

# Annual waste review

An ever changing landscape

2016





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# Foreword

I am delighted to introduce the latest edition of the Grant Thornton Annual Waste Review, where we look back at the merger and acquisitions that took place in 2016, and, alongside the emerging legislation and trends in recyclate prices try to assess what this is telling us about the direction of travel for the waste sector in the UK.



Once again, we are very grateful to Pinsent Masons who undertook the legislation assessment, and to Ricardo who have assessed the trends in the various recyclate markets. Both firms have given us great insight into what remains an industry that is constantly adapting to the forces that shape it, many of which it has absolutely no control over. Having been involved in the sector for over 15 years it never fails to amaze me how adaptable the industry has become.

After decades of doing largely the same thing we have witnessed nearly two decades of massive change in terms of a transition into a technical infrastructure dominated business, where customer service is of greater importance and both legislation and regulation are becoming ever stricter.

This ability to adapt will continue to be tested to the limit with the still uncertain impact of Brexit and the ongoing financial pressures faced by local authorities. In the case of the Brexit decision, this is going to have potentially wide ranging implications, all of which are difficult to judge but which could be argued will benefit the UK longer term. In particular I am thinking about the large scale export of RDF and the cost of buying infrastructure from Europe, which with leaving the EU, may cause a shift to more of a UK self-sufficiency in usage of RDF.

In addition, the UK will need to decide whether it continues to implement EU legislation and targets particularly in relation to greater recycling. It is hopefully unlikely there will be any major reversal of the directives and targets that brought the industry into the 21st century.

There will be many Local Authorities in particular who will hope for a break from increased targets, as these are only going to increase costs. As we have seen with major decisions being made by Councils (the latest being Sheffield and Peterborough) to end large privatised contracts early in order to provide what they believe to be the framework to reduce costs and potentially derive revenue, there is likely to be further upheaval in municipal waste services in order to pay for social care.

Continuing to innovate in service delivery, managing the value in the supply chain more effectively, and exploring alternate markets, whether that be for example into energy production, or different geographical markets are likely to be on many waste company agendas.

We always give our Annual Waste Review the subtitle of 'An Ever Changing Landscape'. There is no reason to suggest that this year, and for the next few years, this will become any less apt.

We have built a web page around the review this year, so that we can keep updating you throughout the year on M&A activity as it happens, and to incorporate articles and updates relating to the developments that will inevitably happen.

Enjoy!!

**Mike Reed**  
Head of Energy and Environment

# Legislation update

Fiona Ross of Pinsent Masons outlines key legislative changes affecting the waste sector and what impact they will have for the year ahead.

The second half of 2016 was over-whelmingly dominated by the issue of Brexit, after the shock referendum result in June. With the UK Government having no plan for implementing Brexit in the event of a vote in favour of leaving the EU, there has been a lot of uncertainty over the likely form of Brexit and what this will mean for key UK industries.

From the perspective of the waste industry, a lot of UK waste policy and regulation has been driven by EU legislation, such as the successive Waste Framework Directives and the Landfill Directive, which have been pivotal in increasing municipal recycling rates and diversion of waste from landfill and also the application of the Waste Hierarchy. Later Directives on WEEE, packaging waste and batteries introduced the concept of "producer responsibility", and the Circular Economy Package published in 2015 has the potential to revolutionise the way we manage resources in our economy.

There are therefore concerns over what Brexit will mean for the waste industry, particularly in light of the fact that DEFRA "stepped away" from waste policy making in 2013, and that since then resources within both DEFRA and the EA have been depleted by public sector cuts.

The industry has long argued that clear policy direction and a comprehensive resource strategy is required to stimulate investment in much needed new waste infrastructure and to support the shift to a circular economy. It also seems clear that there are significant benefits to be derived from such an approach.

## Potential benefits of resource efficiency to UK economy

An assessment of the long-term direction of travel for the waste sector undertaken by Eunomia in September 2016 indicated that the UK economy could benefit by up to £9bn if the UK Government were to integrate circular economy principles into the emerging industrial strategy for the UK. The report states that this would be expected to support significant investment in recycling and reuse activities and also generate savings for companies cutting down on consumption of raw materials.

A recent report published by the Aldersgate Group, "Amplifying Action on Resource Efficiency", also stated that the UK economy could benefit from up to £77bn in gross value added (GVA) by 2030 if it adopts resource efficient business models across a range of sectors. This is notwithstanding the significant amount of EU environmental funding that will be lost when the UK leaves the EU.

In light of the potentially significant savings highlighted in the reports, some of the recommendations therein could end up helping to shape future UK waste policy.

 £77<sub>bn</sub>

Potential benefit to the UK economy by 2030 if resource efficient business models are adopted.

