



**A DISCUSSION OF THE UK PRN/PERN SYSTEM FOR PACKAGING
WASTE AND POSSIBLE ALTERNATIVES**

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EXECUTIVE SUMMARY

This report considers whether the UK's market-based system of tradable recycling certificates remains the most suitable mechanism for ensuring that recycling targets are met in future, and sets out possible options for change, taking advantage of lessons from other countries' experience.

We do not know whether or for how long EU Single Market rules will continue to apply to the UK, or whether, if the UK is not bound by Single Market rules, the Government would wish to push recycling targets as high as those in the Circular Economy Package proposal currently under discussion. A more relaxed approach to targets might imply less need for radical change; but if the Commission's proposed rules on extended producer responsibility (EPR) systems are adopted and apply to the UK, radical change would be inevitable.

This report is based on the assumption that UK recycling targets for packaging waste will increase to some extent, irrespective of the nature of the UK's future relationship with the EU. It describes the way the PRN/PERN system works and its outcomes so far, and discusses its ability to meet the challenges ahead. It discusses the criticisms of the system which have been made and which any reform of the UK packaging waste management regime should try to address.

Finally, the report discusses possible systems that the UK could adopt to replace the PRN/PERN system in full or in part. It concludes that there is no single model already in operation that could be applied to replace it. Developing a new packaging waste regime for the UK would present a unique challenge, and the best way the UK could benefit from European experience would be to mix and match individual elements of different systems.

The report sets out for discussion four possible models, not in any order of preference but starting with the one closest to the current PRN system and ending with the one least like it. Thus, in the first model, it would be possible to use the cheapest packaging waste available to meet specific targets, and in the final option compliance schemes would be responsible for managing the collection and sorting of all household packaging waste:

- *In Option 1, reprocessors and exporters would still issue evidence notes, but these would no longer have a value and would be provided free of charge to the collector or his agent (a MRF or processor) – similar to a transfer note. Instead, compliance schemes and individual compliers would contract with - and pay - **collectors** of packaging waste or their agents for the evidence notes they need to meet the recovery and recycling targets.*
- *Option 2 would be similar, except that the targets would be split between packaging waste from household and from commercial/industrial (C&I) sources. This would require schemes to acquire evidence notes to cover the total recycling obligation, of which x% would have to be household notes.*
- *In Option 3, there would also be separate targets for household and C&I packaging waste, but compliance schemes would contract directly with local authorities (even where segregated collection is undertaken by a private collector that is appointed by the local authority). Schemes would fund a proportion of the collection cost, subject to conditions relating to the quality of the collected material. For C&I waste, compliance schemes would focus on encouraging more material to be collected and ensuring that activity is accurately recorded.*
- *In Option 4, local authorities would no longer have any operational role in the segregated collection of packaging waste from households, as compliance schemes would take full operational and financial responsibility. C&I packaging waste would be addressed in the same way as in Option 3.*

If the UK has to implement a regime where producers pay the full cost of collection and sorting (and treatment operations related to collection and sorting), as the European Commission is currently proposing, some of the options the report puts forward for consideration would have to be amended.

Any changes to the current system would almost certainly involve a very significant increase in producers' costs. Producers rightly stress that there should be a direct relationship between level of funding of the system and level of control over how it operates. If producers are expected to bear the full cost of the system, they should be able to design it – as in Belgium and Sweden.

We were asked to consider whether the models we put forward would be suitable for other waste streams. We have concluded that due to intrinsic differences in the way electrical and electronic products and portable batteries are collected from households, the models we have suggested for packaging EPR would not be appropriate for these other waste streams without significant adaptation.

We were also asked to consider whether EPR could be extended to waste streams not currently covered. We believe that EPR on printed paper would be worth further consideration, and perhaps also on agricultural plastics, packaging of agricultural chemicals and disposable nappies. EPR could also be used to generate funding to reduce litter from products such as chewing gum and cigarette butts, on the basis of the proportion of litter pick-up time attributable to these products.

There are four appendices to the report. The first compares the recycling rates achieved in the UK, where the objective has been to meet EU legal obligations at minimum cost, with those in other Member States, where the EU targets have been taken as the minimum to be achieved.

The second appendix briefly assesses the reliability of the UK system as a means of calculating packaging placed on the market and the recycling rates achieved, in comparison with the reliability of the methodologies employed in other Member States.

The third appendix provides an overview of how systems in selected European countries operate, and considers elements of those systems that could usefully be adopted in the UK. It also analyses elements that failed and why they failed, in order to determine whether the UK should avoid these elements completely or whether their shortcomings could be remedied.

The fourth appendix compares our options with existing UK provisions for WEEE and batteries.

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A DISCUSSION OF THE UK PRN/PERN SYSTEM FOR PACKAGING WASTE AND POSSIBLE ALTERNATIVES

DRAFT FINAL REPORT

1. INTRODUCTION

1.1 The brief

This report considers the role of PRNs (packaging recovery notes) in the UK's compliance system for meeting recycling and recovery targets for packaging waste and how the arrangement has evolved since it was first introduced.

It considers whether this market-based system of tradable recycling certificates remains the most suitable mechanism for ensuring that targets are met in future. The context in which the PRN mechanism now operates is very different from when it was first introduced, and further changes are expected in future. Indeed, the way that the PRN mechanism itself operates is different from how it was first envisaged: when the Regulations were first adopted, evidence of recovery and recycling did not have to be in the form of a PRN or PERN. Only later did the PRN/PERN become the only permitted form of evidence, and able to be issued only by reprocessors and exporters accredited for this purpose.

Some stakeholders are expressing concern that the PRN system is no longer fit for purpose and would not be a suitable mechanism to meet higher targets for the recycling/recovery of packaging waste in future.

This report has been commissioned from Perchards and 360 Environmental by the Environmental Services Association (ESA) which represents waste management companies in the UK. ESA has commissioned the report as a contribution to the debate on the future of the UK's packaging waste regime. It sets out possible options for adapting or replacing the current UK system, taking advantage of lessons from other countries' experience.

These are uncertain times. Following the referendum vote in favour of leaving the EU, it is not known whether Single Market rules will continue to apply to the UK, and if not, when we will cease to be bound by them. If the UK is outside the Single Market, will the Government wish to push recycling targets as high as is currently being proposed at EU level, and will it wish to adopt some or any of the proposed new rules on extended producer responsibility (EPR) systems? Even if the UK remains in the Single Market, the current revision of EU waste legislation will not be completed until 2018, so our future EU obligations will not be known until then (and will not take effect until 18 months after that). A further complication would be added if the devolved administrations opt for different packaging waste management requirements.

This report is based on the assumption that UK recycling targets for packaging waste will increase to some extent, irrespective of the nature of the UK's future relationship with the EU. If economic conditions are difficult, there will be all the more reason to promote resource-efficiency, even if it is likely that more attention will be given to the costs as well as the benefits of higher recycling rates.

It is also assumed that EPR will continue to form part of the UK's packaging waste regime. It was the UK's decision to introduce EPR, as the 1994 Directive on Packaging and Packaging Waste (as amended) has never required member states to impose it. But it is probable that if the UK is outside the Single Market, many of the Commission's proposed new rules on EPR systems will not be adopted in the UK, as they have been designed around the mainstream Continental approach to EPR and do not fit well with the UK's unique system.

1.2. Scope of the report

This report focuses specifically on the PRN system and possible alternative mechanisms for demonstrating compliance with recycling targets for packaging waste and for channelling funding from producers, if and where necessary, to ensure that the targets are met.

The report does not consider other aspects of UK requirements, such as possible changes to the scope and structure of producer responsibility (shared obligations, *de minimis* exemptions).

2. THE CURRENT PACKAGING WASTE REGIME

2.1 Background and origin

The UK first implemented the EU Directive on Packaging and Packaging Waste (94/62/EC) through the Producer Responsibility Obligations (Packaging Waste) Regulations 1997.

The Directive has both environmental and free trade aims. It aims to improve the environmental performance of packaging through increased recycling and eco-design, and also to prevent individual member states from impeding the free circulation of packaging or packaged products throughout the EU. There are recycling targets for six core materials and additional targets for overall recycling and recovery.

The Directive required each member state to set up a "system" that ensures that the targets for the recycling and recovery of packaging waste are met. The Directive does not specify what type of system should be established, except to say that it should not give rise to distortions of competition and that it should be accessible to all economic operators "under non-discriminatory conditions, including the detailed arrangements and any tariffs imposed for access to the systems, and shall be designed so as to avoid barriers to trade or distortions of competition in conformity with the Treaty."

The UK's approach to compliance tackles the issue from the opposite end to most Continental systems. Whereas in the UK, reprocessors use funding from the sale of evidence notes certifying the delivery of material to them – Packaging Recovery Notes (PRNs) – to "pull" material through, Continental compliance schemes "push" material through to reprocessors by providing funding for segregated collection.

It is worth noting that the scope of the UK system is much broader than many of the equivalent Continental systems. The Continental systems focused mainly on household packaging waste, with packaging in the commercial and industrial (C&I) waste streams being handled through other arrangements. Their single point fee arrangement meant that only brandholders had contracts with them and paid fees to them. In contrast, the UK system does not differentiate between household and C&I packaging waste: it covers all packaging waste and producers at all stages of the supply chain have compliance obligations.

2.2 Current obligations on producers

Almost all EU Member States opted to make producers responsible (partly or fully) for meeting the recycling targets. However, the UK's shared approach is almost unique as in most other European countries only one stage in the supply chain, most commonly the packer/filler or importer of packaged products, is responsible for compliance and pays the EPR fees.

The 1997 Regulations imposed a shared responsibility arrangement that had been developed through a cross-industry stakeholder group. This shared approach followed extensive and protracted debate between the different stages of the packaging supply chain about which stage should bear responsibility. The current share of obligations borne by each stage in the supply chain is as follows:

- 6% “activity obligation” for raw material producers (who produce the materials that form packaging, e.g. paper mills);
- 9% for packaging converters (who convert the materials into packaging items, e.g. can makers);
- 37% for packer/fillers (who place their products into packaging, e.g. food manufacturers);
- 48% for sellers (who sell the packaged item to the person who removes the product from the packaging).

The upstream operators were allocated a lower proportion of the obligations partly because some of their production is subsequently exported by their customers, and partly because downstream operators – the packer/fillers and retailers – were considered to have more influence over the specification and design of packaging.

Many producers have more than one obligation. For example, a can maker bears the packer/filler and seller obligations for the transport packaging used to deliver empty cans to a food or drink manufacturer. And converters, packer/fillers and sellers who import supplies have a “rolled-up obligation” for all activities that took place abroad.

As the shared arrangement means that more producers are responsible for compliance than under the Continental single-point systems, it was decided to exempt producers below *de minimis* thresholds (annual turnover and tonnage of packaging) from the onerous obligation of preparing and submitting data on packaging.

To meet the recycling levels required by the Directive while accommodating the *de minimis* exemptions and free-riders, the Regulations set “business targets” that are higher than the Directive's targets.

Each obligated producer is responsible for his share of the target, calculated as:

$$(\text{tonnage of packaging handled in the previous year}) \times (\text{activity \%}) \times (\text{recycling target \%})$$

“Packaging handled” refers to the packaging that is supplied by each producer to the next stage in the chain up to the final user.

For “small” producers in the £2-5 million turnover bracket, the Regulations provide an “allocation” option to calculate obligations. The recycling obligation (in tonnes) is annual turnover (in £ million) multiplied by a “recycling allocation” which is 30 for 2016 and 2017. Thus a company with a turnover of £4 million has a recycling obligation of (4 x 30 =) 120 tonnes. In 2015, less than 7% of producers used the allocation method and it accounted for 0.7% of the overall UK obligation.

Obligations apply to businesses whose annual turnover exceeded £2 million according to their last audited accounts and that in the previous calendar year handled more than 50 tonnes of packaging. Obligated producers can meet their targets directly, by obtaining evidence that the relevant tonnage of

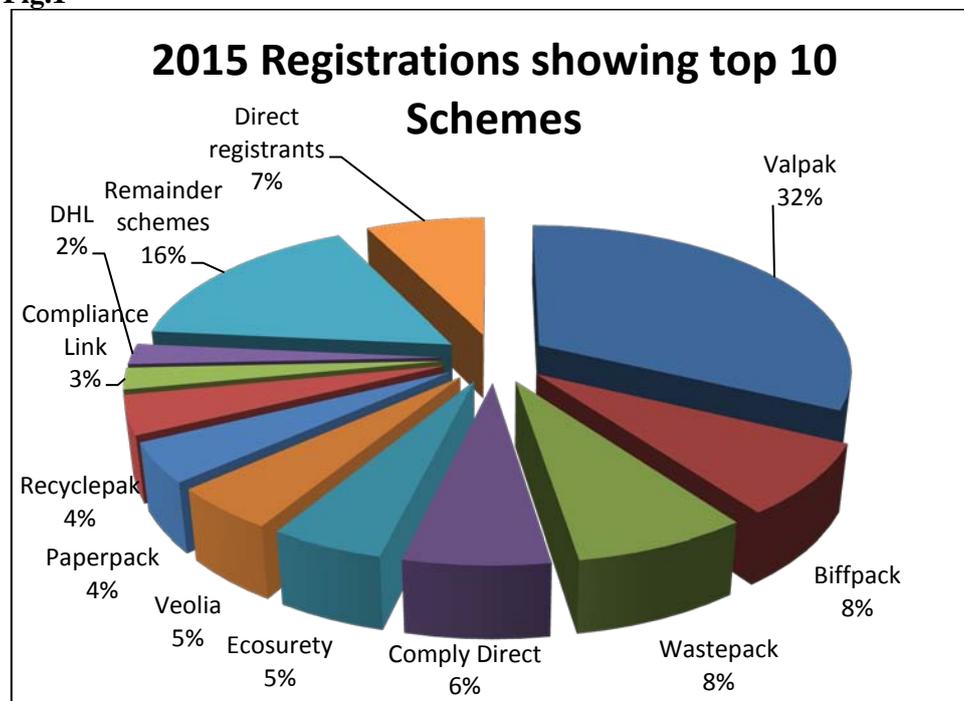
packaging waste has been recycled or recovered on their behalf, or through participation in an approved compliance scheme that takes legal responsibility for procuring this evidence for them.

