 tonnes of waste prevented. The types of waste affected by these actions included bulky waste, textiles, and waste related to facility management, such as paper and plastics.

Performance in reducing waste – waste prevention metrics

Defra worked with stakeholders to develop a suite of seven metrics to monitor progress in waste prevention. These have been tracked in the Digest of Waste and Resource statistics¹³, first published in 2015 and followed by three further editions, the latest of which was released in May 2018. There has been no Digest of Waste and Resource Statistics published since 2018. Much of the data referenced in the Digest, however, will continue to be collated and presented within the Resource and Waste Strategy Indicator Framework '*Monitoring Progress*'. The latest information on progress against these 7 metrics can be found below:

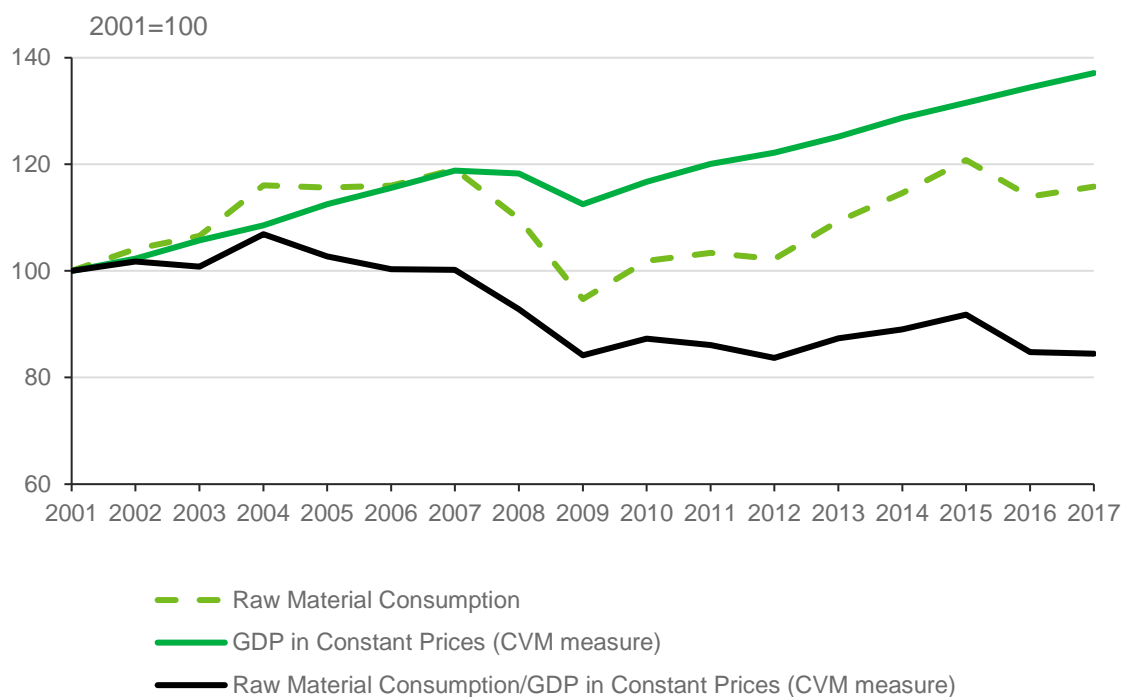
Raw material consumption per unit of GDP

Gross Domestic Product (GDP) in England generally increased between 2001 and 2017, by 37.1% overall and on average, 2.0% each year. Raw Material Consumption¹⁴ (RMC, excluding fossil fuels) also increased across this period, though at a lesser rate than GDP (by 15.8% overall and on average, 1.1% each year). Due to growth in GDP across this period being greater than in RMC, there has been a reduction in England's resource intensity (RMC/GDP) across this period of -15.5%.

¹³ Department for Environment, Food and Rural Affairs (2020) Digest of waste and resource statistics; <https://www.gov.uk/government/statistics/digest-of-waste-and-resource-statistics-2018-edition>

¹⁴ Raw Material Consumption (RMC) is defined as the full amount of raw materials required to meet final demand for goods and services by households, government and charities in England in one year. These estimated have been calculated using a Multiregional Input-Output approach. This helps the measure include an estimate of the materials extracted within England's borders to meet final demand here, in addition to the full upstream material requirements needed to produce imported goods and services. Fossil fuels are excluded in the measure presented here.