## Key areas where the recent reports recommend action by the UK Government include:

### Product standards

The Aldersgate Group report urges the Government to develop product standards for goods sold in the UK which require them to be designed in a resource efficient way to minimise waste, and also ensure production of quality products that last as long as consumers expect them to (perhaps a nod to planned obsolescence). In particular, the report suggests that the standards must be as good as or better than the requirements under the circular economy package, so as not to disadvantage British businesses and consumers.

It is important to note in this context that manufacturers selling into both the EU and UK markets are likely to adopt a single set of product standards – the most stringent applicable – so as not to end up having to manufacture their products to two separate standards. A number of businesses have commented that a single set of product standards is preferable to industry.

### Markets for and use of secondary materials

The Eunomia report notes the need to encourage greater use of secondary raw materials in products manufactured in the UK. It states that this could support a domestic recycling and reprocessing industry which delivers quality secondary materials to UK based manufacturers. Eunomia indicates that re-circulating the 14 million tonnes of recyclables exported by the UK each year back through the UK economy could generate around £650million annually. It points out that the UK is a significant net exporter of recyclates and waste derived fuel, whilst also being a net importer of primary raw materials and energy.

The Aldersgate Group report also indicates that there needs to be greater clarity and certainty around the status of secondary materials and when these can be used, either as raw materials or products in their own right, without being subject to waste controls. In particular it emphasises the need to ensure that secondary materials are not treated as waste where there is a safe use to which they can be put.

This is in fact broadly in line with the existing law on end of waste and secondary materials. However, there is no doubt that the time consuming, highly technical and often costly process for demonstrating this to be the case in the UK has been the subject of criticism. It is currently unclear whether the dissolution of the EA's specialist end of waste panel will help or hinder progress in this regard, and anything that can be done to further streamline the process will be welcomed by those seeking to maximise the re-use and recovery of wastes, secondary materials and byproducts.

### Fiscal incentives

Very much linked with the issue of increasing the use of secondary materials, both the Eunomia and the Aldersgate Group reports indicate that the UK should take note of the success of the landfill tax regime in driving waste from landfill, and should consider other fiscal incentives to drive behaviour consistent with the waste hierarchy in relation to waste management. It suggests that this could include lower rates of VAT for durable or repairable or resource efficient goods and services. The Aldersgate Group report notes that currently environmental taxes account for around 1% of UK tax receipts, compared to around 8% on average in other EU countries. It states that a study, which included Deloitte, EY, KPMG and PwC, found that such a tax shift could be worth €33.7bn and create hundreds of thousands of jobs.

The UK Government has long resisted the imposition of "green taxes" in this way. However, it may be that Brexit provides the impetus for a re-think of the UK taxation system and how this can be used to drive a green economy.

### Will the UK embrace the circular economy?

The big question is whether the UK Government will take note of any of the recommendations in the reports, which essentially reiterate points that the industry has been making for many years regarding stimulating growth in the waste industry and the shift to a green economy.

DEFRA has indicated that it will continue to engage in negotiations on the EU Circular Economy Package, and that it expects that the legislation being brought forward under the Package will be finalised before the UK leaves the EU (currently expected to be early 2019). This would mean that the UK would be required to implement the Package into UK law, including any more stringent recycling targets that are agreed. DEFRA has stated that it is currently working on the assumption that the Circular Economy Package will apply to the UK, which suggests that it would be included in the proposed Great Repeal Bill, so as to preserve its applicability in the UK after Brexit.

The more stringent targets being discussed may not be achievable for the UK, and would therefore require a programme of measures, such as those suggested in the reports referred to above, in order to drive investment in recycling.

It is therefore perhaps disappointing that the recently published Green Paper "Building Our Industrial Strategy" contains only limited reference to resource efficiency and waste. The Green Paper notes the potentially huge cost savings that could be delivered by increasing the efficiency of material use across the whole supply chain, and states that the Government will work with stakeholders to explore opportunities to reduce raw material demand and waste in the UK's energy and resource systems, and to promote well-functioning markets for secondary materials, and new disruptive business models that challenge inefficient practice.

It states that this work will be supported by the Government's 25 Year Environment Plan, which will set out a long term vision for delivering a more resource efficient and resilient economy. The Environment Plan is expected to be consulted on in 2017, and is likely to be a key document of interest to manufacturers and the waste sector alike, particularly since the Government is under increasing pressure to enshrine the plan in law.

As the shock of the Brexit vote starts to wear off, and the Government begins to take steps to extricate the UK from the EU and to shape the new UK legal landscape, manufacturers and waste industry players will have to watch carefully to see whether resource efficiency and a circular economy are enshrined as core principles or whether waste policy is allowed to drift yet further.