Obligated businesses either register directly with one of the environment agencies – the Environment Agency (EA) for England, the Scottish Environment Protection Agency (SEPA), Natural Resources Wales (NRW) or the Northern Ireland Environment Agency (NIEA) – or join a compliance scheme which registers with the relevant Agency on their behalf.

The role of the Agencies is to ensure that all obligated parties are registered, to prevent free-riding; ensure that the data reported is accurate; accredit UK reprocessors and exporters; ensure the accuracy of data on PRN/PERNs; and monitor how PRN/PERN revenues are spent by reprocessors.

There are currently 31 compliance scheme operators managing 50 schemes across England, Scotland, Wales and Northern Ireland. The Valpak compliance scheme has the largest market share in terms of number of members – four times as many as the next largest scheme – but it is believed it has closer to 50% of the obligation as most of the large supermarkets and manufacturers are in membership.

Fig.1



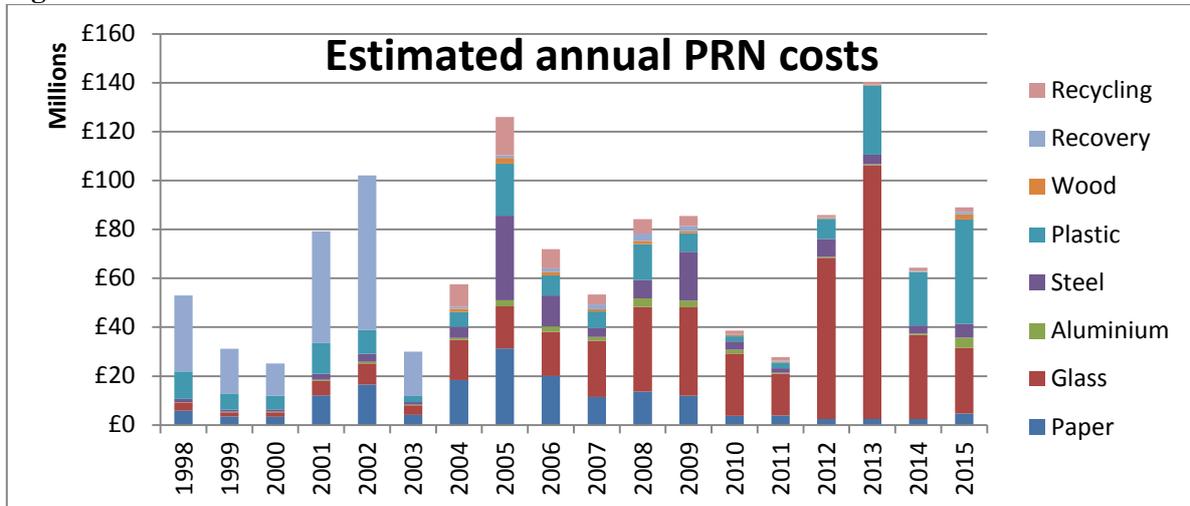
Obligated producers or compliance schemes buy evidence of recovery or recycling from reprocessors (recyclers or operators of energy-from-waste plants) in the form of a Packaging Recovery Note (PRN), or a Packaging Export Recovery Note (PERN) issued by exporters of material destined for recycling abroad.

In principle, reprocessors and exporters use the revenue from the sale of PRNs/PERNs to pull material through the system for recycling or recovery. The sum of the obligations represents total demand, which has to be met by the supply of PRNs/PERNs.

PRNs/PERNs have the same evidence value regardless of whether related to UK reprocessing or exports, or whether they relate to C&I packaging waste or packaging waste collected from households. Accredited reprocessors and exporters sell PRNs on the basis of contracted supply volumes or spot market sales. The market price fluctuates according to the perceived supply/demand position based on quarterly recycling data, national obligations and wider market issues.

Fig. 2 shows the estimated annual cost to UK producers by material, calculated by applying the average PRN/PERN cost to the obligation:

Fig. 2



These figures do not include other costs such as scheme membership fees and the often significant margin added to PRN costs by schemes and traders.

2.3 Accreditation of reprocessors

Under the Regulations, evidence of recycling or recovery for the purposes of meeting targets (i.e. PRNs or PERNs) can be generated only by reprocessors and exporters specifically accredited by one of the Agencies. When assessing an application for annual accreditation as a reprocessor, the Agency requires UK operators to demonstrate that they are carrying out an approved recycling activity that turns the waste into product or, for recovery, that they operate an approved energy-from-waste plant. Exporters must demonstrate that they are exporting to facilities that operate under “broadly equivalent” standards to EU operations. The exporter is usually either the waste management company that collected the material or a merchant (of waste paper etc).

Applicants must also demonstrate that they have robust controls to ensure that PRNs and PERNs are issued only in respect of qualifying waste and that they have a business plan setting out how they will utilise the revenue. Reprocessors and exporters are required to provide revenue reports identifying the use of PRN/PERN income under six broad headings:

- reduction in price and developing new markets;
- infrastructure and capacity;
- funding collection of packaging waste;
- revenues retained for future investment;
- administration; and
- developing communications strategies.

2.4. The role of collectors

Collection is an essential part of the system because materials must be collected and sorted before they can be reprocessed. However, as the PRN system is predicated on the principle of “pulling” material through the system to increase recycling rates, PRNs and PERNs are provided by accredited

reprocessors and exporters in relation to market supply and demand positions, and the role of the collector has no bearing on PRN/PERN prices.

Collection in the UK is regulated by separate legislation. Household waste collection and disposal is controlled by the Control of Pollution Act 1974 which places a duty on local authorities to collect waste and take it to a site designated by the disposal authority. This would normally be the county, but increasingly, two-tier authorities have been restructured into unitary authorities which, along with metropolitan boroughs, have responsibility for both collection and disposal. Where there are separate collection and disposal authorities, the costs of collection and disposal are shown separately on council tax bills whereas for unitary authorities, the cost is shown as a single charge.

The Government's Waste Strategy 2000 set recycling targets on individual local authorities to achieve a national household waste recycling target of 25% by 2005. This led to a significant increase in recycling to 27% in 2005/6, aided by the landfill tax rebate offered by disposal authorities to collection authorities. The Waste Strategy for England 2007 set a national English household recycling target of 40% by 2010, 45% by 2015 and 50% by 2020 in line with the EU Waste Framework Directive (WFD) target (Wales and Scotland have set higher targets).¹ This included composting as part of an EU Landfill Directive target to reduce biodegradable waste to landfill to 35% of 1995 levels by 2020.

About 25% of household waste is packaging, the majority of which is recyclable. However, until recently councils have been under no obligation to recycle specific waste streams and have therefore tended to focus on heavy materials that boost overall waste-based recycling rates – paper and glass – or on waste that is more politically sensitive, plastic packaging in particular. The availability of sorting facilities has allowed them to expand recycling through co-mingled collection schemes where all or a mix of recyclables are collected in one pass. This is significantly cheaper than source-separated collection methods and it generally produces higher collection rates, but recent [WRAP analysis](#) has suggested that overall, once the cost of sorting and impact on quality have been factored in, net costs can sometimes be competitive with separation at the kerbside.²

For C&I waste, Government policy has been to let the landfill tax drive recycling rates. This, along with increasing corporate “greening”, has had a profound effect on the management of waste, with recycling now seen as the norm within any waste management service. However, the extent of recycling is always liable to be restricted by commercial considerations, regardless of the green agenda, so it required a significant increase in landfill costs to compensate for the added cost of recycling collections.

2.5 Regulatory controls on local authorities

Until 2015, the only statutory requirement forcing local authorities to collect recyclable waste was the Household Waste Recycling Act 2003 which required all English collection authorities to collect at least two types of unspecified recyclable waste separately from general waste. Waste Framework Directive 2008/98/EC required all Member States to implement separate collection of paper/card, glass, metals and plastics by 1 January 2015 where “technically, economically and environmentally practicable” (TEEP) in order to achieve “high quality recycling”.

This was enacted through the Waste (England and Wales) Regulations 2011. The Regulations were unsuccessfully challenged by paper, glass, aluminium and plastics recyclers who obtained a judicial review over the decision by Defra and the Welsh Government to allow co-mingled rather than

¹ Only the Welsh targets are legally-binding.

² However, the conclusions of the WRAP report, *A framework for greater consistency in household recycling in England*, are not universally accepted.

material-separated collections on the basis that “high quality recycling” was compromised by mixing materials on collection. The Waste Regulations (Northern Ireland) 2011 adopted a similar position to England and Wales, but Scotland’s is different.

Under Scotland’s Zero Waste strategy, separate collection requirements were applied a year earlier than the WFD required and responsibility was placed on *waste producers* to separate out waste for recycling. In all other parts of the UK, the WFD’s separate collection requirement was applied only to *waste collectors*. Scotland also included separate collection of food waste.

The regulatory bodies in England, Wales and Northern Ireland applied a very low-key approach to the enforcement of separate collection, requiring local authorities to develop a route map to compliance but imposing no controls on C&I collectors. In Scotland, SEPA issued clear guidance to waste producers that whilst co-mingling was acceptable where it did not degrade the quality of recycle, there was no exemption through TEEP.

Thus, other than in Scotland the separate collection requirement has led to very little change to collection practices either in household or C&I waste.

In parallel with the implementation of separate collection, [England & Wales](#) and [Scotland](#) have introduced Codes of Practice for Materials Recycling Facilities. Primarily applied to large-scale household waste sort facilities, these require the publication of sampling data for input and output material to show quality levels. However, there are no statutory quality requirements.

2.6 Management of household waste

According to Government statistics, UK households produced approximately 28m tonnes of waste in 2012 whilst around 48m tonnes of C&I waste were produced. In 2014, approximately 15m tonnes of standard rate waste were landfilled, of which some 8m tonnes were household waste. About 13m tonnes of household waste were recycled and about 7m tonnes incinerated. This suggests that around 7m tonnes of C&I waste were landfilled, but statistics are not available on C&I disposal routes.

In England, the collection of waste is understood to be split approximately 50:50 between council operations and waste management companies through contracted services to local authorities. A contract is typically seven years which equates to the normal life of a refuse collection vehicle, and normally includes collection of waste and recyclables under KPIs related to service quality and recycling rates. The contract will be for an agreed price with supplementary prices for additional services, but there is generally little flexibility in the core collection pricing.

Local residents are charged through their council tax, but regardless of the level of recycling or the amount of waste produced, councils in the UK do not provide any cost incentive to householders for waste separation. Disposal authorities have the power to direct collection authorities where to take collected waste, but it is understood that collection authorities have increasingly made their own contracts with MRF operators and have retained the revenue generally available for collected recyclables.

Competition has been fierce for these contracts to fill MRF capacity, and waste management companies have therefore often entered into long term contracts on a fixed gate value basis, taking the risk on commodity prices for the period of the contract. In these cases, the local authority is shielded from negative price fluctuations but does not get the benefit of rising material values or high PRN prices.

Unitary authorities often have PFI contracts in place where the contractor provides not only the collection services, but also the disposal routes and treatment infrastructure. Again, the nature of

these contracts has generally led to a low-risk position for the councils, with the risk of commodity and PRN volatility lying with the waste management contractor.

A proportion of collection authorities in England and all collection authorities in Wales, Scotland and Northern Ireland continue to utilise in-house Direct Labour Organisation (DLO) services. This often provides more flexibility, but risk will then generally lie with the council unless it offsets those risks through fixed material prices.

2.7 Management of commercial and industrial waste (C&I)

For C&I waste, the vast majority of collection is carried out by the private waste management sector. Five companies account for around two-thirds of the core private sector waste management market (including local authority contracts), but the remainder of the market is extremely fragmented, with increasingly blurred lines between the traditional waste collection and disposal industry and the recycling industry and also between operational and non-operational waste management companies. Brokerage is now much more prevalent in the C&I sector, with not only dedicated brokers, but recycling companies, facilities management operators and specialist service contractors offering waste services.

Waste contracts for both household and C&I waste are now often multi-layered, with a range of different contractual positions determining where the risk lies on cost and revenue. To determine the costs to be allocated to producers for the collection, sorting and processing of packaging waste within these complex equations of responsibility would be extremely challenging, especially if the “net cost” should take into account any avoided costs of alternative disposal methods such as landfilling.

2.8 C&I waste collection costs

C&I waste is collected using one of two modes, “compaction mode” where the container is emptied into the collection vehicle body and the waste compacted prior to delivery to the disposal or recycling facility, and “exchange mode” which utilises large containers – skips and roll on-roll off – that are emptied at the disposal point.

Waste management costs are a factor of three key elements: the amount of waste, operational costs and fixed costs. Compaction mode tends to be used for commercial waste from shops, offices and small industrial operations. Cost-efficiency comes from maximising the vehicle capacity in as tight a route density as possible. Producers generating large quantities of recyclable waste have always had their packaging waste collected for recycling as they use exchange modes or baling equipment, but the waste industry has struggled to get much take-up from producers generating low quantities because of the higher costs related to lower route densities that until recently have often led to higher net costs compared to collection for landfill.

The availability of a larger number of MRFs has provided more cost-effective disposal points and crucially, has allowed route density to be increased by making recycling easier for waste producers through the collection of co-mingled dry mixed recyclables (DMR).

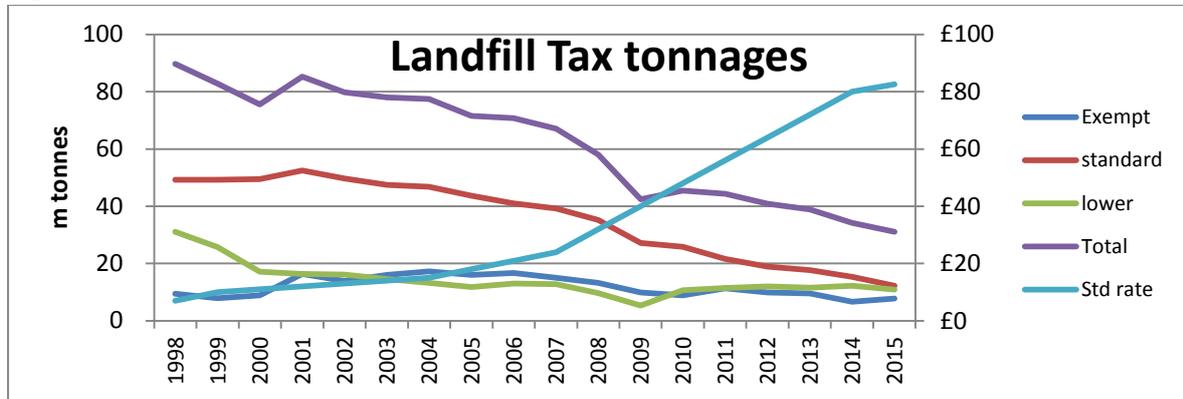
2.9 Landfill Tax

The landfill tax was introduced in 1996 to encourage diversion from landfill. National Insurance contribution changes made at the same time offset the net cost to industry. The tax was initially set at a standard rate of £7 per tonne, which captured most C&I waste, and £2 per tonne for inert waste. The standard rate has been progressively increased and is now £84.40 per tonne. The inert waste tax

remained at £2 per tonne until 2008, and is now £2.65 per tonne. There is also a zero-rated category which exempts specific wastes such as dredging spoil.

