Recycling Collections

For the real world

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Foreword

“Recycling is an environmental and economic imperative. Its fundamentals are strong, with growing demand for the secondary raw materials that are produced from recycled materials.

However, the way we organise our recycling efforts as a society needs to change to ensure that householders and businesses alike are able to separate materials for collection in a manner which is both easy to use and ensures materials have the best possible chance of becoming vital raw materials to support our economy.

Biffa, as the largest collector of waste and recyclables in the UK, is uniquely placed to advise policy makers as vital decisions are made on the way we seek to change behaviours as a society. Put simply, we know what works and what doesn’t, and in this paper we set out our recommendations for a system that is at the same time environmentally ambitious, easy to use and cost effective.”

Michael Topham
Chief Executive - Biffa

About the Author

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Jeff’s responsibilities include environmental matters across policy, regulatory affairs, development and operating consents, compliance and sustainability. He has worked in the sector for over 30 years, the last 17 of which have been at Biffa, and has been heavily involved in engagement with the government’s waste strategy over recent years. This report has been compiled in liaison with key specialists across the business as well as the Executive team.
Introduction

UK recycling rates have quadrupled since 2000, with some of the fastest recycling growth in Europe over that period, but have stalled at around 45% for the last few years. The need to increase recycling is now high on the public and political agenda.

This guide sets out our recommendations to help drive recycling forward by capturing more recyclable material, ensuring quality, delivering convenient and cost effective solutions and stimulating further investment in UK-based recycling infrastructure. The government’s new Resources and Waste Strategy sets out a strong vision, which we support. This guide will help waste producers align their recycling collections well with emerging government policy and current consultation activities on collections consistency, which is a key strand of the new national strategy. We hope you find it informative and useful.

Further reading

This report forms part of a growing series of position papers published by Biffa. The Reality Check series can be viewed and downloaded from: www.biffa.co.uk/publications

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The government’s new Resources and Waste Strategy is a key element of its 25 Year Environment Plan and includes a range of measures intended to increase currently stalled national recycling rates, ramping up to achieve at least 65% recycling of “municipal waste” by 2035. “Municipal waste” is now defined as including both household waste and similar business waste (“non-household municipal waste”).

One of the key strategy proposals subject to detailed consultation launched in February 2019 is achieving more consistency in recycling collections from homes and businesses. Establishing a core set of general materials to be collected for recycling is one of the main objectives of the consultation. The strategy states: “We want comprehensive and frequent waste collection systems that capture as much material as possible, promote householder and business participation, and ensure that high levels of quality recyclable or compostable materials are available for reprocessing. This will preserve our stock of natural resources by ensuring as much used materials as possible gets made into products again”.

The scope of the consultation and potential subsequent regulations covers household waste and similar waste from businesses and places a particular emphasis on plans for mandatory collection of food waste for recycling. The UK has already committed to the EU Circular Economy Package, which mandates separate bio-waste collections (including food) from 2023, so the national strategy reflects this timescale. However, the government wishes to see action taken sooner on recycling improvements and this is already being driven by growing consumer pressure and public interest. The strategy identifies a particular opportunity for more recycling of business waste, stating that: “We will take action, including, where necessary legislating, to ensure that businesses present recycling and food waste separately from residual waste for collection and publish or make available information on what is recycled”.
Increased capture and recycling of food waste/bio-waste is recognised in the new strategy as having the potential to make a big difference, in addition to the more talked about moves around plastics. However, the theme of “consistency” is about a lot more than just consistency in the way waste is collected. For maximum recycling success, collections consistency cannot be effective on its own. It needs to flow from consistency measures at source, such as simpler and more consistent packaging materials, designed for recyclability and using more recycled content, together with clear and consistent labelling for consumers. These are being addressed through other, parallel actions in the new government strategy. More consistency at source will help to enable more consistency at the collection end, as well as reducing consumer confusion about what material can and can’t be recycled, informing both consumer choice at the point of purchase and at the point of later recycling.

