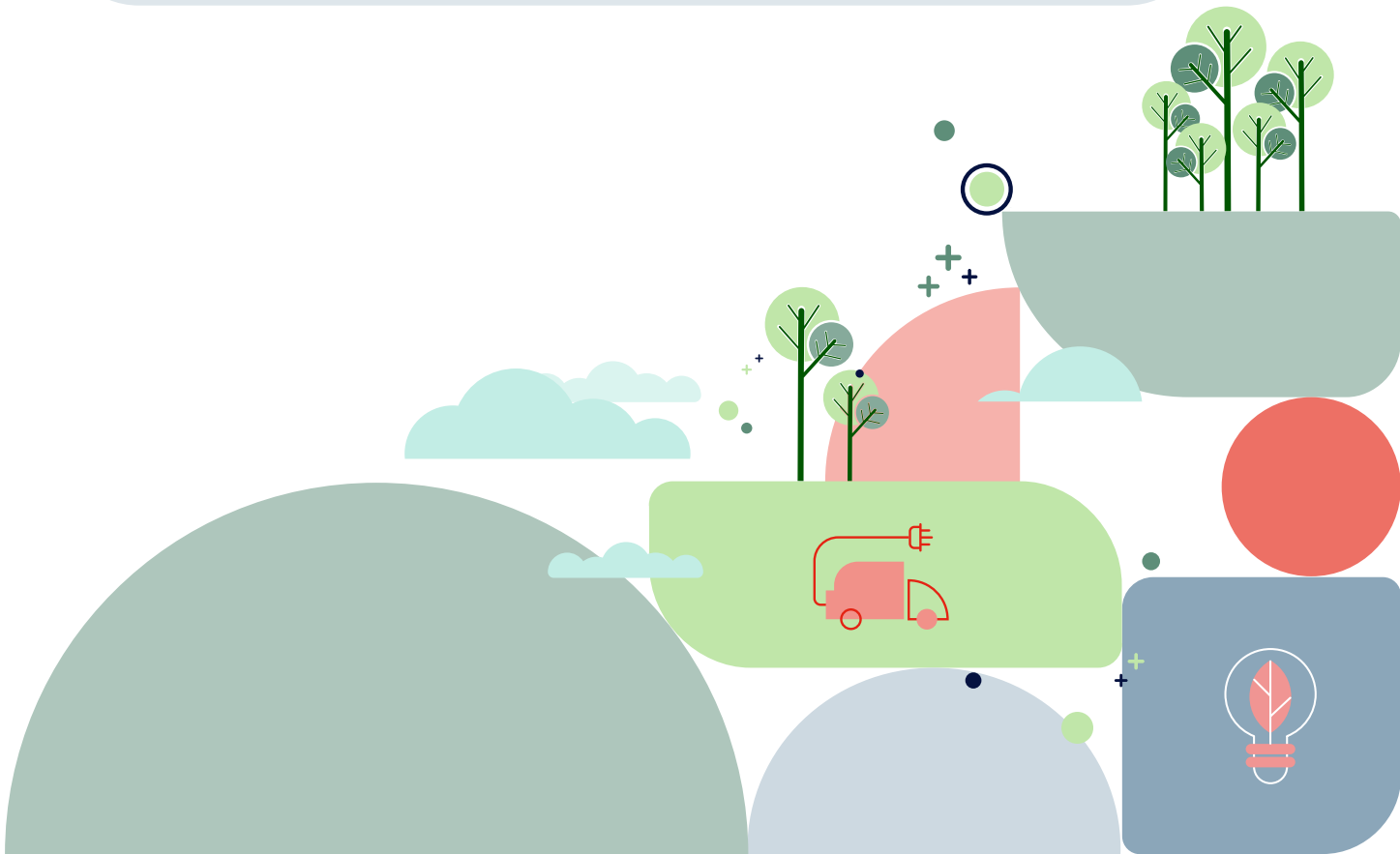
Reality Check 2025

Enabling the UK circular economy



Foreword

By Michael Topham, Biffa CEO

It's been three years since our last Reality Check and once again the world has changed - presenting new challenges, but also fresh opportunities. While global events have shifted short-term political focus, the need for climate action remains urgent and clear.

What's also clear is that, despite headwinds, there are powerful levers at our disposal to drive meaningful progress. Some organisations are recalibrating their ESG commitments and looking to supply chains for support. This creates a moment of opportunity to work together more strategically, aligning commercial needs and economic growth with environmental ambition.

Yes, momentum has slowed in some areas but the case for action has never been stronger. The impacts of climate change are increasingly visible, reminding us why decisive, coordinated effort is essential. Equally critical is the need for resilient supply chains that reintegrate resources and underpin the UK economy to drive growth. Rather than a burden, this is a call to innovate, invest, and lead.

The financial reality of past commitments is becoming clearer, and it underscores the need for smart, well-designed 'investment grade' policy that supports long term growth. Policy certainty, long-term contracting structures, and appropriate risk allocation are essential to unlock private capital and reduce the cost to citizens. While businesses like Biffa continue to thrive despite the current conditions, the wider societal and environmental impact will take much longer to achieve without this stability.

Government has a vital role to play in setting out a clear, consistent direction for industry and creating a stable environment that supports innovation, de-risks investment, and accelerates progress. There's work to do, but there's also huge potential to unlock.

While we are still in the implementation phases of the UK's 2018 Resources and Waste Strategy, there remains strong potential for impactful circular interventions - including reuse, remanufacturing, and repair - that can reshape supply chains and generate economic opportunity.

The Circular Economy Task Force will play a vital role in shaping this future, but many of the outcomes will take years to implement. There are practical steps we can take now within the existing legislative framework to reduce waste and build a more circular economy today.

3 further things to consider:

1. Citizenship must sit at the heart of the transition

While everything we are advocating is essential to stimulate and shape our sector and lay the foundations for a UK circular economy, we need to remember that people are at the centre of it all - at home, in the workplace and in public spaces. Citizenship must sit at the heart of the UK's transition to a more sustainable, circular economy.

This means shifting the mindset – from seeing people as passive consumers to recognising them as citizens with a real stake in how systems evolve. Policies like Deposit Return Schemes (DRS) and Simpler Recycling aren't just about infrastructure or logistics, they're about building public ownership and changing behaviours. The sector has a clear opportunity here, to design services and communications that empower participation, not just demand compliance.

2. Don't let perfect be the enemy of good

We also need to stop holding out for perfect solutions. Progress won't be tidy, there will be setbacks, compromises, and lessons learned along the way. But waiting for flawless strategies means wasting time we don't have. Whether it's decarbonising fleets or scaling recycling capacity, the goal is to move forward, even if that means adapting as we go. What matters most is that businesses, local authorities, and policymakers keep working together and don't let complexity become an excuse for delay.