Fig. 3 shows the annualised tonnages under each of the three categories in relation to the annual standard rate tax. Chapter 4.1 stresses the influence of the landfill tax in driving recycling in the UK over the last twenty years.

Fig. 3



2.10 Measuring performance

The UK's packaging recycling performance is measured by the data submitted by accredited reprocessors and exporters in relation to the POM (placed-on-the-market) figures used by Defra. There is no mandatory requirement for reprocessors and exporters to apply for accreditation and the costs and administrative burden involved in this means that a significant proportion of recycling is not captured, especially when PRN/PERN prices are low.

Tonnage received for recycling or export by an accredited reprocessor/exporter has to be entered onto an online data system, the National Packaging Waste Database, which is hosted on the Environment Agency's websites. Operators cannot issue PRNs or PERNs to registered compliance schemes or to directly registered producers for material unless it has been recorded in this database.

In 2015, the gap between reported data and the total quantity of packaging placed on the market (POM) was approximately 9%. Fig. 4 below shows the amount reported by obligated companies in relation to Defra's estimate (as reported to the European Commission) of packaging placed on the market. This variation is caused by adjustments to the POM figure such as the reduction of glass in 2014 from 2.7 million to 2.4 million tonnes following recalculations. This enabled Defra to reduce the glass business target to meet the same national percentage recycling rate.

Fig. 4

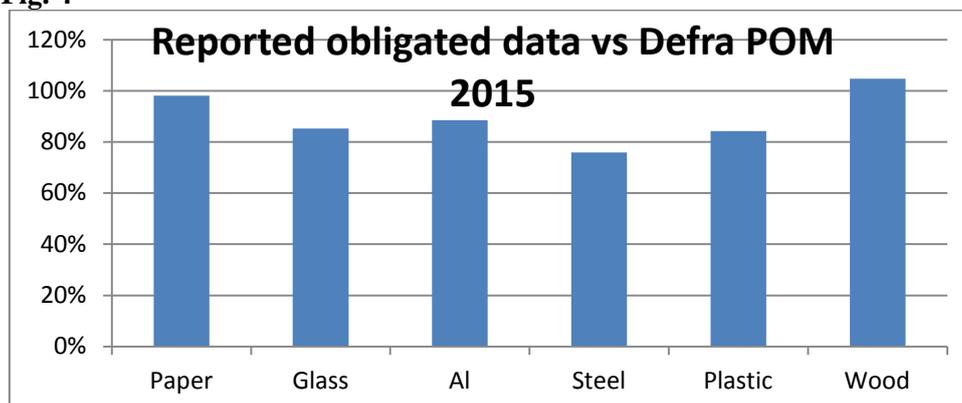


Fig. 5 shows the percentage of packaging reported to have been recovered and recycled, and Fig. 6 the equivalent tonnages:

Fig 5

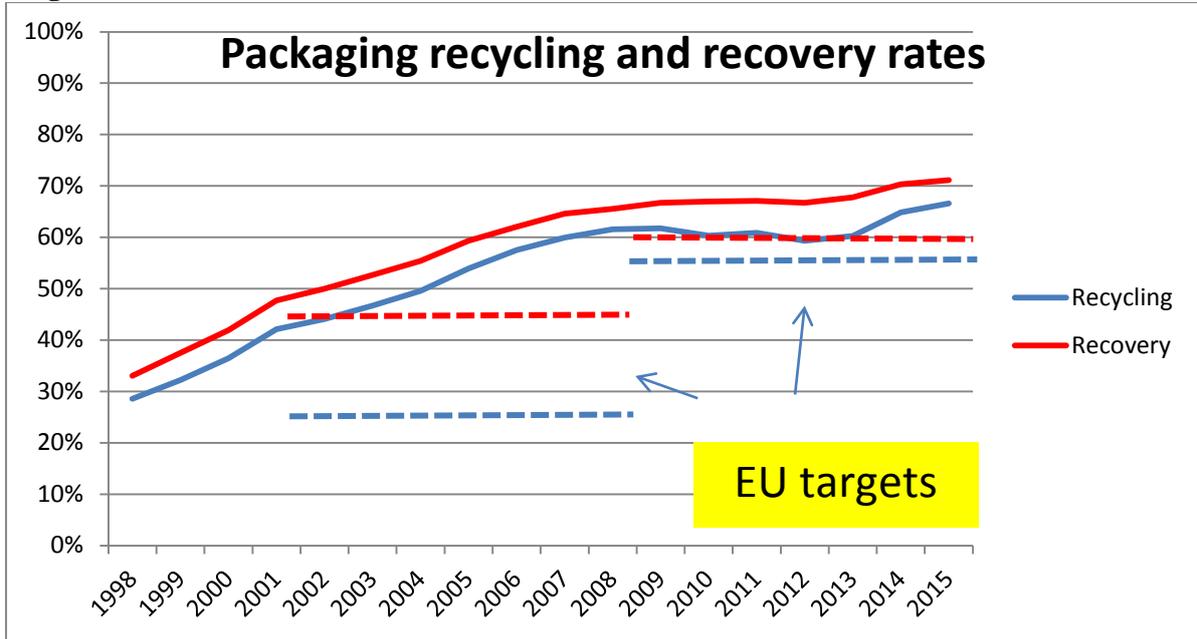
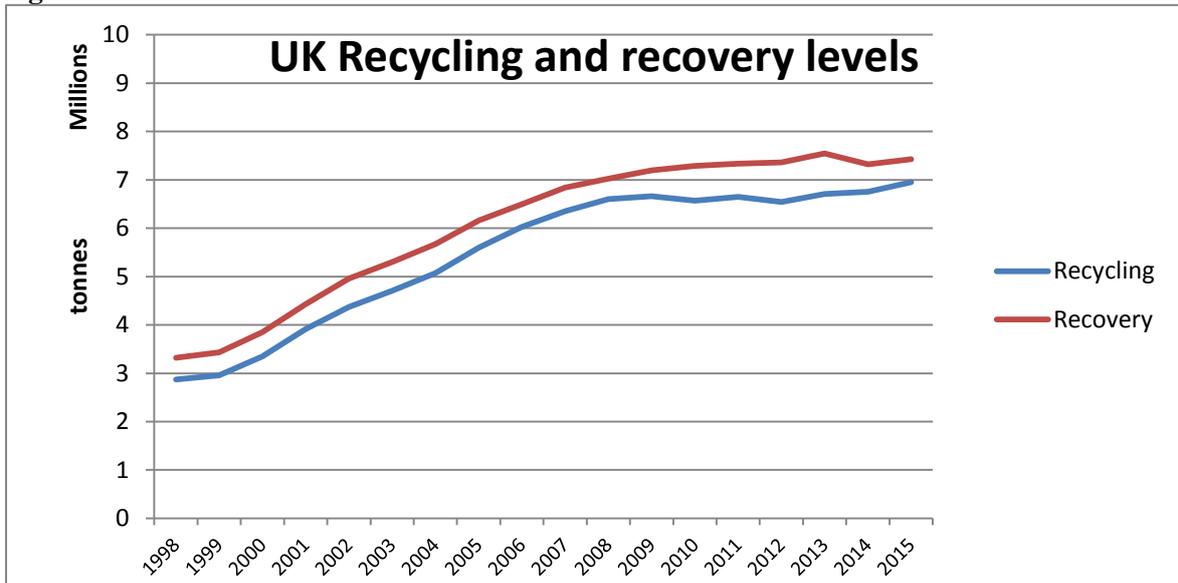


Fig 6



3. VOLATILITY OF PRN/PERN VALUES

PRN/PERN prices fluctuate as they are determined by their availability against demand for them from obligated producers who need them to meet their targets. This arrangement was intended to ensure that if the supply of PRNs/PERNs became tight, their price would rise and more money would enter the system, thereby encouraging more material to be collected or more investment to be made in infrastructure. Conversely, once recycling activity increased to the level needed to meet the targets, the price of PRNs would fall. The aim was to ensure that UK industry could meet the targets at the lowest possible cost, with market forces allocating the necessary funding in the most efficient way.

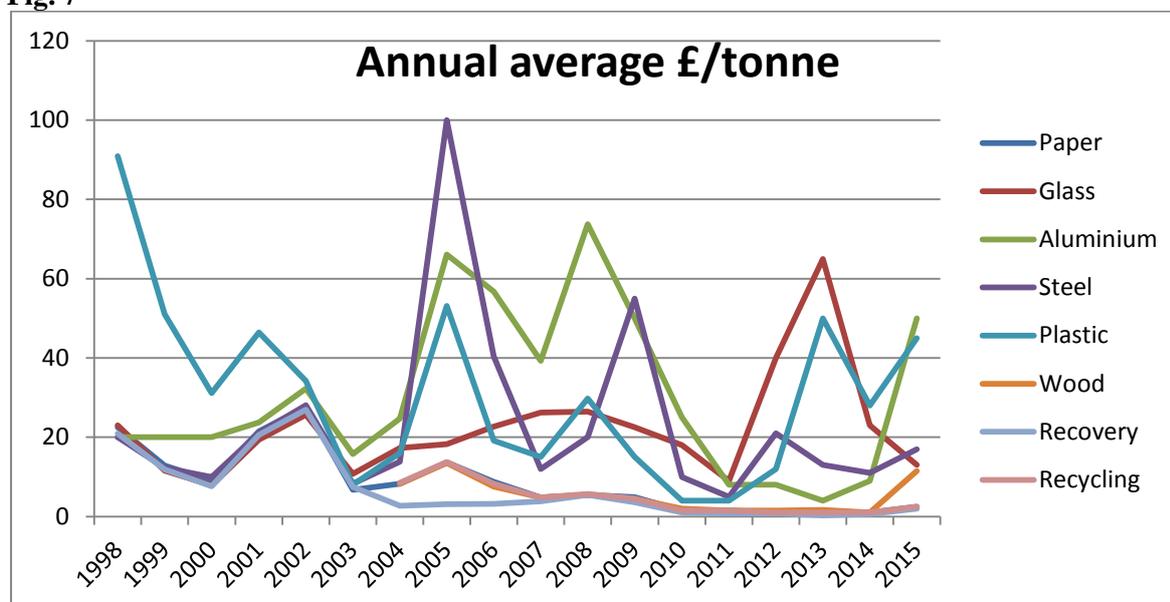
PRN prices respond to a range of influences that are often impossible to predict, even during the year the obligations relate to:

- **Published data.** Recycling data is published quarterly. It shows the tonnages reported by accredited reprocessors and exporters for each material. Obligated data that sets national demand is published in May, but this sees little significant variation year on year.
- **National issues.** Target changes, incidences of fraud, reprocessor closures, local authority budget cuts etc.
- **Carryover.** PRNs/PERNs are valid only for the calendar year in which the material was received by a reprocessor or exporter, except for material received in December. The buyer is free to allocate December PRNs to the following year, if he thinks that prices may increase then. In a year of oversupply, this will lead to a reduction in demand the following year. It could also create problems in the current year – if there is a shortage of PRNs late in the year, and those that are available have already been contracted by operators to obligated parties, forward buying can mean that there are insufficient PRNs available for other obligated parties.
- **Global issues.** Changes in the international market prices of secondary raw materials and oil, and import quality controls such as the Chinese Green Fence.

The larger compliance schemes tend to have supply agreements in place for tonnages, but pricing is generally agreed at the time of purchase and primarily relates to published PRN price indices that include The Environment Exchange trading system and trade news sites such as letsrecycle and MRW which publish prices based on market surveys.

Fig. 7 shows annual fluctuations in PRN prices. Within these ranges there are wider extremes, as in the case of steel, where prices in 2005 rose from £40 per tonne to £200 and fell back to £70, and then in 2006, started at £120 and eventually fell to £2.

Fig. 7



There is no direct correlation between the cost of PRNs and the cost of managing packaging waste. The PRN system is designed as a marginal cost system that adds the necessary financial incentive to facilitate additional recycling when PRN supply seems likely to fall short of target demand. If the targets are met, the price falls to an administrative cost that bears no relation to the cost of collection,

sorting and treatment. This cost applies nationally and takes no account of local conditions that give rise to a wide variation in cost profiles across the UK.

As an example, recycling of paper & board packaging has been well in excess of target requirements for many years, with the result that paper PRNs have rarely risen above £5 per tonne for ten years. Over the last five years, prices have consistently been around £1 per tonne. Commercial paper packaging collection has a net value but household paper packaging collection, sorting and treatment has a net cost that varies significantly between local authorities depending on their nature (urban or rural), collection systems and infrastructure availability.

4. DISCUSSION

4.1 Contribution of the PRN/PERN system to the UK packaging waste management regime

The growth in the amount of packaging collected for recycling has been influenced by a number of factors outside the requirements of the Producer Responsibility Obligations (Packaging Waste) Regulations, primarily:

- local authority recycling targets;
- the landfill tax; and
- corporate environmental drivers.

It is arguable whether the PRN system has been an additional significant factor in the sustainable development of recycling or simply a bridging mechanism that has enabled targets to be met by making short-term subsidies for otherwise uneconomic recycling when natural recycling growth has not been sufficient.