Figure 1: Index values of Raw Material Consumption (RMC), Gross Domestic Product (GDP, CVM) and unit RMC per unit (£) GDP, England, 2001 to 2017¹⁵



Waste arising per unit of gross value added for the commercial and industrial sector

Waste generated in the commercial & industrial (C&I) sector remains difficult to estimate owing to data limitations and data gaps. Resultantly, estimates of C&I sector waste arisings are associated with a higher level of uncertainty than for other waste streams such as Waste from Households for instance, and caution should be exercised in interpreting apparent year-on-year changes in the data. The latest estimates of waste arisings in the C&I sector are presented in Table 3:

¹⁵ Source: Owen, A., Giesekam, J., Barrett, J. (2020) Material footprint and resource efficiency in the UK; <http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20306&FromSearch=Y&Publisher=1&SearchText=ev0279&SortString=ProjectCode&SortOrder=Asc&Paging=10%20-%20Description>, Office for National Statistics (2019) Regional Gross Domestic Product all NUTS level regions; <https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossdomesticproductallnutslevelregions>

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Table 3: Waste generated in the commercial and industrial sector¹⁶, England, 2010-18¹⁷ (million tonnes)

Year	Commercial	Industrial	Total
2010	21.6	10.4	32.0
2011	21.4	12.0	33.4
2012	21.0	12.9	33.9
2013	20.8	12.0	32.8
2014	21.3	10.4	31.7
2015	22.5	9.4	31.9
2016	23.6	9.5	33.1
2017	25.8	10.3	36.1
2018	27.1	10.1	37.2

Table 3 shows England C&I waste arisings, the overall total for which are estimated to have grown between 2010 and 2012, before falling between 2012 and 2014 owing to reductions in arisings from the industrial sector. After 2014, total C&I waste arisings grew year-on-year to 2018, primarily as a result of increased levels of waste generated in the commercial sector.

Figure 2 shows that Gross Value Added (GVA) for the C&I sector¹⁸ increased at a relatively constant rate between 2010 and 2018, and by 17.7% overall. Driven by a fall in total C&I waste arisings between 2012 and 2014, the amount of C&I waste generated per £ GVA of the C&I sector (waste intensity) trended downwards between 2012 and 2015 after a period of stability, before increasing between 2015 and 2018 as a result of increased waste arisings. The waste intensity of the C&I sector is estimated to be slightly less (less by 2.7%) in 2018 than in 2012.

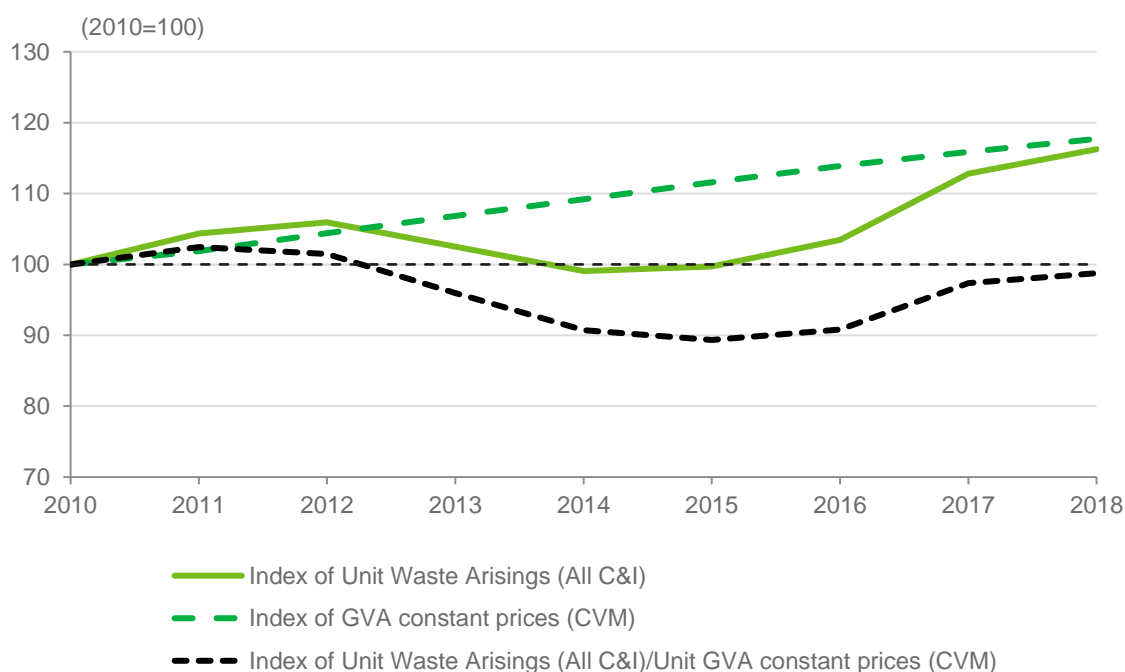
¹⁶ Commercial & industrial waste generation represents a subset of the estimates prepared to comply with Waste Statistics Regulation reporting requirements