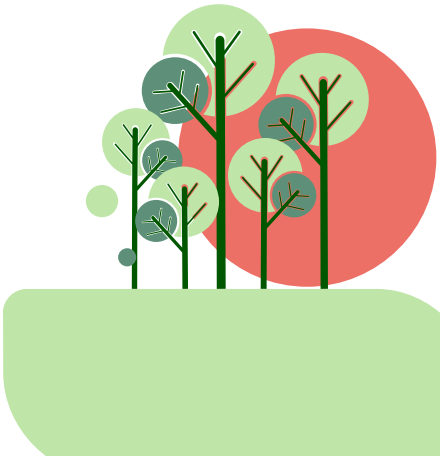
3. Innovation is happening and it needs space to grow

Finally, innovation in the waste sector is real, and in many cases, it is ready to scale. From carbon capture in EfW plants to AI-enabled sorting and smart logistics, the ideas are already out there. What they need now is consistent policy, stable markets, and clear investment signals to help de-risk early action. This isn't about controlling innovation from the top down, it is about established players listening, creating strategic partnerships, and helping the best ideas reach commercial maturity. The next phase of progress will be built on collaboration, not competition.

With the right policy environment and industry collaboration, the UK can lead the way - creating new markets, pioneering scalable technologies, and delivering green jobs across the economy.

In this, Biffa's 2025 Reality Check, we take stock of where we are against this ambition, set out our vision for what's possible, and identify the practical, high-impact actions we can take right now to build a better, more sustainable future.

Michael Topham
Chief Executive Officer



Progress since 2022

In 2022 Biffa published its 'Blueprint for Waste Net Zero', a reality check which summarised the state of play of the sector and set out the policy changes that were the vital next steps in a move towards a more circular economy. The policy asks were the framework we felt necessary to deliver on sustainability ambitions and unlock the potential investment needed from the waste sector in the circular economy.

Today, in our 2025 Reality Check report we take a sobering look at the progress made. Our conclusion is that since 2022 there has only been some modest and partial progress toward implementing the key policy recommendations needed to decarbonise the UK waste sector, accelerate the circular economy, and secure the UK's share of the green industrial revolution.

At the centre of waste policy in recent years has been the England 2018 Resources and Waste Strategy (RWS). Scotland published its latest Circular Economy and Waste roadmap in Dec 2024, the follow up to its 2016 strategy 'Making Things Last'. While the Welsh strategy 'Beyond Recycling' has been at the heart of new legislation and directives for years.

Despite a recent acceleration of momentum in 2024-2025, these multiple, national strategies have been hindered by successive delays and dilutions. Most notably, the RWS in England has not achieved the potential we hoped it would.

While some flagship RWS reforms have moved forward timelines have repeatedly slipped, for example:

- Packaging Extended Producer Responsibility (pEPR) was delayed with fee payments starting 12 months later than originally anticipated.
- The DRS has faced multiple delays and will not come into force until 2027 at the earliest.
- Consistent Collections for household and businesses were watered down and delayed and implemented as Simpler Recycling in England.
- Carbon Capture on Energy from Waste (EfW) facilities has progressed but current government policy leaves open the possibility that new EfW facilities could be built without it.
- Digital Waste Tracking is another RWS policy that has been delayed.

Other policies are in the pipeline but are yet to be delivered and industry needs clearer formal commitments and guidance. These include:

- Extension of the Emissions Trading Scheme to Energy from Waste facilities
- Reform of Landfill Tax

There has been no real movement towards:

- Mandatory food waste reporting
- Making Plastic Packaging Tax progressive
- Clarity on the safe export of high-quality, non-plastic materials for processing
- Policy frameworks that support reuse
- Banning the export of unprocessed plastics (although at time of writing DEFRA has committed to a future consultation on export of plastics)
- A strategy to enable decarbonisation of commercial fleets.

As a result, the latest available data indicates that UK household recycling rates continue to stall, and UK total waste production continues to increase. Industry investment in infrastructure has been impacted by uncertainty and in the case of plastics recycling we have seen facilities close, and capacity reduce because delayed policies have not shaped markets as expected.

This leaves us falling further behind the clear targets that the Climate Change Committee has indicated are necessary to meet if the UK is to achieve its 2050 net zero carbon emissions commitment:

Target	Deadline
68% household and non-household recycling rate	by 2035
5% reduction in non-food waste	by 2040
45% reduction in food waste per capita (from 2021 levels)	by 2040

The current Government has shown a renewed interest in the circular economy and waste sector and has brought back a pace that we have not seen since 2018 with the incoming Defra team maintaining the Government's commitment to:

"... end the throwaway society and work towards a zero-waste economy where resources are reused and recycled, creating new jobs and investment"[i]

We welcome the creation of the Circular Economy Taskforce that will set the long-term vision and strategy needed to achieve this ambition and design circularity into the economy across many sectors and value chains. It is essential work for the future. However, being realistic, the taskforce recommendations will be setting the policy implementation programme for the next Parliament, not this one.

i - https://www.gov.uk/government/speeches/defra-secretary-of-state-at-summer-stakeholder-reception

There are issues that cannot and must not wait for Taskforce recommendations to translate into action. There are fundamental changes that must happen urgently to get the basics working and make further progress in waste reduction, recycling and recovery.

It is important to note that within this climate of legislative uncertainty, the pandemic, supply chain disruptions and a cost-of-living crisis, the waste sector and key companies within it have continued to grow. The ESA/Tolvik 2024 Market Report estimated between 2015 and 2024 the UK waste market grew at compound annual growth rate (CAGR) of roughly 1.5%–2% per year.[ii] During a similar period, Biffa's revenue grew from £1.1bn in 2017 to £1.44bn in 2024, an approximate CAGR of 3.95% per year.

This demonstrates the robust performance and stable investment the waste sector represents. While the waste sector and Biffa will continue to find ways to adapt and grow, the UK is competing at a global level for a stake in the green industrial revolution. The potential for economic, societal, and environmental impact is unprecedented, however the UK is already struggling to complete against certain parts of world, because the UK's labour, land and energy costs are higher, as are our regulatory standards.

Without investment-grade policy that goes beyond mandate, supported by long-term offtake, and government-backed Contract for Difference (CFD), the UK risks falling behind at this critical formative stage.

The following lays out the practical changes we believe can be made now that will ensure the UK benefits from a stable and mature sustainable waste management sector.

ii - https://esauk.org/wp-content/uploads/2024/06/24800_Tolvik-document_summary_June2024.pdf

1. Support UK plastic recycling

The Waste and Resources strategy 2018 signalled long-term government support for recycling and a circular economy with fiscal measures to create a market for recycled material that would not exist without intervention. It encouraged investment into recycling infrastructure including plastics recycling. Industry responded and invested in plastics processing facilities for sorting, washing and mechanically recycling plastics.