**Biffa: Speaking from experience**

The overall drive to increase recycling is something Biffa keenly welcomes and strongly supports, being the biggest service provider overall for business waste and household waste, with strength in depth when it comes to recycling services, geographical coverage and infrastructure, combined with an enthusiasm and capability to do even more. Biffa has over 100 years of operational experience providing recycling services to all commercial sectors, from small local business to major national accounts, as well as top performing local authorities.

Having developed successful, cost effective and convenient recycling services to all manner of customers right across the UK we are ideally placed to contribute to the current debate about collections consistency as well as continuing to ensure that customers remain compliant and ready for the future.

Notwithstanding the eventual outcome of the government’s collections consistency consultation and resulting new regulations, our recommended key principles and core materials recycling collection models can help improve recycling now and are set out on page 9. We believe they also form a solid platform for the future, being capable of adaptation to suit any additional legal requirements or market and infrastructure changes. The models are based on our considerable experience and success in helping private and public sector customers recycle their waste, backed up by our own recent commercial analysis. These models can help deliver more recycling through convenient, practical and cost efficient solutions. Although the models shown on page 9 represent our recommended general models for core materials, specific customer requirements can also be accommodated. The appendix to this Reality Check series paper explains our thinking in more detail.
Recommended key principles

1. **Keep food separate from residual waste.**

   Businesses which generate significant quantities of food waste (like the “over 5kg per week” trigger in Scotland) and all households should be obligated to present food waste for recycling, separate from their residual waste. Food waste can be used to generate renewable energy and soil improvers through anaerobic digestion. It can also be composted (“in-vessel” composting) where collected with garden waste. Both are ranked as environmentally better than incineration in the government’s new Food and Drink Waste Hierarchy, published alongside the Resources and Waste Strategy. Food being removed from the residual waste also helps further decontaminate that stream, increasing the prospects of even more recyclable materials being recovered from the remaining residual waste. Put simply, food waste (with or without other bio-waste) has to be kept separate from everything else.

   Whilst Biffa has successfully introduced food waste collections nationally to businesses and households in recent years, we have enough evidence to show that we cannot rely on economics alone to secure the further uptake that is needed.

2. **For households, forcing multiple separate materials collections would be a backwards step.**

   This approach is proven to be less user-friendly (and therefore usually results in a lower capture rate), physically more awkward for householders and operatives and, in our experience, is costlier as a system. There is ample evidence that the required high standards for end markets can be met through now well-established co-mingled collection systems and efficient, quality-oriented sorting facilities. Biffa operates such facilities, achieving quality standards that allow paper and card, metals, plastics and glass to be used as raw materials meeting customer quality standards, including in the manufacture of food-contact packaging. A convenient, cost effective and productive system is the way forward, with collection frequencies people understand and simple, easy to use wheeled bins which encourage participation and make collection easier.
3. **Separate paper and card (fibre) collection for household collections may have a helpful role.**

We have ample evidence at Biffa that we can meet increasing global standards for paper and cardboard through co-mingled systems, but our evidence also suggests it is often more cost effective for local authorities to collect paper and card separately, to reduce processing costs, providing householders are encouraged to respond to it. Ultimately this will be a decision for local authorities to make based on cost against convenience, rather than on quality of materials.

4. **Be clear on what can and can’t be recycled.**

Let’s be clear once and for all on the known hard to recycle items, such as soft plastics (like carrier bags and films), drinks cartons made from composite materials, disposable coffee cups, black plastic food trays and textiles. These are presently not capable of being recycled through mainstream collection and sorting systems. We should work to ensure that local authority Household Waste Recycling Centres (HWRCs) offer collection points where local re-use or recycling routes do exist for such materials, whilst working to phase out hard to recycle materials at source, wherever possible. Make it clear to the public that these types of materials should be kept out of their main household collection recycling bin, to avoid negative impacts on quality of the mainstream recycling. As the Resources and Waste Strategy appendix notes: “Products that are difficult to recycle fail to deliver secondary materials that producers want”.