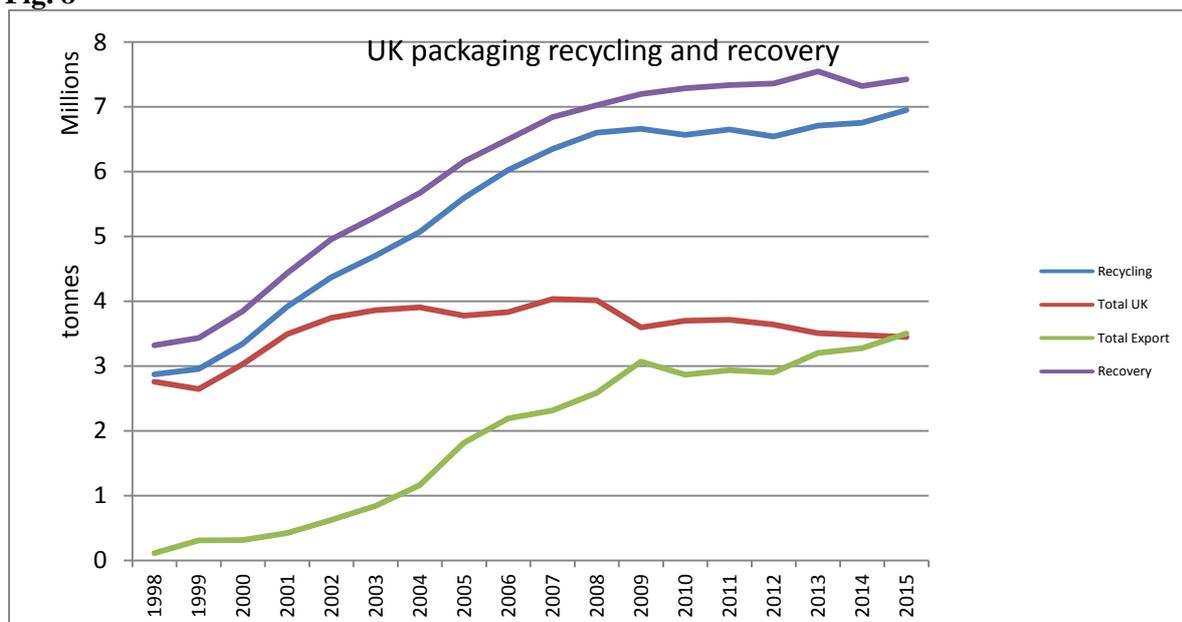
Reprocessors and exporters are required to provide revenue reports showing how they have used PRN/PERN income, and the following table shows the published expenditure in the last three years for which information is publicly available:

	<i>£ million</i>		
	<i>2012</i>	<i>2013</i>	<i>2014</i>
Reduction in price and developing new markets	17.8	34.8	21.2
Infrastructure and capacity	15.9	25.0	19.5
Funding collection of packaging waste	17.4	37.4	17.4
Retained for future investment	8.9	11.9	2.8
Administration	1.6	1.9	2.0
Developing communications strategies	0.6	0.5	0.8
<i>Total</i>	<i>62.2</i>	<i>111.5</i>	<i>63.8</i>

There is no scrutiny or accountability for the use of this revenue in practice. A recent [Guide to the PRN system](#) produced by the Advisory Committee on Packaging (ACP) provides a breakdown of revenue use according to the Revenue Report and provides examples of PRN revenue use, but the volatile nature of PRN/PERN funding gives very little opportunity for planned investment.

Since the volatility of PRN/PERN prices has restricted infrastructure investment, the majority of growth has been achieved through exports. The UK is now reliant on exports for more than 50% of the packaging waste reported as being recycled, as Fig. 8 shows:

Fig. 8



The growth of recycling has been accompanied by increasing concerns about the quality of output materials from sorting facilities (or input material to sorting facilities).³ High PRN prices have eased treatment barriers but have done little to support collection growth. This is illustrated by the glass crisis of 2012, when the targets were met through high-cost processing of poor-quality materials but no increase in collection volumes resulted.

The dependence on export and lack of UK infrastructure means that the UK is now more than ever susceptible to global growth pressures. As demand for poor-quality recyclate diminishes in the slowing Far East economies, it is likely that there will be increased competitive pressure and a reduction in overseas options for UK material.

It is also clear that local authority budget cuts are putting existing recycling schemes at risk and that a perceived lack of benefit from the PRN system is likely to lead to reductions in collected household packaging waste.

This would suggest that while the PRN system could continue to bridge gaps, it will be increasingly difficult to meet rising targets without planning and investment, something the market-based PRN system does not readily lend itself to.

Defra's ability to manage the environmental or cost impacts of the PRN system is limited due to the uncontrolled market-led nature of the outcome. Calls for restraint on PRN pricing or regulatory change to avoid short-term crises have been resisted, and the only changes considered have been adjustments to the targets when Defra has believed that high PRN prices have been caused by inaccurate data.

Targets can be amended to cool an overheated market, but it is not possible to set them to achieve an exact position and this can cause unintended consequences such as the undermining of infrastructure development.

³ It was reported on 23 August 2016 that a BBC Freedom of Information request had [revealed](#) that recyclers rejected 84% more household waste in 2014/15 (338,000 tonnes) than in 2011/12 (184,000 tonnes). This meant that around 3% of the total tonnage delivered was rejected in 2014/15.

For example:

- Realisation in spring 2012 that glass recycling volumes had been heavily exaggerated by fraud led to a sharp rise in glass PRN prices, from £10 per tonne to £80 within three months. Although the 2012 targets were eventually met, it was clear that the business targets were unsustainable without a heavy continued cost to producers. Defra commissioned research into the amount of glass packaging used in the UK and it was found to be significantly lower than the figure on which the business target had been based. The business targets were therefore adjusted downward from 81% to 75% in 2014, which had the effect of reducing PRN demand below existing recycling levels. The PRN then fell to £10 by the end of 2014, which rendered uneconomic some of the high-cost quality improvement processes undertaken.
- In the continued investigation into packaging use, Defra's study on plastic packaging indicated that this too had been significantly over-reported. Fears of an overheating plastic PRN price led to a reduction of the 2016 plastic business target from 52% to 49%.
- The definition of glass recycling has included the use of prepared cullet for aggregate substitution. Government concerns over the zero carbon benefit compared to traditional glass re-melt applications led to the introduction in 2014 of a split glass target that demanded that two-thirds of glass recycling evidence comes from re-melt applications. As the specified percentage split is broadly in line with current practice, there is no evidence that this has led to an increase in the use of glass for re-melt applications. Nevertheless, it has forced the glass recycling chain to utilise glass for re-melt that might otherwise have gone to aggregates.
- In 2015, a change to the protocol rules for aluminium led to a significant potential PRN shortfall due to a lack of accredited reprocessors for aluminium packaging from incinerator bottom ash. Investigation by the aluminium industry found that sufficient material was being recycled, but a large amount of potential tonnage was being lost through non-accreditation. Existing rules would have meant that operators could issue PRNs only on material received following accreditation. Defra agreed to allow backdating to the point of application for accreditation which led to sufficient PRNs being produced to meet the target. This demonstrated that minor interventions can be used to help industry achieve a beneficial outcome for all stakeholders, although the outcome was uncertain for some time.

4.2 The PRN/PERN system as a data management device

The business targets are set on the basis of a combination of data on the tonnage of packaging placed on the market (POM) and the tonnage of recycling reported. Neither of these is particularly dependable, as only the recycling reported by accredited reprocessors and exporters is counted and the POM figure is estimated. The government has to set business targets at rates that will achieve an overall national target. If the reported data are out of line with the actual situation, the business targets will either not achieve the national targets or will not meet the objective of compliance with EU requirements at minimum cost.

Nevertheless, the UK reporting system for packaging data – both for POM and for recycling – appears to be as robust as any in the EU and more robust than some.⁴ *[See Appendix B for a comparison with the data-gathering methodologies in other Member States.]* Although the recycling figure is only what is reported by accredited reprocessors and exporters, it is likely that it represents the vast

⁴ But data accuracy is more important to the correct functioning of the UK system than of the Continental systems, where fees are based on projected cost rather than on a balance between supply and demand.

majority of recycling for most materials. However, data for the proportion of packaging both entering and collected from the household and C&I markets can only be estimated as it is not differentiated in reporting.

5. IS THE PRN/PERN SYSTEM ABLE TO MEET THE CHALLENGES AHEAD?

5.1 Meeting significantly higher targets

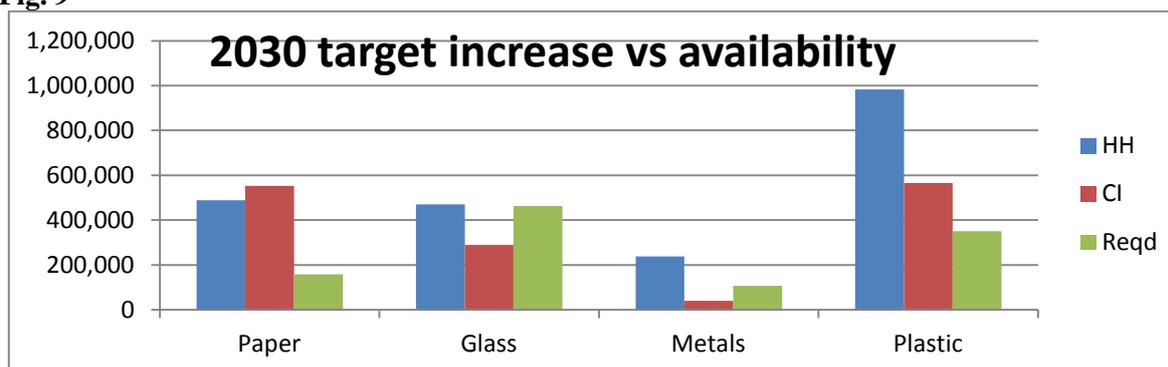
The European Commission has proposed the following increase in the EU targets. It is unlikely that they will be lowered; indeed, key MEPs are calling for higher targets.

All packaging	Current	50% recycling
	2025	65% prepared for re-use or recycled
	2030	75% prepared for re-use or recycled
Plastic	Current	22.5% recycling
	2025	55% prepared for re-use or recycled
	2030	to be reviewed
Metals	Current	50% recycling
Ferrous metal	2025	75% prepared for re-use or recycled
	2030	85% prepared for re-use or recycled
Aluminium	2025	75% prepared for re-use or recycled
	2030	85% prepared for re-use or recycled
Glass	Current	60% recycling
	2025	75% prepared for re-use or recycled
	2030	85% prepared for re-use or recycled
Paper & board	Current	60% recycling
	2025	75% prepared for re-use or recycled
	2030	85% prepared for re-use or recycled
Wood	Current	15% recycling
	2025	60% prepared for re-use or recycled
	2030	75% prepared for re-use or recycled

The meaning of “prepared for re-use” has not yet been clarified, but the Commission has said that its intention is that it should add no more than 5% to recycling rates.

Fig. 9 below indicates the estimated growth required in each material sector to meet the 2030 targets proposed in the Commission’s December 2015 Circular Economy Package, assuming flat packaging use and compared to 2015 recycling levels:

Fig. 9



The current breakdown between household and C&I packaging is estimated to be as follows:

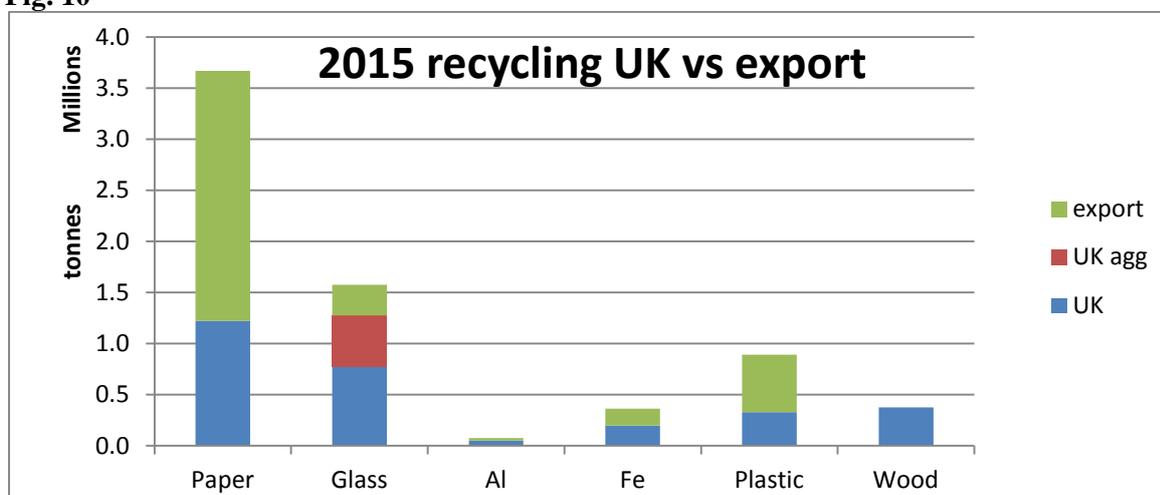
	Total		Collected		Remaining	
	HH	C&I	HH	C&I	HH	C&I
Paper	1,338,150	3,161,850	850,000	2,609,000	488,150	552,850
Glass	1,819,884	579,116	1,350,000	290,000	469,884	289,116
Metals	535,260	203,740	298,000	164,000	237,260	39,740
Plastic	1,533,000	866,000	550,000	300,000	983,000	566,000
Total	5,226,294	4,810,706	3,048,000	3,363,000	2,178,294	1,447,706
Grand total	10,037,000		6,411,000		3,626,000	

This indicates that most growth would have to come from household waste. Given recent flat-lining performance, this would suggest that a fundamental change in the collection model would probably be needed if this is to happen.

The largest % increase is required in plastics, which have the greatest dependence on exports at 63%. Given the requirement for at least a further 350 ktonnes of plastics recycling by 2025 under the Circular Economy proposals and the likelihood that export markets will contract, this is clearly a major challenge.

Fig.10 shows the 2015 split of UK recycling and exports and also highlights the UK's dependence on aggregates to meet the glass recycling target. Under the Circular Economy proposals, aggregates would not be classed as recycling.

Fig. 10



5.2 Reducing the UK's dependence on export markets for recycle

Reducing dependence on exports would require significant investment in UK capacity. Recent capacity closures – steel mills, plastics reprocessors, paper mills – would suggest that this will only occur with sustained investment underpinned by clear government policy. The PRN system will not provide the investment and there has been little sign of any government intervention. And the market-based nature of the UK system means that even if recycling capacity is available, material will be exported for recycling if that is the cheaper option.