However, policy delays or failures mean market demand for recycled material has not kept pace with the investment. In 2022, the UK's plastics recycling capacity was 1.1Mt,[iii] however it is estimated that in the last 18 months recycling capacity exceeding 260 kilo tonnes has been lost due to site closures.

Biffa is a market leader in high-quality recycled plastics, converting over 190,000 tonnes of plastic each year into new polymer products. With three specialist facilities – Redcar, Seaham, and Sherburn – we operate at the forefront of the UK's circular economy, reducing reliance on virgin plastics and supporting brands and households to recycle more. Our capability spans rHDPE, rPET, and rPP, providing a reliable domestic supply chain for sustainable manufacturing.

Our Redcar site was the first in the world to produce food-grade rHDPE pellets from post-consumer sources, earning the Queen's Award for Innovation and processing 83,000 tonnes of rHDPE and rPP annually. At Seaham, a £27.5 million investment delivered one of the most advanced PET recycling plants globally, producing 57,000 tonnes of rPET each year – the equivalent of 1.3 billion recycled beverage bottles. Sherburn complements this capacity, adding a further 25,000 tonnes of food-grade rPET production.

We supply a wide range of recycled plastics, from food-grade rHDPE and rPET compounds for packaging and fibre manufacture, to rPET hot washed flake, compounded plastics in multiple grades and colours, and regrind plastics for extrusion and injection applications. By substituting virgin materials, these products enable significant carbon footprint reductions while meeting the performance and quality demands of UK manufacturers.

iii - https://www.bpf.co.uk/article/bpf-briefing-document-uk-plastic-recycling-market-conditions-3719.aspx

The plastics recycling sector faces difficulties on a number of fronts:

- The downward cycle of oil prices has kept prices of inputs for virgin plastic suppressed. However the cost of collecting and processing recycled material do not follow the same cyclical pattern and remain high.
- Demand for recycled plastic content has not grown as much as anticipated in response to the Plastics Packaging Tax. In fact PPT's design provides no incentive to further increase recycled content in plastic packaging above 30%.
- A delay to the introduction of a deposit return scheme for PET plastic bottles has held up access to high quality feedstock which UK processors need to import, pushing up input costs.
- There are perverse incentives in the Packaging Export Recovery Note (PERN) system to export bales of unprocessed plastic waste that disadvantages domestic recycling.
- There is large scale import of unregulated and self-certified recycled plastic. This material is at high risk of infiltration by fraudulent activity which impacts the UK recycling sector's competitiveness on top of uncompetitive energy prices and higher labour costs.

The UK still exports around 600,000 tonnes of unprocessed plastic waste[iv] abdicating our responsibility for our waste to other countries to handle. The perverse incentives in the PERN system encourages the export of bales with lower levels of recyclable content, and with very limited onward traceability some poor-quality plastics will be ending up in badly managed or illegal operations, possibly in unmanaged landfills or burnt in the open. The UK should not be adding its waste to the environmental burden of other countries.

The UK could take responsibility for its own waste plastic and become self-sufficient in plastics recycling, creating green jobs, boosting investment, cutting exports, and significantly reducing carbon emissions – if government policy drives demand, builds capacity, and ensures material stays onshore.

iv - https://researchbriefings.files.parliament.uk/documents/CBP-8515/CBP-8515.pdf

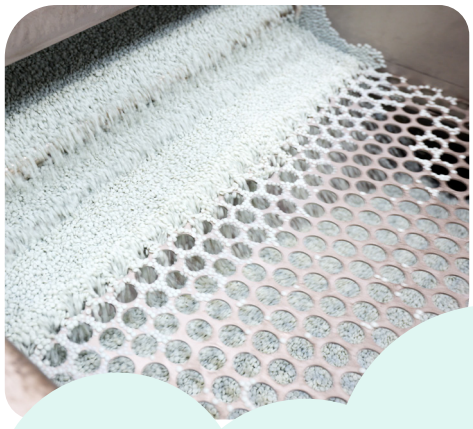
PERN explained

A Packaging Recovery Note (PRN) is a certificate that proves packaging waste has been recycled or recovered by accredited preprocessors. Extended producer responsibility requires waste producers to purchase PRNs.

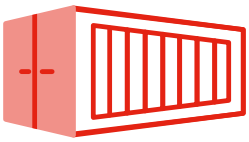
If a material handler sends their plastic bales to a UK processor they will be awarded a PRN that reflects the % of actually recyclable material within a bale.

The Packaging Export Recovery Note (PERN) system on the other hand incentivises the export of plastic waste, because it assumes that exported bales contain nearly 100% recyclable content.

For example if a material handlers has several bales of plastic bottles that are 60% target PET material they would receive 60% of the PRN price if processed in the UK but 100% if they export the bales.

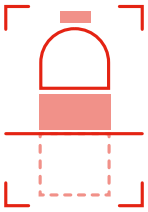


Policy asks:



End exports of unprocessed plastic waste and the market distortion of PERN:

The UK would be taking responsibility for its own waste, creating a valuable supply of recycled materials. Ending the export of bales of unprocessed plastic would deflate the market price for bales in the UK helping recycled materials to compete against cheaper virgin plastic. It would help ensure that high quality material from the incoming deposit return scheme was retained in the UK.



Make the Plastic Packaging Tax progressive:

Increasing the threshold for recycled material as quickly as possible from 30% to a 50% minimum recycled content would drive market demand for recycled plastic.

Verify the quality of imports:

Imported recycled plastic should be subjected to third party verification of the validity of recycled content claim. PPT tax evasion by mis-claiming recycled content must be heavily clamped down on to further discourage fraud.

Certify food grade recycled plastic from FSA:

This would enable UK processors to develop an export market for high quality recycled pellets as raw materials for the food sector.

2. Stop edible, surplus food from becoming waste

Food waste is a critical issue in the UK, with 10.7 million tonnes of food wasted annually, a significant portion of which is still edible. The economic implications are staggering, with wasted food valued at approximately £21.8 billion per year.[v]

The best outcome within a food system is that edible food gets to people who need it. Commercial redistributors of surplus food play an integral part in preventing edible food going to waste, operating with the scale and infrastructure required to be able to manage the volume of potentially wasted stock as well as continually investing in solutions to process harder to reach surplus higher up the supply chain.

Charities perform a vital function in getting surplus food to those most in need. It is not a case of commercial redistribution or charitable donations; the two provide equally critical and complementary roles. The best example of this is in Biffa's Company Shop Group, which offers a commercial redistribution business (Company Shop), alongside a not-for-profit social enterprise (Community Shop).

Create a level playing field

Voluntary food surplus and waste reporting began in 2015, when WRAP first started collecting data as part of its Courtauld Commitment, and excellent progress has been made. Creating a level playing field for surplus redistribution through commercial channels could stimulate further growth. VAT exemptions often favour donations to registered charities, which excludes social enterprises like Community Shop and private enterprise like Company Shop Group. This discourages broader surplus redistribution. VAT incentives should be based on doing the act of donation, not who receives it.