For business recycling collections, separate materials collections are dependent on volumes, as noted in our models.

5. **Don’t be over-prescriptive for businesses.**

Other than mandating separate food waste collection, the rest of the solution should be tailored to suit the needs of the customer and their waste streams. The fact is that businesses’ needs are too varied and there is no ‘one-size-fits-all solution’. We have a dynamic, ultra-competitive market in the industrial and commercial waste sector that can deliver what the customer needs and what the government seeks.
Household waste: recommended core materials collection model

1. Mixed recycling excludes non-recyclable bioplastics. Also, some materials may be placed “at risk” as a result of changes to market conditions and outlet routes. For example, in respect of plastic carrier bags/bin bags (LDPE film) Biffa do not currently advocate their collection for recycling due to the very limited offtake markets in the UK and a potential environmental risk associated with export to some new markets in Southeast Asia due to current negative material values.

2. Separate glass collection is generally preferred for business waste collections unless the receiving MRF has glass sorting capability.

3. Food waste can also be collected with garden/green waste as an alternative “bio-waste” collection for in-vessel composting (IVC) treatment. Where compostable bioplastic packaging, containers, cutlery, plates or cups is included with food waste sent to IVC with garden waste, additional shredding may be required.

Business waste: recommended core materials collection model

1. Mixed recycling excludes non-recyclable bioplastics. Also, some materials may be placed “at risk”, depending on market conditions and outlet routes, which can be subject to change. For example, in respect of plastic carrier bags/bin bags (LDPE film) Biffa do not currently advocate their collection for recycling due to the very limited offtake markets in the UK and a potential environmental risk associated with export to some new markets in Southeast Asia due to current negative material values.

2. Separate glass collection is generally preferred for business waste collections unless the receiving MRF has glass sorting capability.

3. Where compostable bioplastic packaging, containers, cutlery, plates or cups is included with food waste, in-vessel composting (IVC) provides an alternative treatment route although additional shredding may be required.
Appendix

Background

Claims of public confusion over variations in local authority household waste collection arrangements have been the subject of regular press coverage over recent years as recycling collections have grown. That said, much of this confusion arises from the increased complexity and variation in the packaging and waste material itself, compounded by confusing or non-existent labelling.

Rewind 15 or 20 years and waste collections were usually simple: a general waste bin, collected weekly, destined for disposal. Simple yes, but aimed at waste disposal, not recycling.

The subsequent growth in recycling through measures like landfill tax, local authority recycling targets and the Packaging Waste Regulations have necessitated more complex collection regimes to capture the various target materials for recycling and end markets. The source material itself now typically includes a confusing array of different materials, often being used in combination, including various plastics, cardboard, paper, glass and metals.

As a result, some packaging is hard or even impossible to recycle in practice, or its value has been lowered through additives and colouring to the point where recycling is not commercially viable at the present time, possibly longer. Confusing or non-existent recycling labelling has also added to the problem, creating consumer confusion and leading to non-target materials in recycling streams.

Changes to materials collections and to collection frequencies for some materials can help increase capture of recyclables and/or manage costs, or both. However, the nature of the material determines how frequently it needs to be collected before it starts to cause odour or hygiene issues. Collection regimes can also involve the use of different types and sizes of bins, boxes or sacks for different materials, different volumes and different collection modes, although Biffa’s experience indicates that wheeled bins are easier to use and to collect.

The word “inconsistency” in this context tends to be used in a negative, critical manner, but some inconsistency is inevitable, even beneficial where it suits particular local or business needs. The focus needs to be on unnecessary or unhelpful inconsistency, or “avoidable” inconsistency, much like the reference to “avoidable” waste and “avoidable” plastic waste in the government’s 25 Year Environment Plan. Also, “consistency” is about much more than how waste is collected. It needs applying to materials at source, to create more consistency and simplicity of packaging and labelling, to help inform consumer choices at the point of purchase, as well as disposal.