As discussed in section 4.1 above, the current system imposes no obligation on reprocessors and exporters receiving PRN revenue to invest in growth. PRN revenues are unaccountable beyond a very

basic breakdown of revenue use, and there is no legal basis on which PRN revenue use can be challenged. Local authorities complain that very little PRN revenue is directed towards supporting the cost of collections. Recycling growth is thus purely a function of economic viability, i.e. it will only happen if those involved benefit from that growth.

Some might argue that the UK's dependence on recycling capacity abroad is not a problem. As the UK is a net importer of products, it makes more environmental and economic sense to export packaging waste to be recycled into new packaging in the countries where those products are manufactured than to recycle it here and export the output. Investors will not provide funding for recycling capacity in the UK unless there is market demand for the output from recycling plants.

But there is growing awareness in the UK and throughout Europe of the risks of that approach. With potential future barriers to recycling abroad such as the Chinese Green Fence and countries in the Far East collecting more of their own packaging waste for recycling, the UK is likely to be exposed to increasing disposal constraints. As labour costs in those countries increase, the economic benefit of recycling there is diminishing. The rationale for the EU's proposed Circular Economy Package is that recyclable waste is a valuable resource that Europe is not exploiting sufficiently at the moment and that increased recycling in Europe will also create jobs.

5.3 The PRN/PERN system and the proposed new EU EPR requirements

The Commission's December 2015 proposal to amend the WFD includes an entirely new Article 8a which, if adopted and if the UK remains in the Single Market, would be impossible to meet under the existing PRN/PERN system.

Article 8a says that member states shall ensure that any organisation set up to implement producers' EPR obligations

- defines clearly the roles and responsibilities of all public and private sector players *[in the UK the local authorities currently have no formal role in EPR];*
- defines measurable waste management targets, in line with the waste hierarchy;
- establishes a reporting system;
- ensures equal treatment of all producers, including SMEs *[this is designed to prevent shareholders in a compliance scheme from arranging more favourable terms for themselves than for other participants in the scheme – an issue in at least one Member State – and allowing large companies to negotiate discounts from the fees charged to others. It is not clear whether it would also rule out de minimis exemptions for small companies];* and
- ensures that waste holders are informed about collection systems and the prevention of littering *[this could be done by extending sellers' current consumer information obligation to include an anti-littering message].*

Also, member states shall

- take measures to create incentives for waste holders to take part in the separate collection systems in place, "notably through economic incentives or regulations, when appropriate";

- ensure that EPR compliance schemes have a clearly defined geographical, product and material coverage; have the necessary operational and financial capacity; have an adequate self-control mechanism supported by regular independent audits; and make publicly available information about their ownership and membership, the financial contributions paid by producers, and the selection procedure for waste management operators;
- ensure that producers' contributions cover the entire cost of managing the waste from their products, including net cost of separate collection, sorting and related treatment operations necessary to meet the targets, taking account of revenues from reuse or sale of secondary materials; the costs of providing information to waste holders; the cost of data gathering and reporting; are “modulated on the basis of real end-of-life costs” of individual products or product groups, taking into account their reusability and recyclability; and are based on the optimised cost of services where operations are carried out by the public sector;
- establish an adequate monitoring and enforcement framework, including an independent authority to oversee the implementation of EPR obligations where multiple compliance organisations are operating; and
- establish a platform to ensure regular dialogue between all public and private sector players.

*In its current form, the PRN system does not satisfy all of these proposed requirements. In particular, producers' contributions do not cover the entire net cost of separate collection, sorting and related treatment operations necessary to meet the targets. The PRN/PERN system does **not** directly cover the cost of collection, sorting and treatment sufficient to meet the targets even though it **may** cover the entire cost of **some** material at certain PRN value levels.*

5.4 Criteria for improving the PRN/PERN system

If the UK packaging waste management regime is to be reformed, any new system should try to address the following criticisms which have been made:

- The PRN system has enabled the UK to meet targets at a marginal cost, as producers primarily pay the added cost of doing more rather than the current costs (or share of the costs) of managing packaging waste. However, while producers have benefitted from low compliance costs they have also suffered from the excessive volatility of those costs, which prevents accurate budgeting.
- The voluntary nature of reprocessor and exporter accreditation distorts the UK's recycling data and adds to the volatility of PRN/PERN prices.
- Obligated companies and schemes' freedom to meet their targets at the same cost whether the material is sourced from households or C&I and whether it is recycled in the UK or abroad means that the system will always choose the lowest-cost short-term solution. This has favoured collection of C&I waste and export for recycling, as the unpredictable nature of PRN revenue has hindered investment in higher-cost collection systems and UK infrastructure.
- The approach whereby schemes need do no more than purchase PRNs/PERNs promotes the existence of a large number of compliance schemes competing for members, and therefore fierce competition on price. The nature of the system and strong price competition in turn limit schemes' involvement in the physical collection of packaging waste.
- Oversupply can reduce PRN prices to a level that is simply related to administration costs and removes the benefit of continued accreditation to a reprocessor or exporter.

- The complexity of the system sees little significant movement of producers between schemes. This, combined with a lack of transparency on how PRN/PERN revenues are spent, encourages producers to see the Regulations as a tax rather than as an environmental driver.
- Meanwhile reprocessors' and exporters' lack of accountability means that PRN revenue is simply seen as a commercial tool rather than a tool for growth.
- While a modest increase in the targets would be achievable with the current system, it is highly unlikely that it could provide the investment needed to achieve the recycling rates already being attained in the "front-running" Member States and which will be demanded of all countries which are part of the European Single Market if the Commission's current Circular Economy proposals are adopted in the UK.

The aim of any changes to the current UK Packaging Regulations would be to ensure that

- whatever recycling targets are set by legislation, can be met;
- the reprocessing of packaging waste takes place in the UK to the maximum extent that is economically and environmentally feasible; and
- the overall costs of the UK's packaging collection and recycling system are minimised.

6. OPTIONS

Below is a discussion of possible systems that the UK could adopt to replace the PRN system in full or in part. We examined the producer responsibility models currently in use in the UK for WEEE and batteries, and some of those for packaging waste elsewhere in Europe [*these are discussed in greater detail in Appendices B and D*].

The WEEE and batteries models would be difficult to apply to packaging because the EU legal framework is different and because of intrinsic differences in the way that these items are collected from consumers.⁵ And we could not identify a single existing packaging EPR model that could be simply applied to replace the PRN/PERN system. This is because:

- When the packaging systems elsewhere in Europe were set up, segregated collection of waste from households was in its infancy and had to be established to meet legal requirements. Compliance schemes therefore either directly operated segregated collection themselves or they funded or incentivised local authorities to do so. The operation of segregated collection from households is the main focus of most Continental systems and represents a large proportion of their expenditure.

[Segregated collection is already well-established in the UK, so a new system would not need to kickstart collection. The focus of a new system would be more on developing what is already in place and promoting good practice.]

- The systems for household packaging waste in several countries continue to operate as monopolies.

[Competing systems already operate in the UK and some would wish to continue to operate in whatever new regime is in place. In general, the UK competition authorities have tended to

⁵ Chapter 8.1 discusses this in more detail.

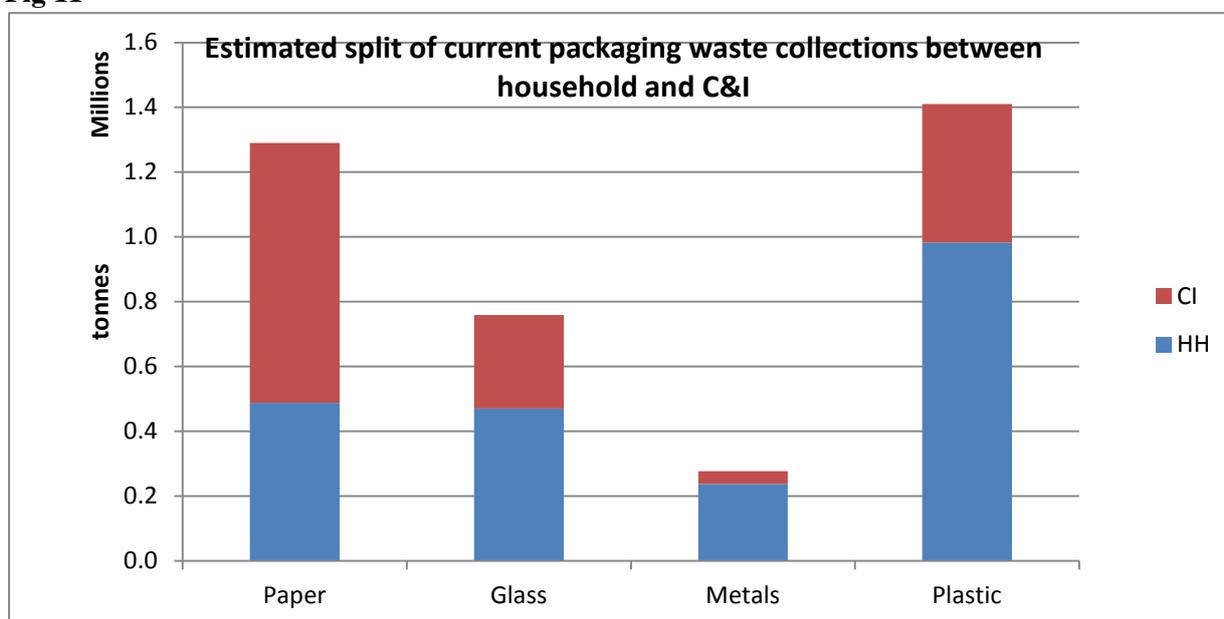
oppose monopolies more than their counterparts elsewhere, but in any case the trend in Europe is also towards competing systems, with some existing monopolies being opened up to competition.]

- National EPR legislation in most Member States requires the main focus to be on household packaging waste rather than on packaging waste in the C&I waste stream. This was mainly a political choice, because household packaging waste is visible to consumers (who are also local taxpayers and voters), although policy-makers also acknowledged that more effort and funding was needed for consumer packaging. In some countries, such as Germany and Belgium, the legislation requires compliance schemes to operate and fund segregated collection for all household packaging, not only to the extent necessary to meet the targets.

[The current UK system does not differentiate between packaging waste from households and from C&I sources. The PRN market mechanism aims to meet the targets using the material that is cheapest to collect and recycle, and this is generally from the C&I stream.]

It is estimated that excluding wood, the UK split is approximately 54% household and 46% C&I, although this varies widely between materials.

Fig 11



Thus we believe that developing a new packaging waste regime for the UK would present a unique challenge. Since no two European systems are alike, the best way the UK could benefit from European experience would be to mix and match individual elements of different systems.

The following possible models are set out not in any order of preference, but starting with the one that is closest to the current PRN system and ending with the one least like it. In the first model, as now, it would be possible to use the cheapest packaging waste available to meet specific targets and in the final option compliance schemes would be responsible for managing the collection, sorting and related treatment operations for all household packaging waste.

The way that the models operate elsewhere is set out below, together with an assessment of the implications for the UK of introducing them. However, none of the options set out is likely to be adopted in the UK exactly as described. Several countries have systems that were modelled on existing systems in neighbouring countries but as stakeholders negotiated them, they evolved to take account of legal requirements, arrangements already in place, the positions of stakeholders etc. We

would expect that if the models below are given further consideration, they too would evolve during the negotiation process.

It is important to note that producers in the packaging supply chain, who bear the obligations for meeting the targets, rightly stress that there should be a direct relationship between the level of funding of the system and the level of control over how it operates. If producers are expected to bear the full cost of the system, they should be able to design it – as in Belgium and Sweden.

It is not yet certain whether the UK will have to transpose the revised Packaging and Packaging Waste Directive, nor whether its proposed new requirement that producers would have to fund the full cost of collection *sufficient to meet the targets* will be adopted. If the UK does have to implement a regime where producers pay the full cost, some of the options below may have to be amended.

If any of the options below (or variations of them) were to be adopted, the existing Producer Responsibility (Packaging) Regulations would need to be radically revised. It is assumed that a single regime, whatever that may be, will continue to apply throughout Great Britain (and preferably throughout the UK), with a single set of regulations, even though waste management policy is now the responsibility of the individual devolved administrations.

We propose that whatever the operating regime in future, the approval and monitoring procedures for both schemes and individual compliers should be adjusted. We recommend that to ensure stability and continuity, schemes are approved for periods of five years (as in most European countries) to address the short-term thinking that has beset the current system.

Option 1

PRNs would continue to serve as evidence of recycling, but as in the UK's WEEE system, they would be the funding mechanism for collectors and their agents (MRFs, processors) rather than for reprocessors and exporters.

PRNs and PERNs would be issued to collectors or their agents by accredited reprocessors and exporters when qualifying material is delivered to them. Compliance schemes would contract with *collectors of packaging waste* for the PRNs they need to meet the targets. The flow of packaging waste and PRN/PERNs would be recorded on the National Packaging Waste Database. Suppliers of packaging waste to accredited reprocessors and exporters would hold an account into which PRN/PERNs for delivered qualifying material would be placed. These suppliers would then allocate the PRN/PERN to the contracted compliance scheme subject to payment.

Accredited reprocessors and exporters would not sell PRNs for a market price, but would be paid a fee per tonne to cover their administrative costs. All reprocessors with the necessary operating licences would be automatically accredited and subject to Agency auditing as part of their Environmental Permit. This would need an amendment to the Permitting/Waste Management licensing legislation. At present, only UK reprocessors can obtain a permit. To ensure that exporters become accredited, there should also be an administration fee for issuing PERNs. However, the key incentive for accreditation would be that collectors would require accreditation of the exporter as a condition of supply to ensure that they were able to get the PERNs. The administration fee would be paid by whoever supplies the material, i.e. the waste collectors, MRFs or processors.

Compliance schemes' obligations would continue to be the sum of their members' obligations. The schemes would contract with collectors or their agents (MRFs and processors) and pay the collectors when the PRNs are handed over to them. The price paid by the schemes would be determined by market forces, but as these would be based on contracts rather than the spot market, we would expect that as with WEEE, the price would relate more to collection, sorting and processing costs than to a market price based on supply and demand. Contracted collectors could be waste management

companies, local authorities or voluntary organisations who collect and sort household and/or C&I packaging waste.