# Municipal heat off-take from Waste to Energy

## Mike Read looks at why there has not been more take-up of heat network commercialisation.

It is fair to say that the generation of heat through Energy from Waste (EfW) facilities at a municipal scale has not been on a scale that the Government would have liked. There was a requirement that energy sourced from waste plants funded through either the Private Finance Initiative (PFI) or Welsh Government funding routes, were required to be Combined Heat and Power (CHP) enabled to try and boost the heat element. However, they remained at the enabled stage during the initial procurement and build stage.

Whilst there were often good reasons for not taking the heat output aspect further at this time - lack of reliable heat off-take agreements, economics of foregone electricity income, wariness of Renewable Heat Incentive (RHI) - it doesn't alter the fact that the focus has been on electricity rather than on heat production.

There are notable exceptions to the above including in Nottingham, Sheffield and the South East London Combined Heat and Power (SELCHP) facility in London. Similarly, the London Borough of Sutton is developing a low carbon heat network to utilise waste heat arising from EfW and Landfill Gas (LFG) facilities at Beddington Lane.

When you look at the key drivers behind those local authorities that have developed networks, they all have the same core themes - tackling fuel poverty, reducing carbon emissions, and energy security, in terms of price and supply. However, heat network commercialisation is not simple. In London, the ability to impose planning requirements on developer led solutions can accelerate schemes. In general though the issues that come from dealing with potentially higher credit risk customers, in a currently unregulated market where the supplier is in an effective monopolistic situation, are some of the challenges that need to be overcome.

Municipal heat networks can clearly play an important role in generating efficient heat supply as evidenced in other parts of Europe, and energy from waste will have an important role to play as the energy source. In order to help other local

authorities in England and Wales deliver these aims, whilst at the same time recognising the need to remove the capacity and capability challenges that have been identified as barriers to heat network deployment, the Department of Energy and Climate Change (DECC) set up the Heat Delivery Network Unit (HNDU).

Through this, local authorities can get access to grant funding (ranging from around £10,000 to £250,000) and guidance from an assigned individual at HNDU to undertake heat mapping, energy master planning, feasibility studies and detailed project development. Whilst not all of these projects will be delivered, and only some of the projects will be based around EfW heat sources, it does start to provide some of the building blocks for allowing a market to grow. This funding has subsequently been boosted with the creation of the Heat Network Investment Project (HNIP) fund which has £320m at its disposal to help get the market moving.

We have seen the power of central facilitation before with the waste PFI projects. There was a project pipeline around which contractors, funders and advisors could invest and build capacity to deliver a programme. The importance of this cannot be underestimated. Unlike the waste PFI projects, there is no evidence that the Government will provide financial support to the heat networks' operation as the annual revenue comes from the end heat users, which isn't necessarily the local authority. To gain momentum and interest from the market it will be extremely important to ensure that the schemes procured are deliverable.

The role of the business case that underpins these projects will be critical. With a large number of municipally focused EfW Facilities built and CHP-enabled, the potential to use them as heat sources as part of these programmes is apparent. Clearly it remains early days but there is definitely momentum building in this market.

# Material prices

The trends in recyclate prices for 2016 paint a better picture than for 2015, with many of the key materials showing an increase in value over the last 12 months.

Such increases have been seen across all core material groups (fibre, glass, metals and plastics); most notably, steel cans have seen an increase in value of 289% between January and December 2016, a welcome recovery following the global fall in the price of steel cans in 2015, and in part driven by an increase in virgin iron ore prices due to higher costs, for example a doubling in coking coal prices in China.

However, this has not universally been the case with MRF glass showing a moderate decrease of 13%, perhaps highlighting the increased focus on material quality. The upward trend in recyclate prices has also been reflected in the PRN prices with a fall in values across all materials over the last 12 months, with the exception of glass.

It is known that high quality materials e.g. high purity and low contamination, will achieve a greater market value than those of a low quality, particularly during periods when market values for materials are low. Tightening of export protocols has also meant that it is no longer possible to export poorer quality materials and operators cannot afford the reputational risk of sending highly contaminated materials abroad for reprocessing, only to have them rejected at the receiving port. Interestingly, whilst the indices did not appear to show a material price advantage for higher quality recyclate for all materials, recent trends now show that glass from a MRF operation (and therefore more likely destined for the aggregate market, due to its poorer quality and thus failure to meet the necessary standards of the re-melt market) is attracting considerably lower prices than glass separated at source. We would expect this trend to continue and to be reflected in other materials in 2017.

The drive for quality materials has continued to strengthen in 2016, influenced by a number of factors, including:

- Contamination rate at the point of collections;
- The level of separation at source;
- The level of rejection at the processing facility or reprocessor;

- The quality and configuration of the processing equipment (and thus degree of purity of output material achieved); and
- The collection method employed.

The price improvements over the last year have had a positive impact on the wider waste industry with Biffa's resource and recovery department, for example, showing a revenue increase of 5.1%, driven in part by the increase in commodity prices.