The scope of the debate has also now widened from just being about household waste collections to collections of similar types of waste from businesses – both sources generating similar volumes of around 30 million tonnes/year in the UK (out of an overall UK waste arising total of around 200 million tonnes including construction/demolition and other wastes). This wider scope is because the EU Circular Economy Package defines municipal solid waste (MSW) as household waste and similar business waste.

The new EU recycling targets also relate to MSW defined in that way and the UK has indicated that it intends to follow a similar approach. From a business waste perspective, recycling collection rounds have grown due to a desire by customers to reduce costs from waste being sent for disposal, also for waste hierarchy compliance and their own sustainability/CSR targets.

National policy context

The WRAP 2016 Framework report

WRAP’s “framework for greater consistency in household recycling in England”, published in 2016 provided a useful discussion of the issue but was solely confined to household waste collections. Also, it took a broad approach, seeking consistency across three areas, namely a core set of materials for collection; fewer collection and sorting systems and a common container colour system.

The report recognised the benefit of separate food waste and paper/card collections.

However, much has happened in the last 2-3 years since that report was published and the government has indicated its intention to revisit this issue through a new consultation, as part of its Resources and Waste Strategy review, also extending the debate to similar business waste, as noted above. Consistency around core sets of materials to be collected for recycling is a key focus in the new consultation, the overall objective being to capture more materials and increase recycling levels.

National policy review

During work on the new Resources and Waste Strategy and notwithstanding the intention to leave the EU, the government has already committed to the general requirements in the 2018 EU Circular Economy Package
through the Brexit Withdrawal Bill. The EU Circular Economy Package recycling targets for municipal waste are 55% by weight by 2025, 60% by 2030 and 65% by 2035. There is already a recycling target of 50% by 2020 in current legislation. The UK also intends to work to the wider EU definition of MSW which includes similar business waste to household waste.

During the latter half of 2018 Defra took soundings from stakeholders on the subject of collections consistency (amongst other waste policy issues) and signalled an intention for a further formal consultation on the subject as part of the roll-out of the new Resources and Waste Strategy published in December 2018. The consultation on collections consistency was published in February 2019, alongside other linked consultations on proposals for packaging producer responsibility system reform, a deposit return scheme for drinks containers and a tax on plastic packaging with less than 30% recycled content.

A key purpose of reviewing collections consistency is understood to be supporting the achievement of the new, higher recycling rates underpinned by establishing a core set of materials to be collected. Within the UK, the devolved administrations have also sought to develop their own waste policy and regulation measures, such as separate food waste collections for food waste producers in Scotland and the proposals in Wales through the Welsh Environment Act for various separate materials collections. Biffa has also been involved in those consultations and continues to monitor implementation.

**The issues**

**Understanding complexity**

The dynamics described above are the real-world complexities of having to manage more complex waste collection regimes in order to capture more value from a more complex waste “landscape”. It is vital that these complexities are recognised and reflected in the development of new national measures to try and achieve simpler, effective and affordable collection consistency.

Furthermore, as explained below, commercial waste collections operate in a very different market, which is fundamentally customer-driven, whose waste streams and service needs can vary massively. It is therefore also essential to understand the similarities and differences between household waste and commercial business waste collections. This is largely new territory for UK policy makers traditionally focused on household waste, but is something Biffa has over 100 years of UK operational experience in.

Public concerns around complexity, primarily in relation to household waste collections, have related to a wide range of issues, such as different types of waste being targeted in different local authority areas, different collection frequencies and different types and colours of bins/boxes/bags being used. However, in any one local authority, clear instructions are usually issued to householders in that area and should be capable of being followed by those with a wish to do so – personal responsibility being as important as producer responsibility.