Commercial redistribution plays a pivotal role in reducing the environmental impact of food waste, as well as redistributing it to communities experiencing food insecurity. Over the past five years, Company Shop Group has paid the industry over £188 million for otherwise wasted stock and redistributed over 46,000 tonnes of food and drink last year alone. This redistribution effort has transformed imperfect surplus products into perfect items through processes such as repackaging, re-labelling, x-rays, or bottle washing, ensuring products are used as originally intended, rather than falling into the Food Waste Hierarchy.

By operating a network of membership-only surplus supermarkets, Company Shop Group provides high-quality, low-cost food and products to those working in fast-moving consumer goods (FMCG), emergency services, and other front-line roles. As well as providing a much-needed route for businesses to prevent and reduce their waste, the surplus supermarkets also save shoppers £130 million a year.

---

v - https://researchbriefings.files.parliament.uk/documents/CBP-8515/CBP-8515.pdf

Build stronger individuals and more confident communities

Company Shop Group also aims to tackle the root causes of food insecurity with its award-winning social enterprise Community Shop. In the past decade the multi-functional social supermarket has expanded its support across the UK to 14 stores strategically located in some of the most deprived communities in towns including Scarborough, Grimsby, Barnsley, Runcorn, Leicester, and Lambeth.

Community Shop's unique model consists of three interconnecting spaces within one building. Community Store provides access to deeply discounted food and essentials, including fruit, veg and bread for only 20p. The profits from the store are then invested in Community Hub, which delivers a life-changing holistic support programme, empowering people to develop their own capabilities and deliver a positive future for themselves. Additionally, each Community Shop has a Community Kitchen, a café that enable people to connect with others and learn through food, as well as providing home-cooked meals for the community with kids eating free every day.

This sustainable model uses surplus products donated by over 200 stock partners through Company Shop Group, ensuring that no product needlessly goes to waste and helping to break long term dependency on food aid by providing earlier intervention for individuals experiencing food insecurity. Unlike short-term fixes such as food banks, which often rely on emergency food parcels, commercial redistribution offers a long-term solution by integrating surplus food into a structured retail environment.

Imagine what could be achieved with more businesses released from financial strictures to use commercial and social enterprise models to redistribute surplus. To support a level playing field for surplus redistribution, with the scale and infrastructure required to tackle the volume of surplus in the market, private and social enterprise needs to be included in tax relief and funding opportunities.

While it is accepted that food waste is a critical issue, there's a lack of insight into how much is occurring and where it occurs. As the UK lacks mandatory food waste reporting, available data uses a combination of methods such as: (i) waste compositional analysis, (ii) diaries and surveys where householders or businesses record their food disposal habits over time, and (iii) sample data modelling combined with secondary data where available from local authorities, waste contractors, and national statistics to validate estimates.

Mandatory food waste reporting must become a cornerstone of UK food policy, not just to quantify waste but to unlock the value of surplus. Reporting should be implemented with clear timelines and consistent standards, following the food waste hierarchy to distinguish between surplus and true waste, ensuring that edible food can be prioritised for redistribution.

To address these issues, we advocate:

- **Including sustainable redistribution models in VAT relief:** VAT relief should be given for the act of donating surplus food, not be based on the status of the beneficiary.
- **Implementing the proposed Mandatory Food Waste Reporting:** Reporting should follow the food waste hierarchy and distinguish between surplus and true waste, ensuring that edible food is prioritised for redistribution.

3. Extend the life of construction materials

The UK government has committed to building 1.5 million homes by 2029 and it has identified investment in national infrastructure as a key driver of growth.

In setting these targets it must be acknowledged within government policy that construction and demolition is the most waste-intensive sector in the UK, generating 61%[vi] of total waste by volume.

The built environment is a priority sector for the Circular Economy Taskforce, but it is unlikely that interventions will be able to scale in time to meet the demand driven by the need for more housing. While innovating for a more circular future is essential, there are interventions that can be implemented now to mitigate the impact on waste and the circularity of construction materials.

Many construction waste materials have established recycling processes and secondary markets, such as metals, wood, and inert waste like brick and concrete which is recycled into aggregate. However, to realise the circularity opportunity there needs to be more and better segregation of waste materials at a site level, greater demand for recovered and recycled materials in new construction projects, and clearer classification and data on waste journeys.

Onsite waste material segregation is undertaken voluntarily by many companies, but there is no regulation mandating it. Beyond the materials proscribed in Simpler Recycling regulations for businesses with 10 or more full time equivalent employees, there is no legal requirement to segregate waste on construction sites. The key waste materials occurring onsite such as inert waste, wood, and uPVC are not covered by Simpler Recycling. The use of mixed skips remains prevalent and is causing contamination and the loss of valuable material.

For materials that are separated and recycled, the demand for the recycled commodity is inconsistent. Valuable materials such as construction metals have a consistent demand and an established global market. For other materials such as aggregate and wood, the demand remains inconsistent which affects the ability to maintain critical infrastructure, leading to stockpiling of materials within the waste system. More progressive demand-side intervention is required and mandating an amount of recycled material in construction projects is a way to achieve this.

Construction projects are often complex sub-contracted environments. Understanding of waste material flow through projects depends on a Waste Transfer Note (WTN) being completed. The current WTN system involves physical paperwork that needs to be completed and requires information on carrier licenses, facility permits, and European Waste Catalogue (EWC) codes. While digital WTNs are available and Biffa uses them for the majority of construction waste collections, there are still challenges in the sector. One estimate approximates that one in three WTNs are non-compliant[vii]. The UK government's commitment to delivering Digital Waste Tracking will address this issue and provide clearer traceability and insight into construction waste material flow.

These are practical steps that taken now will lay the foundations for a more circular built environment. Taking a progressive approach to regulations will ensure that the sector can adapt to the outcomes from the Circular Economy Task Force.

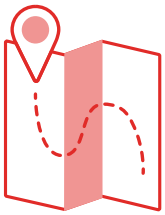
vi - https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste

vii - https://qualisflow.com/uk-construction-waste-report-2023/

Policy asks:

Mandate separation of materials:

Mandate onsite separation for key construction materials where practicable.



Deliver digital waste tracking:

Deliver Digital Waste Tracking in a timely and progressive way in full consultation with waste producers and construction companies.

Assess recycled content in construction aggregates:

Assess a UK-wide directive for recycled content in construction aggregates

Biffa is a strategic partner to the UK construction sector.