## Material quality

Over the last 12 months, the focus on high material quality and purity has continued to increase, with a real shift from volume to material quality, as evidenced by the Recycling Association's 'Quality First' Campaign launched in September 2016. This shift has in part been brought about by the fall in material prices leading up to 2016 and the increasing level of scrutiny of materials for export, which has led to the realisation by material suppliers to the reprocessor market that the only lever currently available to them to secure better prices, is material quality.

Since the introduction of the 'MRF Code of Practice' under Schedule 9A of the Environmental Permitting Regulations 18 months ago, qualifying facilities have been required to report on the quality of materials both entering and exiting their facilities. However, there are no defined quality requirements under Schedule 9A and the Regulators have taken a light-touch approach to enforcement, with no action taken to date against facilities producing poor material quality.

Operators are now getting to the point where they have got their heads around the new quality reporting protocols so we expect to see an increasing shift in local behaviour in 2017. But despite anecdotal evidence of improving material quality and increasing push back from operators to local authorities on contamination rates, this has not yet been reflected in the material output sampling data.

There is no real evidence of improvements since the requirements were introduced, and whilst paper has seen a 0.9% improvement in the level of contamination in outputs in Quarter 2 of 2016 compared to Quarter 4 of 2014, all other materials have seen a slight increase in the proportion of contaminants.

### Emerging material streams

It is worth noting the obvious increased trend for local authorities to collect low value mixed plastics (pots, tubs and trays) at the kerbside as they continue to strive towards the 2020 50% recycling target. Linked to this, and another emerging stream which the market is not yet fully equipped to deal with, is black plastics, and in particular the challenges they present for Materials Recovery Facilities (MRFs).

A significant number of MRFs rely on equipment such as ballistic separators or screens to carry out a separation of 2D and 3D streams, but food trays can act as 2D and travel in the same direction as other 2D material, particularly fibres. In addition, optical sorting technology cannot distinguish the black plastic from the black conveyor belts over which the material passes creating further problems for extracting this stream.

Another issue associated with this stream is the potential level of contamination. Due to its origin as food packaging it is quite likely to be contaminated with food scraps, making it less desirable for end markets.

Black is a final position for reprocessing, or the point of no return, as once a polymer has been coloured black it is incredibly difficult (if not impossible) to convert it to another colour following the addition of "Masterbatch" (an additive for colouring plastics), for example. Interestingly, Proctor and Gamble, in collaboration with TerraCycle and Suez, has launched a new plastic bottle manufactured from recovered marine plastic waste; however, the bottles are black and it is not clear whether a MRF's ability to handle these new

innovative containers has been tested, nor how the consumer or reprocessor markets will respond to such a bottle.

### Oil prices

Whilst there is undoubtedly some association between the oil prices and the value of recovered plastics, this is not consistently the case. In November 2016, the Organisation of the Petroleum Exporting Countries (OPEC) agreed a cut in the production of oil which has led to a Brent crude oil price increase of 21% between 1st November 2016 and the recent price peak on 3rd January 2017. However, with increasing levels of shale output and non-compliance from countries both within and in agreement with OPEC, there may be a more limited impact on the oil prices than intended. It is possible, however, that the current and planned increase in oil prices could have a positive effect on the recovered plastics market in 2017.

### Changes in export markets

The continued trend towards improved quality requirements for exports and the tightening of controls on imports of recovered materials should have had a clear impact on the quantities of recyclate exported. This impact has not been realised with only a 1.79% decline in plastic exports, and a 2.84% increase in paper exports from January to November 2016, compared to the same period in 2015. However, it could be a reflection of a genuine shift towards improved quality. Perhaps more surprising was the change in receiving countries for UK plastic exports during 2016, with Malaysia now the third largest market receiving around 10% of the plastic exports from the UK. Additionally, between January and November 2016, just over 67% of the UK's recovered plastic exports were sent directly for recycling in China/Hong Kong, down from 75% during the same period in 2015.

The key export markets for recovered plastics in 2016 were:

- China
- Hong Kong
- Malaysia
- Indonesia
- India

In terms of receiving countries for paper exports in 2016, there has been little change since 2015 with China continuing to be the key market for recovered paper from the UK, receiving 86% of recovered paper exports<sup>4</sup>.

A key influencing factor on material exports in 2016 was the bankruptcy of one of the largest global shipping firms, Hanjin Shipping Co. Ltd., which resulted in ships being unable to dock and a shortage of vessels arriving in the UK due to containers being held at ports as a result of the company's collapse. This in turn contributed to a doubling in freight rates during the final quarter of 2016.