**Household Waste and Business Waste: the same but different**

Biffa is a major collector of household waste in the UK and is by far the largest collector of business waste, collecting some 1.7 million tonnes and 2.3 million tonnes of each respectively every year. In the UK as a whole there is around 60 million tonnes/year of household waste and similar business waste generated every year, roughly split 50/50, as noted in Biffa’s “Reality Gap 2017” report.

However, with almost exclusive focus on household waste by UK policy makers and the media in the past there appears to be a low appreciation and understanding of the business waste market and the differences between the business waste sector and household waste sector, notwithstanding similarities of some of the waste content. Materials like plastic, paper, cardboard, metals, glass and food are common to both, but case-by-case customer profiles, waste composition and contract terms are very different.

Household waste collections are characterised by a broadly similar average waste composition, but subject to some significant local variations due to demographics. Geographical contract coverage is defined by council administrative areas, with similar customer type (local authorities) but subject to localised political and budgetary variations.

Long-term planning is required on collection methodology, with collection contract durations set to match a typical fleet life of 7-9 years. Reported recycling rates in England (Defra statistics) show a range from 14% up to 63% with an average in the mid-40s.

By contrast, business waste composition varies hugely from one sector to another depending on the nature of the business activities but can be very consistent from a single customer...
across the country. Unsurprisingly, offices, factories, restaurants and supermarkets have very different waste outputs. Recycling rates therefore also range very widely from customer to customer, from over 80% (Biffa data) at the upper end, to zero at the other end where a business does not have a recycling service.

Contracts can be anything from very localised arrangements to major national corporate accounts, or sometimes major site-based accounts (similar to a facilities management type service). Price flexibility is the norm and helps address risks around commodity prices. Contract terms and duration also vary widely, depending on customer requirements.

In terms of specific waste types, businesses which naturally generate a lot of cardboard waste will often have separate cardboard collections because it makes economic sense by reducing disposal costs and through economies of scale. Likewise, business in the hospitality sector will usually have separate glass waste collections because volumes warrant it and many food waste producers will have separate food waste collections, for similar reasons. Generally, most of the fibre (paper and card) in business waste is cardboard and, in relation to plastic packaging, the proportion of PTTs (pots, tubs and trays) is typically much lower than in household waste.

Various other specialised waste collections are also necessary for some customers, such as hazardous waste, secure waste, industrial process waste and high-risk category food waste, but those would generally fall outside the scope of “municipal” covered by the government collections consistency review while some are also not recyclable.

By their nature, business waste collections are therefore responsive to specific and sometimes specialised customer and sector requirements and will continue to be.

End markets: the customer at the other end

After collecting, sorting and preparing for market, usually through an “MRF” (materials recycling facility), all recyclable materials outputs (also known as “commodities” or secondary materials) rely on a buyer for the prepared material.

Depending on the material and the demand for it, those end markets are in the UK, Europe and Asia. China in particular has become the major global buyer of fibre (paper and card) for its cardboard mills. This is needed by them to make their products and its packaging, to satisfy the huge growth in demand from UK consumers for their products.

The effect has been that UK consumers have imported materials destined to become waste, which in turn has created a reciprocal growth in the UK’s reliance on the same off-shore markets for sale of recyclable materials back. However, China’s clampdown on imports for recycling in January 2018 (operation ‘National Sword’) has placed a spotlight on material value, price volatility, quality, end-user demand and end market availability in general.

The National Audit Office report in July 2018 on the Packaging Recycling Obligations advised that packaging waste exports for recycling from the UK have grown six-fold since 2002. Exports were around 0.6 million tonnes in 2002 rising to around 3.8 million tonnes in 2017, out of a total of nearly 7.5 million tonnes. Of that total, the report showed paper and card export to be greatest at around 2.5 million tonnes (out of around 3.8 million tonnes), followed by plastics export at approaching 0.7 million tonnes (out of around 1 million tonnes).