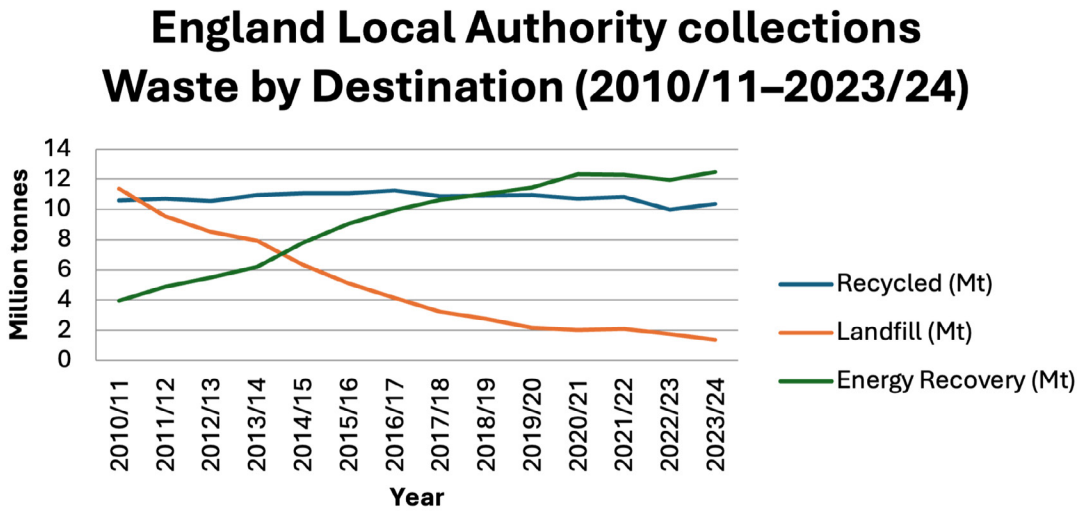
Delivering waste solutions that are regionally tailored and nationally scalable. With facilities in Newcastle, Birmingham and Cardiff, and the recent addition of L&S Waste in Southampton, we have rapidly expanded our infrastructure.

Our nationwide coverage combines scale and agility, enabling fast mobilisation, responsive local account management, and reduced carbon impact through shorter material journeys.

With 95% of collections handled by our own fleet, we provide end-to-end accountability and transparency on waste flows, helping construction customers meet recycling targets, cut emissions, and achieve practical, sustainable outcomes.

4. Reduce and decarbonise residual waste even further

The waste sector is estimated by the Environmental Services Association to account for 8% of the UK's emissions. The UK waste sector has delivered a 46% reduction in emissions since 1990, an achievement built on decades of infrastructure development, system reform, and operational optimisation.



'Source: Local authority collected waste management: waste by destination (England, 2010/11–2023/24)'

Much of this progress has come from diverting material away from landfill and towards recycling and energy recovery, alongside the capture and utilisation of landfill gas as a source of renewable energy. The UK government has a target to achieve a 50% reduction in per-capita residual waste by 2042. While overall waste reduction is essential there are further measures within the existing policy landscape that can support more progress.

In order to further decarbonise residual waste, the UK needs to focus on three key areas:

Part 1 - Removing organics from landfill

Landfilling biodegradable municipal waste (BMW) is the largest single source of greenhouse gas emissions within the waste sector. In 2021, landfill gas from closed and operational landfills across the UK was estimated to emit 13.6 Mt CO2e, which is ~72% of the total emissions from the waste sector.[viii]

Removing more organics from landfill is an essential part of decarbonisation and the Landfill Tax has helped drive rates down. Although we work to prevent as much edible food from being wasted in the first place through Company Shop Group, for food no longer fit for human consumption, energy recovery through Anaerobic Digestion (AD) is a sustainable waste management solution.

Simpler Recycling regulations for businesses and households mandates that food waste must be separated from general waste, which will result in more feedstock reaching Biffa's anaerobic digesters. Here inedible food waste is transformed into biogas which can either be used as a fuel to generate electricity or injected into the gas grid as a substitute for natural gas. An additional biproduct from the process is digestate which can be used as a fertiliser and soil enhancer.

viii - https://consult.defra.gov.uk/waste-and-recycling/cfe-near-elimination-bio-waste-to-landfill/

The government is consulting on reforms to landfill and the Landfill Tax to address how more progress can be made. We fully support a review to ensure that the right drivers are in place to incentivise further reductions. Any changes do need to acknowledge that sometimes for public hygiene, safety or technical reasons, landfill will have to play a limited but vital role in the disposal of waste which may have a biogenic content.

Part 2 - Remove fossil-based materials from residual waste

Removing plastics from residual waste destined for energy recovery facilities is supported by several government policies that are in the process of being implemented:

- Packaging Extended Producer Responsibility if well-executed can shift design choices toward reusable and recyclable materials.
- Simpler Recycling will legally require the separation of recyclable materials from general waste in all settings and from 2027 it will include the collection of flexible films and plastics. This needs effective enforcement from the regulators.
- DRS has the potential to raise recycling rates and improve the quality of collected plastic for increasingly closed-loop systems.

However, we also need supporting policies to enable these to work. For example, the kerbside collection of flexible films from 2027 presents a great opportunity to help local authorities and businesses reduce the amount of plastic in their residual waste.

Conversely, this presents the challenge of what to do with the plastic film once collected. Currently there is limited capacity to recycle this material in the UK and low demand for the recycled material. The measures set out earlier in the section ('Support UK plastics recycling') must be undertaken now to ensure that the UK doesn't simply create a new plastic waste problem and then address it with more export.

Removing plastics from general waste that is destined for energy recovery facilities is supported by several government policies that are in the process of being implemented:

- **Packaging Extended Producer Responsibility** if well-executed can shift design choices toward reusable and recyclable materials.
- **Simpler Recycling** will legally require the separation of recyclable materials from general waste in all settings and from 2027 it will include the collection of flexible films and plastics. This needs effective enforcement from the regulators.
- **DRS** has the potential to raise recycling rates and improve the quality of collected plastic for increasingly closed-loop systems.

Part 3 - Implement ETS for EfWs to drive further decarbonisation investment

(i) Remove plastics through 'fuel preparation' process

While much of the recent focus on EfW has been on its role as an energy generator, its primary purpose remains sanitary – diverting waste from landfill. While the Resources and Waste strategy policies will work together to place more recyclable and reusable packaging on the market, separate certain materials, increase quality of recycling feedstock, and divert more materials from landfill, they mainly impact packaging.

There will be high volumes of materials in residual waste such as hard plastic mouldings, synthetic textiles, and types of clinical and post-industrial waste. These plastics will still need to be processed and this fossil content risks driving-up costs. Additionally plastic film cannot legally be incinerated after Simpler Recycling mandates separation in 2027, for which there is no current scaled recycling solution.

Unlike energy sector emissions, the carbon released from burning fossil-based plastics in EfW cannot be offset by switching to a different fuel or source. The more fossil-based materials that are burned, the higher the cost. The only real mitigation is removing these fossil-based materials before they reach EfW facilities. This points to an opportunity to introduce a new pre-sort phase in EfW feedstock processing.