### Packaging recovery notes

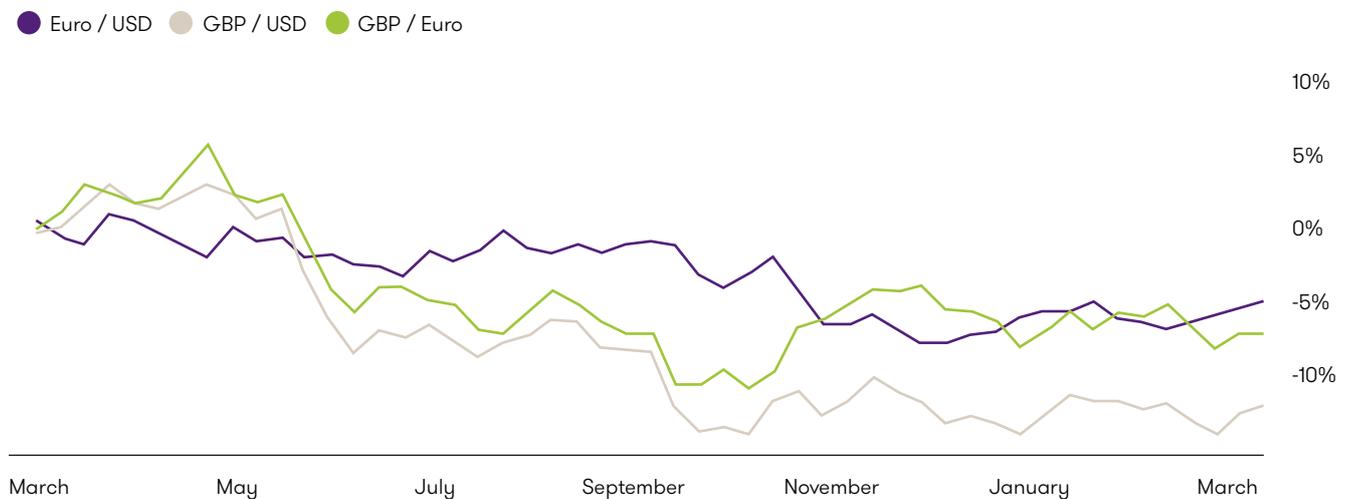
With the exception of glass, PRNs for all other materials saw some significant declines during 2016, with steel PRNs 89% lower in December 2016 than they were in January 2016. However, despite downward trends across the course of the year, Plastic PRN prices increased in late December as a result of uncertainty as to whether the target had been met.

### Brexit

Despite the UK voting to leave the European Union in June 2016, the impacts in the second half of 2016 have been better than feared, with economic growth at around 2% for the year. The vote has had little impact on overall material values, with trends showing prices continuing to rise. However, exchange rates have shifted rapidly in the wake of the UK's referendum vote to leave the European Union, with the sterling hitting a 31-year low against the dollar.

The fall in the sterling exchange rate following the EU referendum did contribute to a rise in export demand for recovered paper from the UK as it made UK material prices more competitive on the global market.

### Exchange Rates – February 2016 to February 2017



Source: Reuters

### Summary

The picture for material price trends in 2016 is less complex when compared to 2015, where prices for plastics stabilised whilst those for metals continued to fall. However, 2016 has shown price increases across the majority of material streams - price increases as high as 289% over the 12 months have been recorded. As for 2017, continued high iron ore prices should increase demand for steel cans from steel mills and further price increases in recovered materials should be seen.

In terms of the economic outlook for 2017, economic growth in the UK is anticipated to be lower than 2016 with PWC predicting growth to slow to 1.2% and for inflation to rise from 0.6% to 2.3%, with short term impacts attributed to a fall in investment in the UK. It is difficult to predict what impact this might have on material values, with commodities traded on a global market. However, a reduction in investment in the UK could increase the reliance on export markets, with continued pressure on collectors and processors to produce high quality products, to ensure they meet export requirements and can compete on the global stage.

There has been an increased trend for local authorities to collect low value mixed plastics as they continue to strive towards the 2020 recycling target of 50%