High quality, high value materials generally find good end markets, but lower grade materials present the biggest challenge, particular given China’s quality clampdown.

The resulting diversion of large volumes of plastics to other, new markets in Southeast Asia and Europe has created market disruption and, in some cases, has also raised some environmental concerns about end destinations and uses.

Consequently, end markets, demand, material values and prices will continue to warrant regular review and market-responsive measures in collection and sorting arrangements. Measures to address designing for recyclability, phasing out “hard to recycle” material and clearer labelling should assist with creating stronger secondary material value and reducing contamination, as could separate collection of some key materials with quality issues, such as paper/card and certain “at risk” low grade plastics like plastic carrier bags/sacks made from LDPE.

Materials specific issues:

Plastics

A useful guide to understanding plastics generally has been produced by WRAP in 2018, as part of the Plastics Pact initiative (“Understanding plastic packaging and the language we use to describe it”). Biffa is a Plastics
Pact member through our Biffa Polymers business. This Biffa position paper does not seek to provide an in-depth commentary on all plastics types but for the purposes of considering recycling collection requirements some current problem or “at risk” types of plastic are identified below.

Given the wide variety of plastics and the combinations in which they are currently often used, including in combination with other materials and, given the current volatility in overseas end markets and plastics values already described, collections involving plastics will need to remain responsive to changes in market conditions and infrastructure availability.

The introduction of bio-degradable plastics to the marketplace has created an additional potential contaminant to recycling collections if not collected separately. Bio-degradable plastic (which includes “compostable” bioplastic) is specifically designed to break down.

Whilst this bio-degradable quality is helpful in parts of the world without recycling collections, or where material escapes and becomes litter, it is inherently incompatible with conventional oil-based plastics designed to last and collected for recycling accordingly. Unless bio-degradable plastic is collected separately and is clearly labelled as not suitable for recycling, consumers can unwittingly put it in their recycling bin, creating contamination of the plastics recycling stream.

As regards bio-degradable plastics classified and marketed as “compostable” in commercial composting systems Biffa’s experience with trials of compostable bioplastics in hard form (e.g. plates, food boxes, cutlery and cups) has shown that additional fine shredding is necessary in order to ensure satisfactory subsequent breakdown and composting through the rest of the process.

However, thin bio-degradable food waste bags break down more quickly and easily. Any food waste packaging included with food waste sent to Anaerobic Digestion (AD) is removed by the de-packaging part of the process prior to the food waste entering the digestion tanks, since the digestion process is aimed at recovering biogas from the actual food waste content.

In relation to plastic carrier bags and bin bags (LDPE film), China has now banned imports of that material and there are currently very limited offtake markets within the UK or the EU.

The main offtake markets presently are new markets in Southeast Asia since China’s ban. However, at the time of writing this Reality Check series paper the material value itself is now negative and it also attracts a high export Packaging Recovery Note (PRN) value. Whilst the volumes are very low (only 2-3% of the traded secondary materials in Biffa’s case), the current negative material value combined with a high export PRN value create a potential opportunity for abuse in receiving countries.

Consequently, Biffa considers this type of material to be “at risk” and has currently suspended exports of it, considering that it is best kept out of recycling collections until more reliable and environmentally sound end markets are available.

Other plastics can continue to be collected in mixed format subject to specific end-market dynamics. As discussed earlier, parallel action to phase out hard to recycle materials like composite packaging and black PET food trays, which some retailers are already planning, should assist with raising recycling rates and economic viability.

**Paper and card (fibre)**

With Asia remaining the major customer for paper and card (fibre), but now with higher quality standards, paper and card will continue requiring sorting and quality control at MRFs. However, based on our own analysis and operating experience, a separate fibre collection in respect of household waste collections can prove to be cost effective (by reducing subsequent MRF processing costs), convenient, easy for the public to understand.