¹⁷ Source: Department for Environment, Food and Rural Affairs (2020) ENV23 - UK Statistics on Waste: <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

¹⁸ NACE Sections C, D, E 36-37 & 39 and G-T

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Figure 2: Index values of commercial and industrial (C&I) waste arisings, Gross Value Added (GVA) of the C&I sector (CVM) and unit waste per unit (£) GVA of the C&I sector, England, 2010 to 2018¹⁹



Waste arisings by sector (households, commercial & industrial, construction, demolition & excavation, other)

Waste arisings by sector are shown in table 4. Between 2012 and 2016, total waste arisings in England increased by 11.7%. The construction, demolition & excavation sector, which makes up roughly two-thirds of the total waste generated each year, accounted for the vast majority of the overall increase in this period. Waste from the C&I sector and 'other' sources e.g. agriculture and mining activities, fell between 2012 and 2016.

¹⁹ Source: Department for Environment, Food and Rural Affairs (2020) ENV23 - UK Statistics on Waste; <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

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Table 4: Waste arisings by source, England, 2010-16²⁰²¹ (million tonnes)

	Commercial & Industrial	Construction, demolition & excavation	Households	Other	Total
2010	30.9	101.6	22.3	12.9	167.7
2012	33.3	100.1	21.9	12.0	167.3
2014	30.7	116.8	22.4	11.9	181.8
2016	32.1	120.3	22.8	11.8	187.0
% Change (2012-16)	-3.5%	20.2%	3.8%	-2.2%	11.7%

Waste from households

Waste from households (WfH) in England was at a similar level in 2018 as in 2012 (see table 4). However, over the same period, the Office of National Statistics estimates that England's population grew by almost 5%²², meaning that waste from households on a per capita basis fell slightly between 2012 and 2018 (by 4.1%). This metric excludes local authority collected waste types not considered to have come directly from households such as street bins, street sweepings, parks and grounds waste and compost-like output.

²⁰ Source: Department for Environment, Food and Rural Affairs (2020) ENV23 - UK Statistics on Waste: <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

²¹ Estimates presented here have been calculated to report against the EC Waste Statistics Regulation return

²² Office for National Statistics (2019) Estimates of the population for the UK, England and Wales, Scotland and Northern Ireland; <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>

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Table 5: Waste arisings from households, England, 2010-18²³ (million tonnes)

Year	Waste arisings
2010	22.1
2011	22.2
2012	22.0
2013	21.6
2014	22.4
2015	22.2
2016	22.8
2017	22.4
2018	22.0

Hazardous waste arisings by sector

Total annual hazardous waste arisings in England increased by a tenth (12.3%) between 2012 and 2016, rising from 3.1 to 3.4 million tonnes. The greatest source of hazardous waste arisings in this period was the C&I sector, which also experienced the greatest proportional increase in arisings between 2012 and 2016. Hazardous waste arisings from the construction, demolition & excavation sector and 'other' sectors e.g. agriculture and mining fell between 2012 and 2016.

Table 6: Hazardous waste arisings by waste sector in England, 2010 to 2016 (million tonnes)²⁴

	Commercial & Industrial	Construction, demolition & excavation	Households	Other	Total
2010	1.97	0.57	0.29	0.15	2.98
2012	1.89	0.74	0.27	0.16	3.06
2014	2.11	0.62	0.26	0.17	3.16
2016	2.30	0.68	0.30	0.15	3.44
% Change (2012-16)	22.0%	-8.0%	11.3%	-5.2%	12.3%