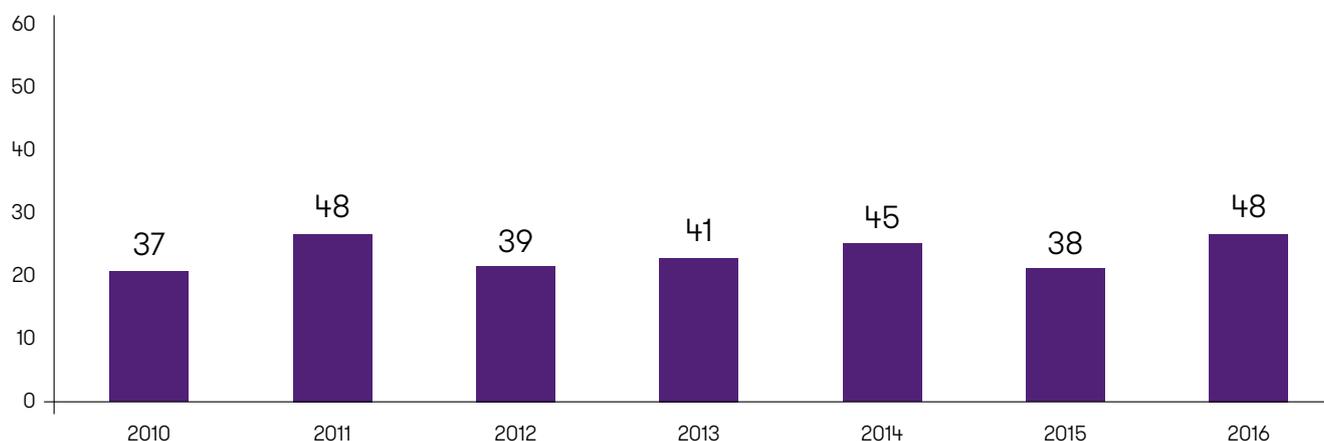


# M&A Trends - 2016

## Waste deals at their highest level since 2011

This year has been a strong year for deals with 48 waste deals completing in 2016, up 26% compared to the same period last year. This figure reverses the downward trend we saw in 2015, and equals the previous best performing year in 2011.

### Annual waste sector deal volumes 2010-2016

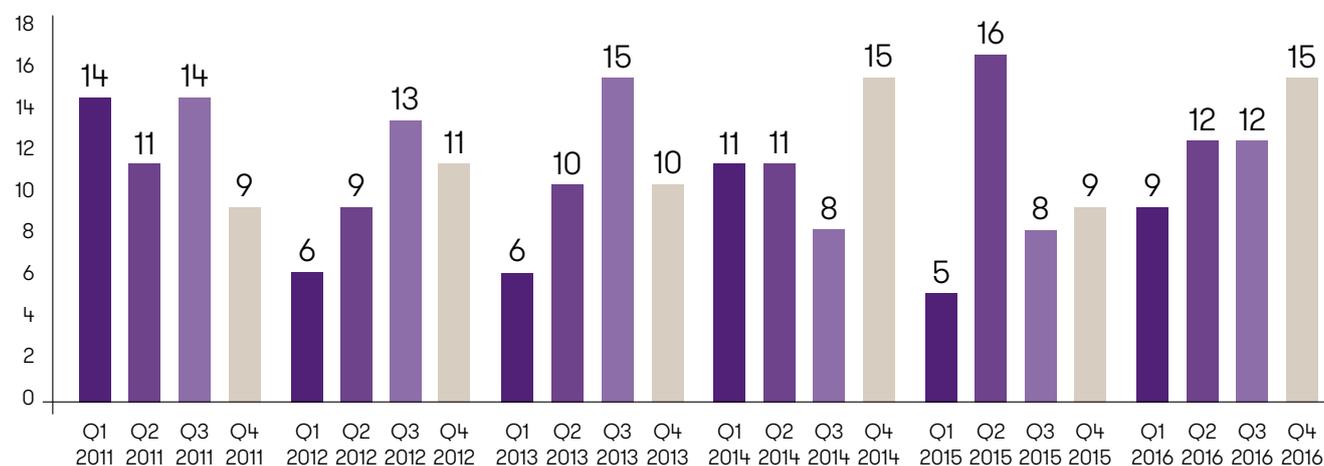


Source: Grant Thornton

## Waste deals by quarter

The year started strongly compared to last year with 9 deals completing in the first quarter – up on last year's figure. Activity gradually increased throughout the year, with a strong finish in the last quarter of 2016.

### Quarterly waste sector deal volumes Q1 2011 - Q4 2016



Source: Grant Thornton

### A return to larger deals

In 2015 there was no evidence of M&A activity over £60m in value but this year there has been a shift to larger deals, with a number surpassing the £60 million mark.

This year we have seen the the buy-out of Infinis Plc by 3i in October 2016. Mr Richard Laing, Chairman, 3i Infrastructure plc, commented: "The strong cash generation profile of Infinis is a natural fit for 3i Infrastructure and complements the existing portfolio well". The deal represents an exit by Terra Firma who have built the business into a leading power generation group and have achieved value for its investors through the sale of the business.

More recently the acquisition of Spanish owned Urbaser by the Chinese investor Firion was announced in December 2016. The deal estimated at c. £2 billion is the largest deal this year and represents an exit from the waste market for Spanish construction group ACS. Urbaser's footprint in the UK include recycling and waste contracts as well as the Javelin Park energy from waste plant in Gloucestershire which is being constructed in partnership with Balfour Beatty.