Business waste tends to be dominated by cardboard, which is relatively easily sorted at a business waste MRF, although customers with large volumes of paper and card waste usually already have separate recycling collections for that material, since it makes economic sense and is both easy and convenient to operate.

**Glass**

Co-mingled household waste recycling collections are sent for sorting at one of our large scale, sophisticated MRFs with glass separation and quality control capability, enabling a high-quality glass output. Therefore, in our systems household waste stream glass does not need to be collected separately to achieve high quality and separate collection would add unnecessary cost.
In contrast, business waste recycling collections are typically sorted at smaller scale sorting facilities without glass separation capability. Glass is therefore usually collected separately from business generating significant volumes of glass waste (e.g. from the hospitality sector) and should continue to be so.

Cans

Metal cans are typically a bigger component of household waste than business waste, but in both streams, they can be very effectively separated at MRFs using over-band magnets for steel cans and eddy current separators for aluminium.

Bio-waste (food waste and garden/green waste)

Biffa believes separate food waste collections for households and businesses generating food wastes are now essential. According to WRAP, food waste makes up around 30% of collected household residual waste. Separate collection can help boost recycling rates and resource productivity by capturing and realising the resource value through anaerobic digestion (renewable energy generation and soil improver) or, where more appropriate, composting, in accordance with the government’s new “Food Waste Hierarchy” (December 2018). It also helps avoid contamination of dry recyclables and helps reduce disposal costs.

Separate funding mechanisms such as Biffa’s Green Waste Club model have proven to be a successful way of supporting such collections. Experience has shown that MBT (mechanical and biological treatment) can separate out the organic matter but at greater cost and process complexity, with limitations on end use of the organics output.

Open-windrow composting is not suitable for garden waste which includes food waste as it would not be compliant with the Animal By-Product Regulations. Garden/green waste collection which does not contain food waste can be sent for open-windrow composting, which is a simpler and lower cost process.

In relation to business waste collections, garden waste is not a usual waste stream. However, Biffa believes that businesses producing significant quantities of food waste should have separate food waste collections, as is already legally required in Scotland and Northern Ireland and set to be in Wales.

Many large food waste producers in England already do this on a voluntary basis, to increase their recycling performance and reduce their disposal costs. Anaerobic digestion is the appropriate treatment route for this source-segregated material, as for separately collected food waste from households. Merchant Anaerobic Digestion plants like our plant at Cannock in the Midlands can serve both commercial food waste and local authority food waste customers.

Higher risk food wastes (Category 2 under the Animal By-Product Regulations) are legally required to be disposed of, either by landfill or incineration. The highest risk food wastes (Category 1) are only allowed to be disposed of through incineration. These categories of food waste are therefore outside the scope of recycling.

Local authority budgets

Local authority budget cuts have put added pressure on some recycling collections and frequencies in recent years and different challenges are faced by different councils with different demographics and priorities (e.g. urban vs rural; high density/multi-occupancy housing vs low density housing; high levels of transient population; “clean streets” demands of tourism).

Less frequent residual waste collections are typically cheaper and help divert more materials to recycling. A key measure of planned new government waste policy, due to be the subject of forthcoming consultation in early 2019, is the prospect of deposit return schemes for some materials and substantially higher compliance fees being applied to waste producers in relation to packaging waste. The general intention is that funding collected from these new types of measures can help support financially challenged recycling collections, as well as additional infrastructure investment.

Labelling

Confusing or non-existent packaging labelling leaves people in doubt whether an item is recyclable or not. Labelling which provides information about recycled content used in the packaging would also help inform consumer purchasing choice, as well as demonstrating recycling in action, increasing public confidence in recycling generally. Clearer labelling, consistency of adoption and consumer education will all play an important role in supporting more recycling. It needs to reflect the defined “core materials” for recycling collections, making it clear and unambiguous what can and
what can’t be put in mainstream recycling collections and excluding known hard to recycle items such as soft plastics (carrier bags and films), food and drink cartons made from composite materials, disposable coffee cups, black PET food trays and textiles. Until hard to recycle items can be phased out, separate collection points (potentially at household waste recycling centres) may be a solution where local specialist recycling or re-use routes do exist for such items. Labelling is a separate area for consultation under the reform of the Packaging Producer Responsibility system and current work by the Plastics Pact initiative.