As the schemes would be obligated only to the level of the targets, some PRNs might remain unsold in which case, they would simply be recorded on the National Packaging Waste Database. The collectors would not gain the additional PRN benefit but would usually still benefit from the income from selling the materials. That reprocessing activity should nonetheless count towards the UK's national targets as, if all reprocessors are accredited, it would be recorded. However, if not funded by producers it would not count towards producers' achievement of those targets.

Individual compliance would still be permitted but individual compliers, like schemes, would be subject to more robust approval requirements than at present. As the obligation would be to purchase PRNs, some producers can be expected to opt for individual compliance, as in the current regime. In principle, there would seem to be no reason why individual compliers should not be able to buy PRNs on the open market as now. However, it is open to discussion as to whether individual compliers should also be approved for periods of 5 years, like the schemes, or whether annual approvals would be needed to ensure effective compliance.

Assessment:

This option has the benefit of being close to the current PRN arrangement while ensuring that funding would be targeted at collection, sorting and processing, which is acknowledged as a weakness of the current arrangement.

It would not directly address the lack of funding in UK reprocessing infrastructure, but if schemes are approved for five years, they are likely to enter into longer term contracts for a proportion of their obligations and collectors would in turn enter into longer-term relationships with reprocessors.

Unless new regulations require producers to fund operating costs or a large proportion of them, compliance schemes would be free to buy the cheapest available evidence notes, which are likely to be those for C&I packaging waste. Even if collectors had contracts with UK reprocessors for some material, they would probably continue to rely on exports to a certain extent. Nevertheless, we believe that by encouraging longer-term contracts this system would result in more investment in infrastructure.

Allowing prices to be determined by market forces could lead to similar volatility to the current system. This is especially likely if PRNs are traded through brokers and trading floors on a spot basis. However, the WEEE and Batteries Regulations have demonstrated that where responsibility for collection is placed on producers, costs have tended to be more stable and we believe it is likely that a requirement for contractual relationships to be demonstrated for the supply of evidence should ensure more price certainty and stability.

Segregated collection from households would continue regardless, based on existing contracts with waste management companies and because it is a legal requirement that local authorities provide it. Contracts between the local authorities and their collection, sorting and processing suppliers would clearly have to be amended to take account of the additional revenue that would be made available through the purchase of evidence, and there could be a requirement for greater transparency.

Segregated collection from large business end-users would also continue because the current drivers—landfill tax, environmental improvement etc – would still be in play. We recognise that those collecting small volumes would be less likely to access the PRN system, especially if they were collecting material not needed to meet the targets. This could potentially lead to some material not gaining producer funding. Indeed, this issue has had to be faced under the current WEEE system. But given that producer funding is only supposed to pay the net cost of collection, sorting and

processing sufficient to meet the targets and that the material would still have its intrinsic value, we do not expect that small collectors – who would only be collecting what is commercially viable – would be adversely affected.

Option 2

As above, but with targets split between packaging waste from household and C&I.

This would require schemes to acquire PRNs to cover the total recycling obligation, of which $x\%$ would have to be household PRNs in relation to waste collected from households under local authority responsibilities.

The UK defines “waste from households” to include waste from regular household collections, civic amenity sites, bulky waste and other household waste. Waste from street cleaning and separately collected healthcare waste are excluded.

This is different from practice elsewhere in Europe, where “waste similar to household waste” falls into the municipal waste category. This includes packaging waste from pubs and clubs, cafes and restaurants, canteens and leisure facilities. Demarcation between “similar to household” and non-household is always difficult, but Austria has issued detailed rules which define “household and similar to household packaging” by its size (e.g. area of less than 1.5m² or capacity of less than 5 litres), type and by the type of site where it becomes waste.

The definition of “municipal waste” in the Commission’s proposed amendment to the WFD includes “mixed waste and separately collected waste from other sources that is comparable to household waste in nature, composition and quantity” as well as mixed waste and separately collected waste from households, bulky waste and garden waste. It also includes market cleansing waste and waste from street cleaning services, including street sweepings, the content of litter containers, and waste from park and garden maintenance.

Chapter 7.3 discusses in more depth how the demarcation between household and C&I packaging waste is addressed in other Member States.

Assessment:

As above, except that the arrangement would ensure that the reprocessing of household packaging waste was supported.

The UK does not currently have accurate data for household and commercial packaging waste because this has not been needed up to now. Targets could be set based on estimates initially and adjusted once work has been undertaken to determine the split more accurately.

Alternatively, a transitional arrangement could be used such as in Poland. Poland is currently undergoing a transition from a system where compliance schemes were unregulated to one designed to ensure that household packaging waste is recycled. Because the data were insufficient to set separate targets for C&I and household packaging, compliance schemes are required during a transitional phase to meet a proportion of their targets using household packaging waste. These proportions are gradually increasing each year between 2014 and 2020: 32% of their overall targets using household material in 2014, 38% in 2016 and 50% by 2020. It is planned to set separate targets for household and C&I packaging waste to take effect after 2020, by which time accurate data should be available.

Option 3

In this option, compliance schemes would be more directly involved in operational aspects. If the UK sets separate targets for household and commercial packaging waste, we would expect the same compliance organisations to ensure compliance for both streams. However, if schemes were more directly involved in operational aspects, their activities would not necessarily be the same for both streams. In this option, a distinction is made between the system for household packaging waste and the system for C&I packaging waste.

Option 3a - household packaging waste

For household packaging waste, compliance schemes would contract directly with local authorities for collected materials, even where segregated collection is undertaken by a private collector appointed by the local authority. Schemes would fund a proportion of the collection cost, with conditions relating to the quality of the collected material.

This has always been the arrangement in France and Spain, although it operates differently in each of these countries. An arrangement along these lines has just been introduced in Slovakia where, like the UK, several compliance schemes compete and previously there was no particular obligation to support household packaging waste.

France and Spain:

In both countries, compliance schemes originally paid the “additional cost” of collection, i.e. the difference between basic collection and segregated collection.⁶ The schemes pay the local authorities per tonne for material delivered for recycling (or recovery), but only if the material meets a quality specification agreed with reprocessors.

There is also a “take-back guarantee”, whereby the scheme undertakes to take all packaging waste collected by a local authority. Local authorities receive the market price for the material that meets the quality specification, but if the market price falls below zero, the councils pass their material over free of charge (i.e. the minimum price is zero). Local authorities can choose whether they take advantage of this guarantee, or whether they (or their contractor) pass the material to a reprocessor. This was put in place when these systems were established in the 1990s because the fluctuating price of secondary raw materials was a barrier to the development of segregated collection by local authorities. In practice most local authorities take advantage of this guarantee, so the schemes also have a role in passing materials to recyclers.

France currently has a monopoly compliance system for household packaging waste, Eco-Emballages. The scheme’s operational arrangements are set out in great detail in a framework agreement negotiated between producers, local government and reprocessors, so terms and conditions are identical nationwide. Each agreement is valid for five years, the term of each approval granted to Eco-Emballages⁷. The agreement sets out the amounts of funding paid for collection per tonne of material, quality specifications etc.

However, each local authority in France is free to make its own arrangements for segregated collection and sorting. As a result, there is a wide variation in arrangements.

⁶ The rationale was that local authorities were already required to provide a basic collection service.

⁷ A second scheme, Adelphe, originally operated only for glass while Eco-Emballages handled the other materials. Adelphe’s scope expanded in 1997 to handle all materials, but it was required to operate on identical terms to Eco-Emballages. The organisations merged their operations in 2005.

A second scheme has now expressed interest in operating in competition with Eco-Emballages. The French authorities are currently considering whether the regime should be opened up to competition and how competing schemes would operate.

In Spain there is effectively a monopoly system as two schemes operate in parallel rather than in competition: Ecoembes handles all materials except glass and Ecovidrio handles only glass. In Spain's devolved governmental arrangement, the systems originally had to be approved separately by each region (autonomous community), and in some places there are separate agreements with individual local authorities.

Ecoembes pays for segregated collection, transport, sorting and communications against evidence of tonnes delivered for recycling and activities undertaken. The rates of payment are not standardised but are negotiated separately in each agreement. Other terms and conditions are also negotiated for each agreement, often based on a model contract prepared jointly by Ecoembes and the Federation of Spanish Municipalities and Provinces. Collection arrangements are fairly standardised, mainly through bring containers. There is a dense network of containers throughout Spain, with identical material categories, banks identified with the same symbols and the same colours for each material.⁸ Ecoembes also supports the kerbside collection of board organised by the municipalities from small commercial end-users (bars, independent retailers etc).

Although the regulations in France and Spain do not require the schemes to support segregated collection nationwide, both Eco-Emballages and Ecoembes report that around 99% of the respective national population has access to segregated collection.

Slovakia:

Slovakia has had EPR requirements for packaging since 2003, and several compliance schemes operate. However until updated legislation was adopted in 2015, there was no approval procedure for compliance schemes. Although legislation required them to collect a proportion of household packaging waste, this was not enforced. Only one scheme contracted for household packaging with local authorities, whereas the others contracted with the collectors.

The new legislation establishes new household packaging waste management provisions. Schemes must meet a proportion of the target with household packaging waste and they must contract with local authorities and not with the collectors. They are also required to take a share of all the packaging waste collected, based on their market share (tonnage of packaging waste participating).

The new legislation says that producers are required to fund the full net cost of collection, sorting and treatment. However, implementing legislation says that they must fund "normal" costs and there is a formula for calculating this. They are not required to pay for poorly sorted material. As a condition of its approval, each scheme is required to contract with a sufficient number of local authorities to meet its targets. Contracts must be for a minimum of one year and each municipality signs a contract for all materials with only one scheme. Schemes pay the collection contractors appointed by the municipalities.

To ensure that all local authorities have a contract with a compliance scheme, the legislation provides for a co-ordination centre to be established. If a local authority has not found a collection partner, the centre will allocate one by drawing lots. It will also redistribute waste collected through any system in excess of its targets, mediate in disputes etc.

The new requirements only took effect this year, so it is too early to assess their effectiveness.

⁸ Green for glass, blue for paper and yellow for the "lightweight fraction" - metals, plastics and beverage cartons.

Assessment:

- *The nature of the obligations on producers would have to be revised if Option 3a were introduced, as would the obligations on schemes.*
- *None of the above arrangements could be adopted in its entirety by the UK for packaging waste. We would not have a monopoly scheme as in France and Spain. Slovakia still needs a significant increase in segregated collection of packaging waste from households and some of the new requirements are designed to deliver that.*
- *However, an arrangement whereby schemes directly contract with local authorities to support segregated collection would greatly increase the transparency of the UK system. Local authorities would see clearly what financial contribution producers are making to collection (even if the money is paid to the contractor). Producers would also see more clearly how their fees are being spent, including on improving the quality of collected materials to facilitate recycling, even though this model is likely to result in producers paying higher compliance costs than they do now.*
- *Each scheme would negotiate terms and conditions with individual local authorities, as in Spain and Slovakia. Collection arrangements are more standardised in Spain than in France, perhaps because Ecoembes has been able to influence the design of the collection system during the negotiation process, whereas Eco-Emballages has to offer the same terms to all local authorities, as set out in a single, centrally negotiated agreement.⁹ As segregated collection is already well-established in the UK, it is unlikely that collection arrangements would be fully standardised if an arrangement along the lines set out above was introduced. But such an arrangement could help to reduce the wide variation in collection, which has been acknowledged to be a problem, as the schemes could steer the design of collection arrangements through the process of negotiating with local authorities.*
- *If the UK is not required to transpose the EU's proposed new EPR requirements, it would be a political decision for the UK authorities whether each scheme would be allowed to contract with only the number of local authorities it needs to access sufficient packaging waste to meet its targets, or whether, as in Slovakia (and for WEEE in the UK), all authorities must have a contract. But if UK policy-makers decide that all areas should be supported by EPR, then a co-ordination centre along similar lines to Slovakia could be considered for matching authorities and schemes. The local authorities most likely to be left without a contract and support would be those with high costs, such as those in remote locations and those generating poor quality materials and unwilling to adapt their current collection and sorting arrangements to meet the compliance schemes' quality specifications.*

In Slovakia, the role of the co-ordination centre also includes allocating any imbalances in tonnages between schemes that have more tonnes than they need and schemes with a shortfall. A co-ordination centre could also fulfil that role in the UK, or alternatively schemes could simply trade any tonnage imbalances between themselves. A co-ordination centre might be needed in any

⁹ In France, sorting is also managed by the local authorities. As local authorities are keen to have sorting facilities, this aspect of the system has resulted in a large number of small, inefficient sorting plants. By contrast, Ecoembes in Spain tenders for sorting services and has promoted the development of large, mechanised sorting plants. (There are now 228 sorting plants in France, most of which cannot handle mixed plastics, which Eco-Emballages is trying to include in its system. In comparison, there were 95 sorting plants in Spain in 2012, of which 47 were automated.) Ecoembes also offers training for sorting plant staff to help them identify different materials more accurately

event to resolve issues arising.¹⁰ Depending on its role, it could be managed by the Agencies or it could be an independent organisation jointly funded by all the schemes.

- *Direct contracts between schemes and local authorities combined with the principle that producers pay only for collected packaging material that meets quality standards would help to improve the quality of materials from local authority collections. In France there are nationally agreed quality standards, but as the requirements of each reprocessor may be different, it might be preferable for each reprocessor to set its own in the UK regime, or else each scheme could agree standard terms. Schemes could also promote an improvement in quality through the structure of their financial support.*

However, quality improvements may not emerge for some time if local authorities retain their existing collection arrangements until their contracts expire. Local authorities may also be unhappy at the low levels of financial support they receive from schemes if their materials are of poor quality.

- *The take-back guarantee offered in France and Spain would not be necessary because most UK local authorities manage the risk of fluctuating commodity prices through their contracts with collectors. The extent of the schemes' influence on where material is recycled would therefore vary, depending on whether the local authority or the contractor currently decides on recycling arrangements, and what contractual arrangements are already in place with recyclers/exporters.*
- *Even if revised regulations still permitted individual compliance, producers would generally comply through a scheme, as it is not practicable for most producers to operate this type of arrangement individually.*
- *The French decree does not specify how compliance schemes should operate. These requirements are set out in considerable detail in each approval granted to Eco-Emballages – in effect its business plan for the period. French legislation also has general requirements for all EPR compliance schemes, which also apply to those for WEEE, batteries etc. These include that the systems must be not-for-profit, that their fees must take account of the recyclability of the product (i.e. the packaging) and prevention, and that their role includes communications.*

Slovakia's new obligations on schemes include that they must report annually on their activities, indicating which municipalities they have contracts with. They are approved for periods of 5 years. They must meet a proportion of their targets with municipal packaging waste, and the legislation contains provisions for calculating this. As competing schemes were already in operation, the legislation also provides for this.