Pre-sorting residual waste in a fuel preparation process could transform the sector. It would enable a more accurate, ongoing analysis of waste composition, moving beyond today's reliance on infrequent spot checks. Removing fossil-based materials before combustion will cut carbon intensity, reducing ETS exposure and unlocking recycling opportunities. Other valuable and hazardous materials could be saved from incineration too, reducing risk and creating more value.

Innovative advances in optical sorting, robotics, and AI can perform a vital function within this process, delivering improved recovery rates and operational efficiency. Harnessing these innovations will increase data and insight into waste composition, create new revenue streams, and strengthen the UK's circular economy infrastructure.

Emissions Trading Scheme (ETS) explained.

The extension of the Emissions Trading Scheme (ETS) to EfW in 2028 will be the sector's biggest change since Landfill Tax. The UK ETS is a cap-and-trade system, imposing costs on carbon emissions to drive efficiency and decarbonisation. The cost of these carbon allowances passed to producers depends on market demand but could be around £100 per tonne.

Government has acknowledged the risks of incentivising exports and is exploring safeguards, including alignment with the EU ETS. Businesses can reduce exposure by adopting Simpler Recycling, diverting recyclables from general waste and minimising carbon-linked disposal costs.

(ii) Develop more cost effective and lower carbon alternatives to EFW

The transition to a circular economy will take time, in the interim there will remain a stream of hard-to-eliminate wastes as previously mentioned: plastics not recycled at scale, hard plastic mouldings, synthetic textiles, and more. In addition large amounts of waste electricals still end up in general waste, even though there is a recycling solution.

A strategic approach is needed to ensure these residual materials are managed and repurposed to where they deliver the greatest carbon benefit. In solutions like sustainable aviation fuel (SAF) and marine fuels, waste-derived feedstocks can displace fossil fuels for which there is no current commercially viable zero-carbon alternative.

Mandates alone will not be enough to stimulate demand and protect the UK market for these alternative fuels. As with the recycled plastics market, the UK is struggling to compete in the global marketplace, undercut by international competition that benefits from larger subsidy support and/or lower labour and energy costs, as well as lower regulation standards.

The domestic bioethanol market is an example of where this is occurring. The closure of Vivergo Fuels in Hull highlights how the UK's domestic bioethanol capacity is diminishing due to key infrastructure losses. Once seen as a cornerstone for green industrial growth, its collapse, driven by regulatory inconsistency and overseas competition, signals to investors that the UK risks becoming an import-only market. With facilities shutting, the opportunity to anchor jobs, skills, and investment in future fuels is slipping abroad.

By contrast, energy from waste competes with power sources that can already be generated through established low-carbon technologies such as wind, solar, hydro, and wave. If waste is to play a role in decarbonising these harder-to-abate sectors, there must be long-term certainty of feedstock supply – ensuring these valuable, non-recyclable resources are directed to where they can make the most strategic contribution to net zero.

Sustainable Aviation Fuel explained

Sustainable Aviation Fuel (SAF) is an essential interim solution for the airline industry to decarbonise its operations by displacing fossil fuel kerosene with fuel derived from renewable sources. Currently, SAF production is being met through waste fats, oils and greases (HEFA).

However, the SAF Mandate will drive demand that is unlikely to be met from HEFA alone. It is widely agreed that this demand must not be met by turning more land to agricultural production and instead seek alternative sources. One major likely source alongside innovative cover crops is SAF waste. Whilst still energy recovery rather than recycling the argument in favour of SAF over energy-from-waste (EfW) is clear. SAF displaces fossil fuel use directly for which there is currently no alternative, while the energy gap created from sending less waste for incineration at an EfW could now be met by wind, solar or wave power.

Currently we are positive about the impact that the SAF Mandate will have to drive demand and the benefit of the Advanced Fuels Fund in helping address technical challenges.However, Government does need to work with industry to ensure that the Mandate is sufficient to stimulate domestic investment in supply infrastructure and support the adoption of Carbon Capture and Storage by this sector as they have for EfW.

(iii) Promote Carbon Capture and Storage (CCUS) for EFW

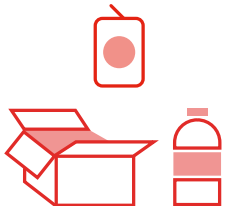
Carbon Capture and Storage presents an important opportunity to decarbonise some energy from waste facilities during the transition to a more circular economy and should be a requirement for all new EfW infrastructure. However, it is unlikely to be a practical solution for retrofitting the majority of existing infrastructure, particularly for plants that are not located near hubs for transport and storage of CO2 emissions.

Policy makers need to take a joined-up approach and engage key sectors to align on priority outcomes. The available technologies are still unproven at scale, and each pathway offers different potential contributions to cost-efficiency, tax revenue, or progress towards net zero. Decisions should focus on how to secure the greatest strategic and economic value for the UK from the finite carbon contained in residual waste.

Expanding UK Municipal Waste Partnerships

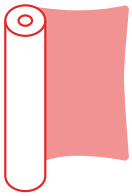
In 2024, Biffa acquired Renewi's UK municipal business, including five long-term contracts with local authorities in England and Scotland. Under Renewi's management, these contracts treated 930,000 tonnes of household waste in 2022, diverting it from landfill and recovering energy and raw materials. Around 550 Renewi staff have now transferred to Biffa as part of the acquisition, alongside contracts with Barnsley, Doncaster and Rotherham, Cumbria, Wakefield, East London, and Argyll & Bute councils. The addition of this portfolio strengthens Biffa's position as a trusted partner in complex, long-term waste treatment, combining expertise to support local governments in meeting net zero targets and delivering greater efficiencies in sustainable waste management.

Policy asks:



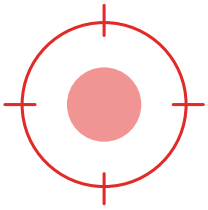
Fully implement reforms:

Fully implement the Collection and Packaging Reforms set out in the Resources and Waste Strategy.



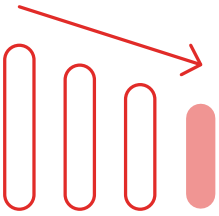
Collaborate on plastic film segregation:

Government engages with the waste sector to examine what needs to be done to drive the infrastructure necessary to be ready for plastic film segregation in 2027.



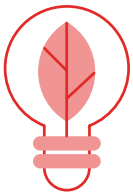
Prioritise strategy for residual waste applications

Develop a strategy to prioritise the use of residual waste in applications where it delivers more value than incineration in EfW such as SAF, maritime fuel or SRF.