**Designing for recycling**

Eco-design in terms of designing packaging and products for recyclability in future is another area of crucial but separate government action, thereby helping to tackle the problem at source.

Producer responsibility to tackle the problem at source is arguably the most fundamental aspect in delivering higher recycling levels in the future because a waste collector and processor can only collect and process what is put in front of them. If that material is hard to recycle or reduced in value due to having a composite nature or problem colour, it is already starting from a disadvantaged position so far as recycling is concerned.

Many large retailers are already signalling intentions to phase out hard to recycle materials for these reasons.

**Conclusions**

The overarching objective needs to be to reduce packaging complexity, reduce confusion, reduce hard to recycle packaging and materials - all of which will help boost recycling levels - and to increase the use of recycled content in packaging and products.

Tackling the problem at source will, in turn, lead to simpler, more consistent and more easily understood collection regimes, which, in turn, provide the best likelihood of success for achieving higher recycling rates. Conversely, complex and confusing waste materials will continue to require complex and confusing collection regimes and maintain current levels of recycling at best.

That said, it still needs to be recognised that there will always be some genuinely necessary or unavoidable waste which will continue to require safe collection and disposal to avoid pollution and UK infrastructure for that will also continue to be essential.

Greater consistency of core materials collected for recycling would be a positive move in principle, but Biffa believes that any new government advice or policy around this needs to support materials capture where practical and possible, whilst remaining flexible enough to cater for different local authority and business customer requirements as well as end market conditions and infrastructure availability. These factors are dynamic, some beyond the control of waste producers, local authorities, waste management service providers or, indeed, the government.

Therefore collection regimes must remain sufficiently responsive to enable adjustments to market dynamics.

The responsibility for compliance is also an area which needs to be addressed for business waste, in order to drive the increased participation and business waste recycling increase which government wished to see.

In Scotland, Wales and Northern Ireland, unlike in England at present, it is the waste producer who is responsible for compliance by presenting separate materials for recycling collections, which is consistent with the principle of producer responsibility.

However, in England compliance currently rests with the waste collector to offer recycling services, but the waste producer is under no obligation to take up the service. The service choice is therefore driven by cost and/or a customer’s own sustainability/CSR policies and targets.

Achieving higher levels of recycling cannot be achieved by changes to collection regimes in isolation. It necessarily relies on parallel actions to increase the recyclability of packaging and products at source, clearer labelling to inform consumers, increased demand for secondary materials use and greater investment in UK recycling infrastructure.

Taking into account the above issues, specific concerns and our latest commercial analyses, we have developed recommended models for core sets of materials. However, we recognise that customers apply a range of criteria when selecting service requirements and Biffa is always happy to discuss appropriate alternatives or interim measures, particularly during the interim period prior to implementation of new national waste policies and regulations.
UK recycling rates have quadrupled since 2000, with some of the fastest recycling growth in Europe over that period, however have stalled at around 45% for the last few years. The need to increase recycling is now high on the public and political agenda.

This guide sets out our recommendations to help drive recycling forward by capturing more recyclable material, ensuring quality, delivering convenient and cost effective solutions and stimulating further investment in UK-based recycling infrastructure. The government’s new Resources and Waste Strategy sets out a strong vision, which we support. This guide will help waste producers align their recycling collections well with emerging government policy and current consultation activities on collections consistency, which is a key strand of the new national strategy. We hope you find it informative and useful.

To find out more information about Biffa visit our website biffa.co.uk