Option 3b - commercial/industrial packaging waste

The role of compliance schemes is smaller for C&I waste than for the household stream because arrangements are already in place for a proportion of this material, and as costs are lower because the material tends to be cleaner and arises in larger quantities, the value of the material provides sufficient incentive for segregated collection.

The focus of compliance schemes for C&I material therefore is to encourage more material to be collected and to ensure that activity is accurately recorded. Some possible models:

¹⁰ The Commission's proposed amendment to the WFD (new Article 8a) says that in Member States where multiple organisations implement EPR obligations on behalf of producers, the Member State shall establish an independent authority to oversee the implementation of extended producer responsibility obligations.

- Making arrangements with waste management companies for packaging waste to be accepted at their transfer stations free of charge. This arrangement, which is intended to benefit small end-users, does not include transport between end-user and depot, which is funded by the end-user. Both Sweden and Austria have an arrangement along these lines. In Austria, the end-user receives payment for loads of specific types of material above a minimum quantity that meet an agreed quality specification. This money may offset all or part of the transport cost. ARA has agreed standard terms, including the payments made for certain materials. The compliance schemes support these arrangements from brandholder fees.
- Paying end-users an incentive for sorting packaging waste for recycling. VAL-I-PAC in Belgium has this arrangement. Incentives per container are paid either once per year or per sack of plastic films on condition that the bins/sacks contain a minimum proportion of recyclable packaging waste. For plastic and wood packaging, end-users are also paid a recycling incentive per tonne. End-users receive payment when their waste contractor sends a receipt to VAL-I-PAC. VAL-I-PAC is the only approved scheme for C&I packaging waste in Belgium. It pays all end-users, not only those that participate in VAL-I-PAC (but obligated importers that should be in VAL-I-PAC but are not, do not get paid!).
- Supporting the segregated collection of trade waste (whether by local authorities or private contractors). For example, Ecoembes in Spain supports the segregated collection of board packaging from small city-centre shops, bars etc. This arrangement is intended for end-users that are unlikely to have a contract in place because of their size, so small branches of large retail chains are excluded.

Continental compliance schemes that focus on household packaging waste are now also increasingly expanding their scope to include packaging waste of products consumed away-from-home. Thus they support the collection of packaging waste from city centres, restaurants, leisure sites etc.

In the UK, compliance schemes could also incentivise the segregated collection of C&I packaging waste, or make arrangements similar to those above, or monitor tonnages already being collected. With competing schemes operating, robust auditing procedures would be needed to avoid double counting.

Option 4

Option 4a - household packaging waste

In this option, compliance schemes would take full operational and financial responsibility for the collection of packaging waste from household sources. Schemes would contract with operators to provide a segregated collection service for packaging waste,¹¹ and local authorities would no longer have any operational role in the segregated collection of packaging waste from households. This is the arrangement in Austria, Belgium, Germany and Sweden, where compliance schemes organise the segregated collection of packaging waste. They appoint collectors by competitive tender, they decide on collection arrangements, and then ensure that the material is sorted and recycled. In all these countries EPR legislation also requires segregated collection to operate nationwide.

Local authorities are involved to the extent that they have to give permission to site collection containers on public land and may charge for this. As they usually have the right to collect all household waste, they often also have to approve the collection arrangements on their territory.

¹¹ This would be separate from collection services for non-packaging waste such as residual waste and food waste.

In Germany, the first country to introduce EPR for packaging waste, all household packaging waste is collected through this system regardless of whether it can be recycled or not. In Belgium, only packaging waste that is capable of being recycled (glass, paper & board, and plastic bottles / metal cans / beverage cartons) are collected separately, with other packaging waste still collected by local authorities together with residual waste. Austria originally introduced the German arrangement but in areas close to an energy-from-waste incinerator, only recyclable material is collected separately and other packaging waste is collected with residual waste, as in Belgium. It is then recovered as energy in the local incinerator.

Assessment:

This option is the furthest away from current UK arrangements. The collection arrangements above were developed at a time when little household packaging waste was being collected separately for recycling (some paper banks and bottle banks) and there was no kerbside collection. UK local authorities have already invested in segregated collection facilities and would probably object to compliance schemes taking control of these or even introducing new ones alongside. Many local authorities have long-term contracts with collectors, so new collection contracts for packaging waste could come into effect only as existing municipal contracts expired unless authorities and contractors were willing to renegotiate existing contracts. Thus, this option would involve significant operational disruption and could take a long time to implement.

The German and Austrian compliance schemes described above are responsible for all the packaging waste collected through these systems, which is generally significantly more than is needed to meet the targets, particularly as segregated collection operates in every local authority area. If the UK were to introduce this arrangement, it is unlikely that schemes would be permitted to operate segregated collection only to the extent necessary to meet the targets, as that would mean collecting only in certain local authority areas. That would be unfair to local authorities left out of the system. But UK producers would object to having to pay the full cost of collecting all material handled through the system, which would go beyond the Commission's proposal that producers fund the full cost of meeting the targets.

The German and Austrian systems were established as monopolies so collection arrangements in the country are similar everywhere. Germany and Austria have now opened up their monopoly system to competition, using a complex model in which each scheme shares the collected tonnages based on its market share. It would be difficult to introduce this option in the UK, where local authorities have already established segregated collection and where competing schemes already operate, albeit with a very different role. Existing schemes operated by waste management companies already involved in the segregated collection of household waste would have a clear competitive advantage over schemes operated by producers or other types of operator.

Option 4 would address the lack of transparency for producers as they would know how their fees are being spent, although it would also result in higher compliance costs. Where this option operates elsewhere in Europe, local authorities do not need information about cost as they are no longer responsible for collecting packaging waste. However, if this option were introduced into the UK, local authorities would probably want the schemes to use the existing infrastructure (collection bins and boxes) and would expect to be compensated for this. This would resolve transparency issues from the local authorities' side.

Option 4 is the model most likely to improve the quality of collected materials as the schemes would determine how materials are collected. There could however be some transitional problems, if the collection infrastructure that schemes inherited in some areas does not lend itself to efficient collection and/or good quality.

Option 4 would also address the export of materials for recycling. In this option, schemes would have control over where material is recycled.

Option 4b - commercial/industrial packaging waste

Any of the arrangements discussed in Option 3b could be relevant.

7. OTHER ISSUES TO BE CONSIDERED

7.1 Individual compliance versus compliance through a scheme

In the current UK regime it is relatively easy to comply individually rather than through a scheme. All a producer has to do is buy PRNs/PERNs which are available on-line through a trading platform or, particularly if the producer has a trading relationship with a reprocessor, he can buy PRNs directly from the reprocessor.

If the UK moves to a system where obligated producers are required to become more involved in directly supporting operations, it is likely that many producers that currently comply individually would have to join a scheme.

In this scenario, should participation in a compliance scheme be made mandatory? Evidence from Europe suggests that mandatory participation would not be necessary. Most countries permit producers to comply individually but as it is generally not possible in practice for producers to meet targets, particularly in respect of household packaging waste, producers generally opt to join a scheme.

Germany and Austria made it mandatory to join a scheme when the monopoly scheme for household packaging waste in each country was opened up to competition. In both countries the monopoly system was directly funding and organising segregated collection nationwide when it was opened up to competition so it is very different from the UK system.

Although the French decree offers a choice between participating in an approved compliance scheme and individual compliance, only one producer has ever been approved as an individual complier. It already had a collection arrangement in place when the French regulations were adopted and when its first approval period expired, the company joined Eco-Emballages.

In Spain, participation in a collective scheme for household packaging waste is effectively mandatory as the only alternative permitted is to operate a deposit (for packaging of any product). No producer has chosen this.

Individual compliance is not permitted in Slovakia for packaging waste that is part of municipal waste, but producers are individually responsible for meeting the targets.

For C&I packaging waste, there may be instances of producers being in a position to meet the targets without recourse to a scheme. This could be the case where a producer (seller) is making regular deliveries of specialised products to a relatively small number of business customers (such as speciality chemicals or engineering components). Producers that are also recyclers would also be in a position to comply individually, but other stages in the chain would find it hard to do so.

In any case the UK competition authorities may well object to mandatory participation in a compliance scheme, although both the WEEE and batteries systems require scheme membership for all producers above specific thresholds. However, although the WEEE Regulations require participation in a compliance scheme, single-member schemes are permitted.

If participation in a scheme is not mandatory, we suggest that individual compliers be required to undergo a robust approval procedure. They should have to register with the authorities and submit a plan setting out how they intend to meet their obligations. We would expect that few producers would opt for individual compliance, in particular for household packaging waste.

7.2 Competition versus monopoly schemes

As already discussed, we assume that several compliance schemes will continue to operate in competition when the UK regime is revised. However, if their role is more than purchasing PRNs, they should be regulated more closely than now. This would be necessary both to ensure that the targets are met and to ensure fair competition between them.

At present, there is no accreditation fee for packaging compliance schemes. For WEEE there is an initial application fee of £12,150 but no subsequent annual fee, but for batteries, compliance schemes must pay an application fee of £17,000 and an annual subsistence fee of £90,000. These fees are in addition to the fee that must be paid to the Agencies for each member – which also applies to packaging. The high battery compliance scheme application has had the effect of minimising the number of schemes to 5 compared to 36 WEEE schemes and 31 packaging schemes. The Agencies believe that this ensures a more strategic approach to compliance and more opportunity for investment in collection systems.

The Agencies are currently responsible for enforcement and they will no doubt continue in this role, but if there is a need for greater supervision, this would require either that the role of the Agencies expands or perhaps that a second regulator is established with a different focus. A regulator with experience of supervising market operators could mediate in disputes and ensure that all local authorities have equal access to support.

In other Member States, where compliance schemes have always had more of an operational role than in the UK, they have to undergo a robust approval procedure involving submitting a detailed application setting out how they plan to operate and meet the targets and their funding arrangements. These requirements are generally set out in legislation to ensure that all they apply equally to all schemes. Schemes are also required to submit a detailed annual report and accounts each year to enable the authorities to monitor their progress and identify any problems.

Schemes are typically approved for a period of five years. That is the case both for monopoly schemes and for those in competition. Currently UK schemes are approved from year to year, which we think would be too short if they have an operational role.

Currently producers in the UK can change scheme every reporting year. That is also typical in many European countries. In Germany, producers have been permitted to change scheme every quarter since the system for household packaging waste was opened up to competition. Austria, which has recently adopted a system broadly similar to Germany's, permits producers to change scheme only once per calendar year.

The UK does not currently permit producers to split their obligations between more than one scheme. German producers are free to split their obligations between several schemes, and even the same material can be split. Austrian legislation establishes standard collection categories (by material, with a split between household and C&I) and producers cannot split a collection category between schemes, but they can comply for one category with one scheme and for another category with a different scheme.

Fees charged by schemes in Germany are not regulated, and discounting is common. That means that larger producers tend to pay less per tonne than small producers. Austria on the other hand requires producers to get their fees approved by the authorities, bans discounting and requires schemes to publish their fees on their websites.

Assessment:

Approving schemes for five years but permitting producers to change scheme each reporting year seems a good compromise between ensuring stability in operations and flexibility for producers.

The relaxed approach to competition in Germany has resulted in producers regularly changing schemes to chase a better price, which has resulted in short-term thinking and in the system being deprived of funding. As noted in section 5.3 above, the proposed EU requirements for EPR systems include no discrimination against individual producers. That would rule out individual discounts which tend to discriminate against smaller producers.

The German government has just proposed an amendment to its packaging legislation which would require schemes' fees to incentivise recyclability. This is already a requirement in France, but it is hard to see how effectively this provision could be implemented in a country where there is strong price competition between schemes. It may not even survive in France if a competitor to Eco-Emballages is allowed to enter the market.

If UK schemes in future have separate obligations for household and C&I packaging, some may focus more on one stream and/or on certain materials. The current UK ban on splitting obligations may be too restrictive, particularly as fees may vary significantly between schemes in future. There is an argument for producers being permitted to separate their obligations between categories, but not for splitting a category between schemes.

The UK should also require schemes to charge identical fees to all clients, although of course the tariff may be different for household packaging than for C&I packaging. This could be regulated either by requiring them to publish their fees on their website, or to notify the regulator of their fee scale.

7.3 Demarcation between household and commercial packaging waste

If legal obligations or targets are separate for household packaging waste from those for C&I material, it would be necessary to demarcate between them to ensure that material meets the correct target.

This would also be necessary because the costs of meeting the target for household packaging waste are invariably higher than those for C&I packaging waste. Compliance schemes in other member states that handle both streams almost always charge higher fees for household packaging waste. The higher the proportion of costs paid by producers for household packaging waste, the greater the difference between the two sets of fees, which makes it essential to demarcate clearly.

This is challenging, as the producer who places the packaging or packaged items on the market often does not know where the packaging will become waste. This is the case for example for food and drink that may be consumed at home, on the go, or at work, and for items that may be used either in the home or at the workplace.

There are different ways to tackle this problem:

- In Belgium, where there is one monopoly system for household packaging waste (FOST Plus) and a separate monopoly system for industrial packaging waste (VAL-I-PAC), the enforcement authority has drawn up rules. All transport packaging is considered “industrial” packaging and is

reported to VAL-I-PAC. All grouping packaging is also “industrial” packaging except for multi-packs intended for retail sale (six-packs of drinks etc). For primary packaging, the demarcations are sometimes by product category, so the sales packaging of all televisions is “household” but the packaging of all computers is “industrial”. For other products demarcations are by pack size, so jars of mayonnaise or paint pails etc above a certain size are considered “industrial”. All producers must follow these demarcations even if they know where the packaging will become waste.