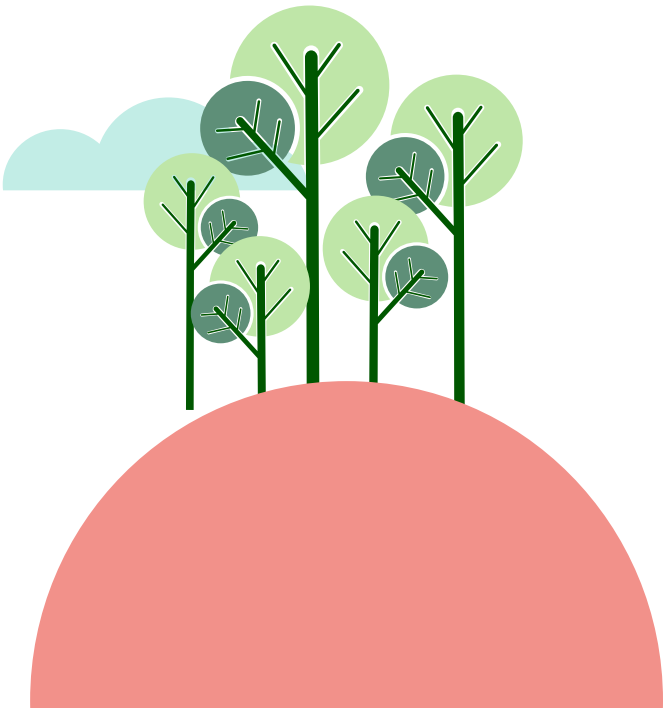
Limit new EfW facilities:

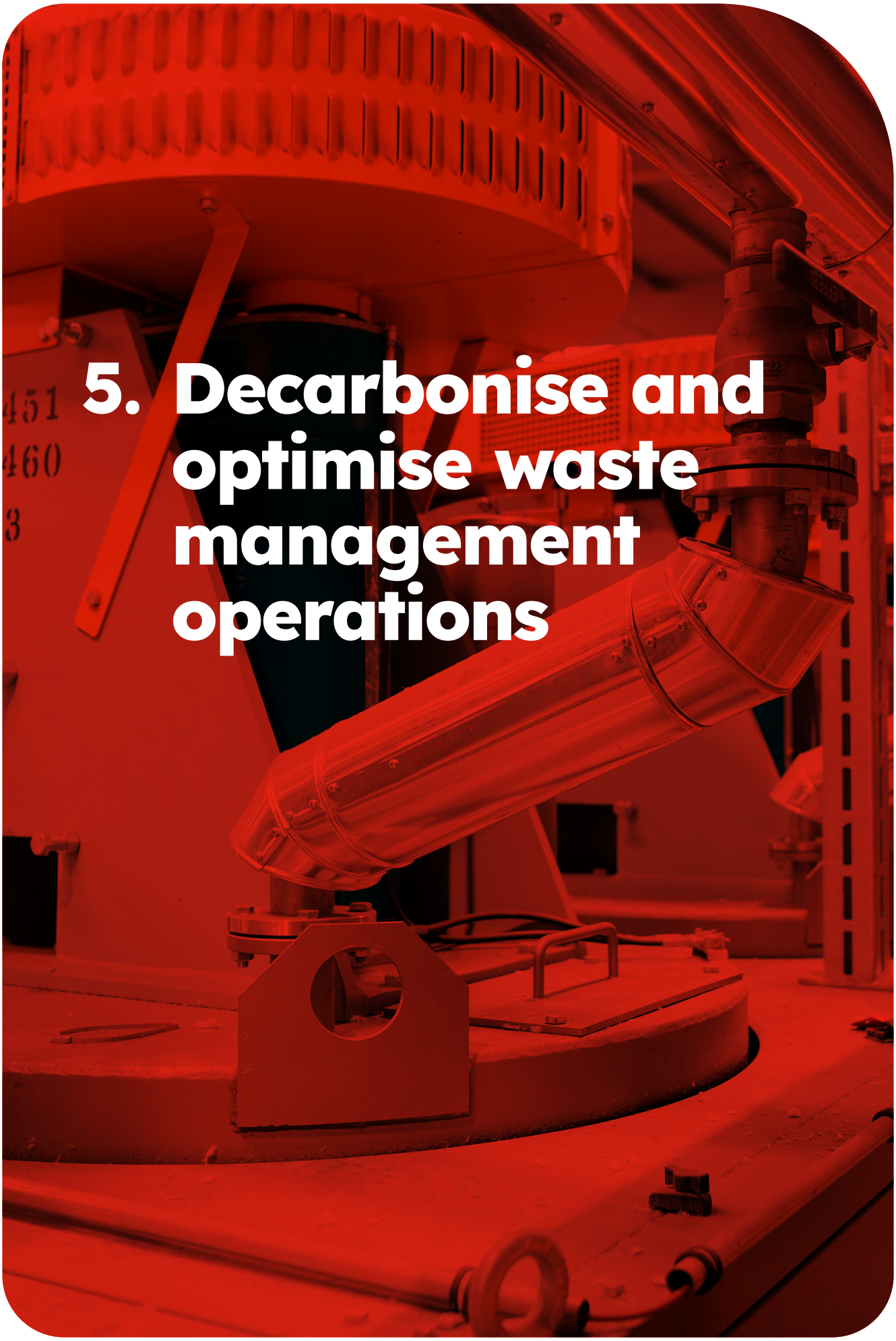
Limit the construction of new energy from waste facilities unless there is a very specific public hygiene need and they are fitted with CCS technology.



An investment grade ETS:

Implement an investment grade ETS for energy from waste in 2028, with clarity on how costs will be passed through to incentivise waste producers to reduce the volumes of residual waste produced.





5. Decarbonise and optimise waste management operations

The logistics network behind national waste management collections and transport is one of the sector's material carbon contributors. Transitioning our fleet to alternatively fuelled vehicles is a key ambition, but progress is slower than we would like due to persisting barriers.