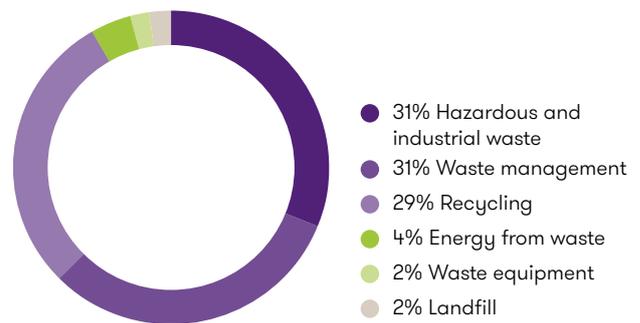
### Chinese investment

The Firion deal is an example of growing interest in the UK and European waste management market by Chinese investors this year. As well as a number of high profile deals across Europe Chinese investors were also reportedly interested in the acquisition of Biffa before the integrated waste management group eventually completed an IPO in October 2016. This trend is likely to continue into 2017 and beyond as investors are attracted by the high growth energy from waste market in Europe as well as expertise in waste treatment technologies.

### Uplift in waste management and hazardous and industrial waste

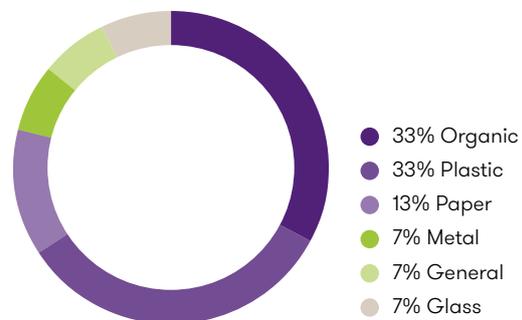
Hazardous and industrial waste and waste management overtakes recycling as the sub sector receiving the highest levels of investment this year, accounting for 31% of deals respectively. Whilst recycling deal completions remain at a similar level to last year there has been an uplift in other areas of the waste sector, which when combined with more diversity in the type of deals taking place accounts for the apparent drop.

### Deals by subsector - Q1-Q4 2016



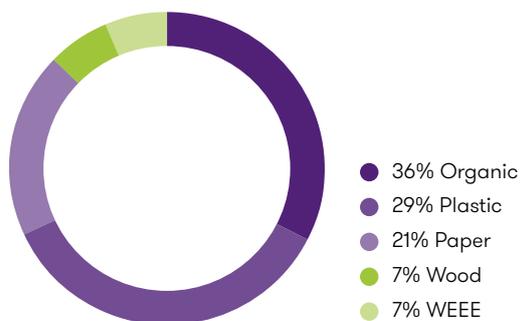
Source: Grant Thornton

### Recycling deals by type - Q1-Q4 2015



Source: Grant Thornton

### Recycling deals by type - Q1-Q4 2016



Source: Grant Thornton

# 2016 deals

Date	Investor	Target	Deal type	Deal value * estimated (£000)
05/01/2016	Veolia Environmental Services (UK) plc	Boomeco Ltd	Acquisition 100%	na
08/01/2016	Equitix Holdings Ltd	Ignis Biomass Ltd	Institutional buy-out 100%	4,000*
22/01/2016	Bakers Waste Services Ltd	Berridge Waste Paper Ltd	Acquisition 100%	na
03/02/2016	Equitix Holdings Ltd	Shanks Group Plc's Special Purpose Vehicle	Acquisition 49.99%	30,000
04/02/2016	Business Growth Fund Plc	Total Recycling Services Ltd	Minority stake unknown %	6,700
08/02/2016	TGM Recycling Ltd	Polymer Industries Ltd	Acquisition 100%	na
29/02/2016	SARIA SE & Co. KG	SARIA Ltd	Acquisition increased from 51% to 100%	na
04/03/2016	Riverridge Recycling	ENGIE SA's Northern Ireland Operations	Acquisition 100%	na
07/03/2016	Ekman & Co AB	Reliance Fibres Ltd	Acquisition 100%	na
01/04/2016	Binn Group Ltd	Holden Environmental Ltd	Acquisition 100%	na
02/04/2016	EDF Developpement Environnement SA	Studsvik AB's UK and Sweden based waste treatment operations	Institutional buy-out unknown % and 100%	28,794*
15/04/2016	Wastecare Ltd	Avonmouth hazardous waste treatment facility of Greif UK Ltd	Acquisition 100%	na
18/04/2016	FGS Organics Ltd	Envar Composting Ltd	Acquisition 100%	na
26/04/2016	React Group PLC	EPUK Ltd	Acquisition 100%	165*
16/05/2016	Devon Contract Waste	Wellington Waste's commercial division	Acquisition 100%	220
19/05/2016	Augean Plc	Colt Holdings Ltd	Acquisition 100%	13,950*
20/05/2016	Future Industrial Services Ltd	Bale Group Ltd	Acquisition 100%	na
07/06/2016	Wastecare Ltd	Batteryback Plc	Acquisition increased from 50% to 100%	na
08/06/2016	Biffa Group Ltd	Cory Environmental Municipal Services Ltd	Acquisition 100%	23,000*
09/06/2016	DM OPCO Ltd	New Earth Solutions Facilities Management Ltd	Acquisition 100%	na
21/06/2016	Cleansing Service Group Ltd	Frogson Waste Management Ltd	Acquisition 100%	na
01/07/2016	Sugarich Ltd	Leafield Feeds Ltd	Acquisition 100%	na
04/07/2016	Veolia Environmental Services (UK) plc	Euro Closed Loop	Acquisition 100%	na
08/07/2016	San Sac Nordic AB	Easi Recycling Solutions Ltd	Acquisition 100%	na