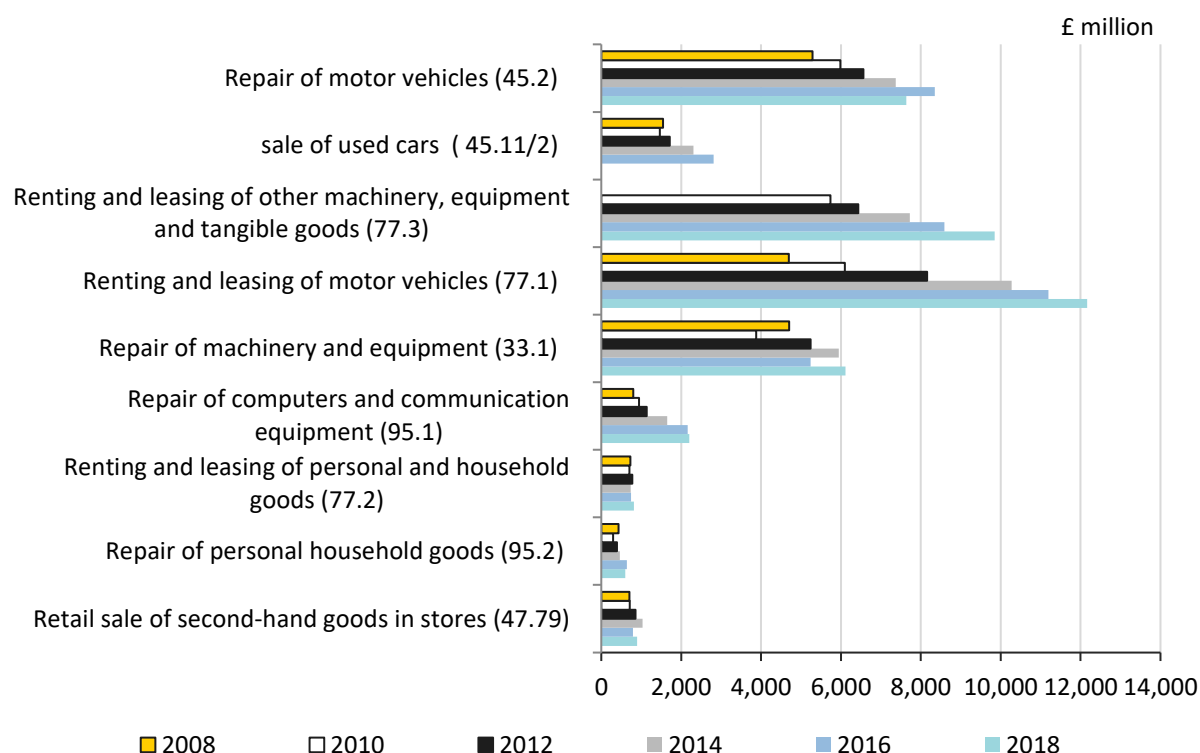
²³ Source: Department for Environment, Food and Rural Affairs (2020) ENV23 - UK Statistics on Waste; <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

²⁴ Source: Department for Environment, Food and Rural Affairs (2020) ENV23 - UK Statistics on Waste; <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

Gross value added of the repair and reuse sector

The Annual Business Survey provides data on the size and growth within the UK's economic sectors. The Gross Value Added (GVA) of the UK's repair and reuse sector more than doubled in the decade between 2008 and 2018. Renting and leasing of motor vehicles (77.1) and renting and leasing other machinery (77.3) contributes to roughly half of the size of the repair and reuse sector. Sub-sector estimates from the Annual Business Survey are usually based on small samples, and year-on-year trends should be treated with caution as they might be due to sample volatility.

Figure 3: GVA (Basic prices) for repair, re-use and leasing sectors, UK, 2012 to 2018 (£ million)²⁵



²⁵ Source: Office for National Statistics (appears to 2020) Non-financial business economy, UK: Sections A to S.

<https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/datasets/uknonfinancialbusinesseconomyannualbusinesssurveysectors>

GHG emissions from landfill

There has been a sharp decline in GHG emissions from landfill in England predating the introduction of the Waste Prevention Programme in 2013 (see figure 4). Emissions from landfill are now less than a quarter of those recorded when reporting began in 1990. The downward trend in landfill emissions is due to reductions in many types of waste being sent to landfill, driven by the landfill tax and increases in recycling. The downward trend in landfill emissions nevertheless has slowed in recent years.

Figure 4: Historical trend of emissions from landfill and the waste management sector, England, 1990 to 2017 (ktCO₂e)²⁶



²⁶ Source: Department for Business, Energy and Industrial Strategy (2020) Greenhouse Gas Inventories for England, Scotland, Wales & Northern Ireland: 1990-2017; https://naei.beis.gov.uk/reports/reports?report_id=991



WRAP's vision is a world in which resources are used sustainably.

Our mission is to accelerate the move to a sustainable resource-efficient economy through re-inventing how we design, produce and sell products; re-thinking how we use and consume products; and re-defining what is possible through re-use and recycling.

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