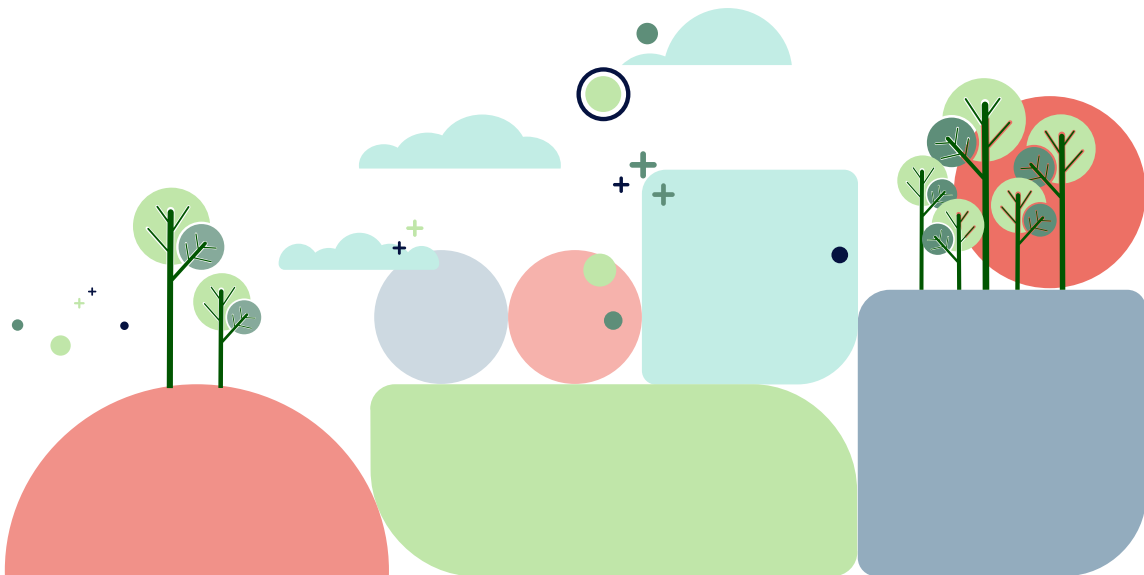
- **Cost of Charging Infrastructure:** Currently the first mover in an industrial area has to foot the full cost of the local grid upgrade to enable the charging of commercial vehicles. This is a major barrier that needs to be addressed by new funding models or partnerships between the government, local authorities, and private-sector operators.
- **Suitability of Charging Infrastructure for HGVs:** On the go charging infrastructure that meets the requirements for HGVs is lacking in most geographies. The nature of the refuse collection work means that electric HGVs are heavy users of battery power. They are also often used by more than one shift each day.
- **Cost of Ownership:** Whilst there has been recent progress, the cost of purchase and ownership of an electric refuse HGV remains significantly higher than standard diesel vehicles.
- **Limited Planning:** Local low emissions zones and public procurement are not being fully utilised to drive change.

Responsibly sourced HVO is currently an attractive transitionary solution because it can be used in existing vehicles. However, it is more expensive per litre than diesel and there are concerns that large increases in demand could be met by fuel obtained from non-sustainable sources entering the market fraudulently.

Improving efficiency:

Beyond logistics, waste handling and processing operations also present a significant frontier for optimising efficiency. There is a wide range of emerging technologies, particularly AI and robotics that can drive efficiency and potentially reduce emissions. For example, robotics powered by AI technology might advance the scaling and economics of sorting materials that are currently very challenging, such as flexible films and plastics, enabling them to be moved up the waste hierarchy away from incineration.

But adoption is still in its early days despite many initial investments and trials. For example, Biffa is installing its first robotic waste sorter at its Aldridge site and is testing AI systems that can scan and assess waste composition. We expect these innovations to scale at rapid pace as competition increases, and policy obligations tighten.



It is also important to recognise that the path to decarbonisation of waste management operations won't be seamless. Progress will be uneven and often imperfect. There is a risk in overstating the need for ideal outcomes and in doing so, stalling necessary change. To deliver real change, the sector must stay pragmatic and collaborative. There is room for innovation and there is an opportunity to lead but only if businesses, local authorities, and government work together.

Circular economy policy, net-zero commitments, and emissions trading mechanisms all interact at the operational level. That's where delivery lives or dies. Progress won't be perfect, but working across boundaries and committing to action will matter more than waiting for the ideal solution.

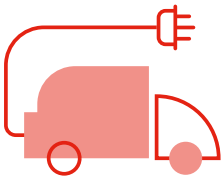
Policy asks:

Mechanism to spread or mitigate upgrade costs:

Consider mechanism to spread or mitigate the cost associated with the upgrade of local electricity grid capacity and connections for depots so that the costs do not fall entirely on the first mover in a locality.

Measures for total cost of ownership:

Implement measures that in the short-term will mitigate the additional full cost of ownership for alternatively fuelled vehicles.



An alternative fuels infrastructure:

Create a plan to address the lack of on-the-go infrastructure for alternatively fuelled HGVs.

Zero emission zones:

Encourage the creation of zero emissions zones in cities to speed up the adoption of zero emission vehicles.

Conclusion

Turning momentum into meaningful change

After a period of costly inertia, we have seen some welcome progress in the last 12 to 24 months. We welcome the new momentum but are troubled about the lack of real-world impact on recycling rates and secondary markets for recycled materials since 2022.

Investment grade policy, such as the Landfill Tax, can reshape markets. But ill-timed, poorly enforced, or incoherent policies risk becoming compliance costs rather than catalysts for transformation. What's needed now is a pragmatic, joined-up, forward-facing approach that creates stability for investment, rewards innovation, and provides industry with the confidence to act.

Biffa's vision for the future is to accelerate growth into a high-performance, low-carbon waste system that underpins the UK's circular economy ambitions. This means scaling domestic infrastructure, supporting competitive secondary markets, and aligning fiscal levers with both sustainability and business outcomes. It means embedding circularity from planning through to product design, and ensuring citizens are empowered through the process.

Let's move from commitment to delivery.

Policy ask summary

Section	Policy Ask
Support UK Plastic Recycling	• End exports of unprocessed plastic waste and the market distortion of PERN. • Make the Plastic Packaging Tax progressive (increase minimum recycled content threshold). • Introduce import verification for recycled plastic. • Certify food grade recycled plastic from FSA.
Stop Edible, Surplus Food from Becoming Waste	• Include sustainable redistribution models in VAT relief (VAT relief for the act of donation, not recipient status). • Implement mandatory food waste reporting (with clear timelines and standards).
Extend the Life of Construction Materials	• Mandate onsite separation for key construction materials. • Assess a UK-wide directive for recycled content in construction aggregates. • Deliver Digital Waste Tracking in a timely and progressive way.
Decarbonise and Optimise Waste Operations	• Spread or mitigate the cost of local electricity grid upgrades for depot charging. • Address lack of on-the-go infrastructure for alternatively fuelled HGVs. • Mitigate additional cost of ownership for alternative vehicles. • Encourage creation of zero emission zones in cities.

Policy ask summary

Section	Policy Ask
Decarbonise Residual Waste	• Remove organics from landfill. • Remove fossil-based materials from residual waste (supporting policies for kerbside collection and recycling of flexible plastics). • Promote carbon capture and storage (CCUS) for EfW. • Implement an investment grade ETS for energy from waste in 2028, with clarity on cost pass-through to incentivise waste reduction. • Align UK and EU ETS policies to prevent waste export as ETS avoidance. • Develop a strategy to prioritise the use of residual waste in applications with greater value than incineration (e.g., SAF, maritime fuel, SRF). • Limit construction of new EfW facilities unless fitted with CCS.
Further Considerations	• Fully implement the Collection and Packaging Reforms set out in the resources and Waste Strategy. • Government to engage with the waste sector to drive infrastructure for plastic film segregation by 2027.

Biffa