Date	Investor	Target	Deal type	Deal value * estimated (£000)
19/07/2016	Sharp Polymer Solutions Ltd	CKN Holdings Ltd's Hull Operations	Acquisition 100%	84*
21/07/2016	Reconomy (UK) Ltd	Cory Environmental Holdings Ltd's UK based national waste brokerage business	Acquisition 100%	na
25/07/2016	Lucion Services Ltd	Redhill HCO Ltd	Acquisition 100%	na
09/08/2016	R Collard Ltd	M Collard Waste Management Services Ltd	Acquisition 100%	na
10/08/2016	Business Growth Fund Plc	Wales Environmental Holdings Ltd	Minority stake unknown %	2,000
16/08/2016	MBO team - United Kingdom	Raymond Brown Minerals & Recycling Ltd	Management buy-out 100%	na
26/08/2016	Restore Plc	PHS Datashred	Acquisition 100%	83,100
07/09/2016	The Recycling Partnership	KSD Environmental Services Ltd	Acquisition 100%	
28/09/2016	Business Growth Fund Plc	Riverridge Recycling Ltd	Minority stake unknown %	10,000
13/10/2016	Pandagreen Ltd	New Earth Solutions Group Ltd	Acquisition 100%	na
31/10/2016	Business Growth Fund Plc	Johnsons Aggregates and Recycling Ltd	Minority stake unknown %	5,000
31/10/2016	3I Infrastructure Plc	Infinis Plc	Institutional buy-out 100%	535,000*
01/11/2016	Biffa Plc	Blakeley's Recycling Ltd	Acquisition 100%	5,000
01/11/2016	NG Holdings Ltd	Moore (Holdings) Ltd	Acquisition 100%	na
03/11/2016	Plastipak Packaging Inc.	Evolve Polymers Sales Ltd	Acquisition 100%	na
04/11/2016	Remondis Waste Solutions Ltd	JBT Waste Services Ltd	Acquisition 100%	na
07/11/2016	Hills Waste Solutions Ltd	Able Waste Management Ltd	Acquisition 100%	na
21/11/2016	Red Industries RM Ltd	Tarmac Trading Ltd's Walleys Quarry Landfill and Power Generation business	Acquisition 100%	na
25/11/2016	Ashcourt (Durham) Ltd	Biowise Ltd	Minority stake unknown %	na
30/11/2016	Breedon Group Plc	Sherburn Minerals Ltd	Acquisition 100%	15,700*
01/12/2016	River Ridge Holdings Ltd	Wastebeater Ltd	Acquisition 100%	na
05/12/2016	MBO team - United Kingdom	Specialist Building & Asbestos Services Ltd	Management buy-out 100%	na
07/12/2016	Firion Investments SL	Urbaser SA	Acquisition 100%	2,081,559*
13/12/2016	Slicker Recycling	John Rome Ltd	Acquisition 100%	na

# About us

Grant Thornton is one of the world's leading organisations of independent assurance, tax and advisory firms. We help dynamic organisations unlock their potential for growth by providing meaningful, forward looking advice.

Our underlying purpose is to build a vibrant economy, based on trust and integrity in markets, sustainable growth in dynamic businesses and communities where businesses and people thrive.

Grant Thornton's dedicated Energy and Environment team have a strong track record of working with successful and dynamic organisations throughout the industry both in the UK and internationally. We understand the issues facing organisations in the sector and offer personalised solutions to clients to help them unlock their potential for growth.

As a Grant Thornton member firm, we are part of a network of over 40,000 people in over 130 countries. In the UK we are led by 185 partners and over 4,500 people under the UK's first shared enterprise model.

## How we can help

Working with us, you'll gain access to practical advice from specialists passionate about your sector. From European legislation to progress on 'Technically, Environmentally and Economically Practicable' (TEEP) and the Waste Incineration Directive, you'll receive advice on how the policies can work to support and drive your business. Because we're a close-knit team you'll get answers and decisions from the right person at the right time, wherever you are on your business journey.

Our experience is based on years of accompanying small and large waste companies on their business journey from setting up, through mergers and acquisitions, to IPOs. Working across the country, and globally, our people are experts across the public and private sectors, including corporate finance, business consulting and structuring.

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## Contact

If you would like to discuss this report or any other issues affecting the waste and resource management sector please contact:



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