- In France, obligations for commercial packaging waste fall on end-users and apply to businesses that generate more than 1100 litres of packaging waste per week and they bear the cost of getting the material collected. However, producers report using demarcations developed by the scheme for household packaging waste, Eco-Emballages. It says that fees must be paid on packaging that typically becomes waste in the home, on packaging of items that may be sold either to households and to businesses such as cash-and-carry (unless the producer has evidence of the proportion sold to businesses), and on packaging of items supplied to resellers. Producers must report to Eco-Emballages, but not pay fees, on packaging of products not consumed in the home if the packaging is identical to that used for household products. Producers should not report on packaging that is exclusively supplied to businesses such as transport packaging, and packaging of products intended for business use.
- In Germany, there are effectively four separate categories:
 - sales packaging of products that become waste in the home is classed as household packaging waste and must participate in a “dual” compliance system;
 - producers whose sales packaging becomes waste on specified sites such as hotels and restaurants, schools, hospitals and cinemas – “private end-users other than households” – are exempt from the obligation to participate in a dual system if their packaging waste is handled through a separate arrangement known as a “branch solution”. These are always cheaper than the dual system and are managed by the same operators alongside their dual system. Each producer must have evidence that his packaging meets the criteria and is handled through a “branch solution”;
 - secondary packaging (such as the plastic film on a multi-pack) is subject to special requirements. Retailers must provide in-store bins for secondary packaging so that consumers can leave it there. Any secondary packaging taken home by consumers becomes sales packaging;
 - transport packaging is packaging that becomes waste on sites falling outside the definition of private end-users (back of store packaging waste, industrial packaging waste).

Austria has a simplified version of the German rules – packaging is either household packaging or commercial packaging. As in Germany, sales packaging arising as waste in hotels and similar sites does not have to participate in a system for household packaging waste, but it is classified as “household packaging” – Austria does not have the intermediate “branch solution” category. Austrian legislation also categorises packaging by size, so packs above a certain size are commercial packaging. To avoid the abuses that have occurred in Germany, an implementing regulation specifies what proportion of packaging by material and sector must be reported as household packaging and what proportion as commercial. All producers must follow the proportions specified in the implementing regulation regardless of their individual situation.

Assessment:

As the UK will have competing schemes, a single set of rules will be needed to ensure that all producers apply the same demarcations. Raw material producers and converters are less likely to know where their packaging will become waste than downstream producers.

We therefore recommend that the demarcations should apply based on the typical situation rather than the individual situation of each producer. An approach similar to that in Belgium and Austria, with demarcations by size and type of pack and by type of product, could be appropriate.

7.4 Consumer Information

As required by EU legislation, the current UK Regulations require producers who are predominantly sellers or, if members of a scheme, their scheme, to satisfy a Consumer Information Obligation. This requires information to be provided to help consumers understand how packaging can be recycled, but with little regulatory definition, it has largely been dealt with at lowest-cost, primarily via web pages.

It is generally accepted that this has done little to raise awareness of packaging recycling, but the Consumer Information Obligation does offer an opportunity to create a more coordinated approach to educating both business and household consumers about the benefits of packaging recycling and issues such as correct separation, avoidance of contamination, etc.

In other Member States, as most producers comply through a scheme, this obligation is in practice fulfilled by the scheme. For the schemes that operate as monopolies, public awareness is a key task, and often expands beyond communications on recycling to more general communications about litter and the sustainability of packaging.

Ensuring public communications is more challenging where competing schemes operate, particularly where they compete aggressively on price. To address this, Poland specifies in its new legislation that individual compliers must spend at least 2% of the net value of the packaging they place on the market on public communications, while each scheme must spend 5% of client revenue on communications. In Estonia, accredited compliance organisations must spend at least 1% of their annual turnover on informing the public about how to return used packaging.

8. SUITABILITY OF OUR MODELS FOR OTHER WASTE STREAMS

We were asked to consider whether the models we put forward would be suitable for other waste streams.

8.1 Aligning other UK EPR regulations to our four options

A comparison between the provisions of our four options and current WEEE and batteries legislation appears as Appendix D.

The extent to which operational responsibilities for WEEE or batteries could be amended in line with our four options is limited by the different requirements of the respective EU directives. In particular, the WEEE Directive forbids evidence trading, though it does allow management of collection to be reassigned to other schemes. These different requirements would rule out direct application of *Options 1 and 2*, but the broad principles would be similar.

Our *Option 3* would involve the packaging compliance schemes' principal relationship being with the local authorities. This would not work for WEEE or batteries, due to intrinsic differences in the way B2C WEEE and packaging waste is collected:

- Very small WEEE could be collected from households or deposited at large retailers' premises, but are more often collected at civic amenity sites, while large WEEE is either taken away when replacement equipment is delivered or else is taken to a civic amenity site. The WEEE Regulations do however permit schemes to collect WEEE from private households.
- Portable batteries may be collected separately from households, but are more often collected at civic amenity sites, often still inside discarded electrical or electronic equipment.
- It is an EU legal requirement that glass, plastic, metal and paper & board waste are collected separately from households. This consists primarily of packaging and non-packaging paper. In all UK jurisdictions, local authorities are responsible for this.

Common rules on EPR systems for any waste stream are under discussion at EU level, and if they are adopted – and if implemented in the UK – they would bring about some convergence. *Option 4* is designed around this.

The UK's EPR systems for WEEE and batteries offer models that are already more closely aligned to the principles of the proposed EU EPR requirements than is the current UK packaging regime. For example, the UK WEEE system applies a direct cost responsibility to producers for household (including "commercial similar to household") waste through producer compliance schemes which are required to manage the collection, treatment and recycling of WEEE from collection points.

However, given the constraints of the WEEE and Batteries Directives and the differences in collection methods, there would seem to be no advantage in amending the WEEE and Batteries Regulations to bring them closer to our Option 4.

We have also considered the converse, incorporating requirements of the WEEE Regulations into revised Packaging Regulations. It is clear that the UK's WEEE model would need to be significantly adapted for packaging. As noted above, local authorities have little operational responsibility for collecting WEEE, whereas packaging waste represents a significant proportion of their existing segregated collection arrangements. Each authority currently makes its own collection arrangements for packaging, so costs and quality of output vary significantly. This would make it difficult to allocate costs and materials fairly between schemes. Collection costs are far higher for packaging than for WEEE and would not be offset by the value of the material to the same extent. Thus unfair allocation of costs or materials would distort competition between schemes more than for WEEE. To ensure that costs were allocated fairly it might be necessary to determine reference collection costs, i.e. what it should cost rather than what it actually costs, to avoid schemes paying for inefficient collection. And it might be necessary to take account of the quality of materials in some way such as by establishing uniform minimum quality standards or by paying less to local authorities for poor quality materials.

For packaging, it would probably be preferable for schemes to contract with local authorities and for any allocation to be undertaken only for tonnages for which no agreement between scheme and local authority is in place.

The WEEE Regulations allow failure to meet targets to be offset through a "compliance fee", which means that the national target may not necessarily be met by physical collections. This is the equivalent of the packaging taxes which many central and eastern European Member States charge for failure to meet the targets laid down by law. The tax is imposed on the difference between the recycling tonnage needed to meet the target and the tonnage actually recycled. The tax needs to be

significantly higher than compliance schemes' fees, or else it becomes an incentive to do nothing. In the UK packaging context, a "compliance fee" would not be helpful: it would not be compatible with our tradable permits system (Options 1 and 2), and it would undermine the Options 3 and 4 arrangements.

WEEE producers above the *de minimis* level are required either to join a compliance scheme or else set up a "single-member compliance scheme" (i.e. follow the same rules as collective compliance schemes). Unless they have joined a WEEE compliance scheme, small producers below the *de minimis* exemption level must register with an agency and report the tonnages of EEE in each product category that they have placed on the market, even though they have no cost responsibility for WEEE. Applying these requirements to packaging would be unduly burdensome, especially if the shared responsibility principle remains.

As WEEE is generally not collected close-to-home, it can be treated as a discrete waste stream. It is therefore significantly easier to identify the associated costs and to apply separate collection under the control of producer compliance schemes.

There is, and can be, no equivalence between the packaging waste management regime and the two-tier structure for WEEE and batteries, where retailers have collection obligations (directly, in the case of batteries, or directly or indirectly, in the case of WEEE) alongside producers' obligation to finance collection, treatment and recovery from private households.

Options 3 and 4, like the WEEE and Batteries Regulations, place more reliance on the active participation of end-users of B2B waste than the current UK Packaging Regulations. This would suggest that the provision in the Waste (Scotland) Regulations 2012 requiring business end-users to ensure the separate collection of dry recyclable waste could usefully be adopted throughout the UK.

8.2 Suitability for adoption of EPR for waste streams not currently covered

Other countries in Europe have imposed EPR requirements on products beyond packaging, batteries and WEEE, or have reached agreement with producers on voluntary arrangements. The rationale for the choice of products affected is either that the materials are recyclable or that they are potentially harmful if not managed at end of life. If the UK wanted to expand EPR to other waste streams, whether through legislation or voluntary agreements, the choice of fractions would probably be similar.

Voluntary agreements are often preferred because they are more flexible and easier to introduce. Requirements are introduced through legislation where this is considered necessary, such as because the authorities and producers fail to reach agreement on a voluntary arrangement or because producers fear that a voluntary system will be undermined by widespread free-riding.

The materials most commonly covered by EPR in other countries and which we think are most likely candidates for EPR in the UK are:

8.2.1 Printed paper

Non-packaging paper is generally collected together with packaging from households because it makes operational sense for all paper to be collected together. It would be challenging for residents to understand the difference between packaging and non-packaging and even more challenging to persuade them to put them in separate bins.

Because printed papers are collected together with packaging paper, imposing EPR on non-packaging paper is seen as a logical extension. The proportion of the paper collected that is packaging (and thus should be supported financially and count towards the targets for packaging) is determined by sampling.

Countries that have EPR requirements for printed papers include Finland, France and Sweden, while the Netherlands has a Covenant (a non-statutory but mandatory instrument). Obligations always apply to advertising materials, catalogues, office papers and sometimes also to newspapers and magazines.

Obligations usually apply to those placing the papers on the market, i.e. advertisers and publishers and/or printers, who pay fees which are disbursed to local authorities to support collection. Producers are required to meet a recycling target, which in Finland, the Netherlands and Sweden is 75%. In France the approval granted to the compliance scheme for paper, Ecofolio, specifies a recycling target of 55%.

Obligated producers have generally established a compliance scheme to meet the obligations for paper. In Sweden this is the same scheme as handles packaging (FTI), while Ecofolio, the scheme for paper in France, is negotiating with Eco-Emballages on closer co-operation and possibly a merger. The compliance schemes for paper mainly focus on collection, and they usually liaise with a paper sector material organisation on recycling. These material organisations also co-ordinate the recycling of paper packaging, so there is synergy between the recycling of the two streams.

For the UK, paper would be an obvious fraction to include in EPR obligations. Paper is invariably collected together with packaging from households, so it fits with existing operations.

On the producer side, imposing EPR on generators of junk mail would be politically popular. European countries have been reluctant to impose EPR on newspaper publishers which could be seen as a “tax on information and culture”, but this is arguably less of an issue as newspapers increasingly move online. France and Canadian provinces have given newspapers the option of contributing in kind, such as by publishing information about recycling.

8.2.2 Agricultural plastics and packaging of agricultural chemicals

Several countries have special arrangements in place for agricultural plastics which fall outside the definition of packaging (silage and similar films and netting, for example) and packaging of fertilisers, pesticides and similar. The aim is to recycle as much as possible and to prevent harm from unused chemical residues by ensuring their safe recovery or disposal. These materials, which arise in fairly large quantities, can be collected through dedicated return points at agricultural suppliers or on the farm.

In France this system works through a voluntary agreement and the relevant sectoral trade associations set up a company to manage it.

RIGK, a German compliance scheme that handles C&I plastic packaging, also handles packaging of hazardous products. It operates a special service for agricultural packaging and has expanded its range to handle agricultural films and netting. RIGK works with the relevant producers’ associations and its services are funded by producers.

Similar arrangements operate in other countries, including Belgium, the Netherlands and Sweden.

For the UK, a system to collect agricultural plastics would need to be managed. The system relies on a dedicated network of collection points, including some that may only operate at certain times of the year. Thus, we do not believe that Options 1 and 2 would be suitable for this waste stream, some of which is packaging and some of which is not. Although the material arises in large quantities, it is

often contaminated and is in remote locations. It is unlikely to be the most cost effective fraction for a collection PRN. Those in other countries operate as set out in Option 3b.

8.2.3 Medicines

Empty pharmaceutical packaging is collected through existing segregated collection systems for household packaging waste, but several countries have arrangements to collect unused medicines together with their packaging via retail pharmacies. The aim is to ensure that unused medicines are safely recovered or disposed of.

The packaging is already covered by EPR but in countries such as France, unused medicines are also covered by separate EPR requirements. The systems are funded by the pharmaceutical producers.

For the UK, we do not think that an EPR system is necessary. Retail pharmacists are already required to accept unused medicines through their dispensing contract with the NHS, so a collection network already exists. EPR could be justified only if the costs become unsustainable for the pharmacists.

8.2.4 Other fractions

France has introduced EPR for a wider range of waste fractions than any other European country, including textiles, furniture, medical sharps used by patients at home and household chemicals.

There have been reports in France that the multiplicity of systems is causing demarcation problems. The design of the containers used by pharmacists for unused pharmaceuticals has had to be changed because consumers were putting used syringes and blades in the same bags, resulting in stick injuries for pharmacy staff. And civic amenity sites are supposed to store household chemicals, which are subject to EPR, separately from those used by professional builders, which are not covered by EPR.

Other EU countries do not have equivalent EPR requirements and we do not believe that the UK is likely to impose EPR arrangements on such wastes either. This is because there is already a collection arrangement in place for some fractions (such as for textiles through civic amenity sites, charity shops and on-street banks).

However, it is clear that the principle of EPR has attractions for other wastes in encouraging change in the design and supply of the products being placed onto the market, especially where those products present particular challenges in their end of life collection and/or disposal. The following examples could be considered:

- **Chewing gum.** Removing gum is a significant cost to local authorities. At present, the manufacturers have no responsibility to ease that situation through product design, consumer information etc, and make no contribution to the costs of removal and disposal. A Consumer Information Obligation similar to that for packaging could be applied that would require a campaign for responsible disposal of gum to be funded by producers. A further possibility would be a 'placed on the market' fee that could be allocated to local authorities on an equitable basis to support litter clean-up.
- **Cigarette butts.** A similar principle could be applied. This would not have a dissuasive effect as cigarettes are already heavily taxed, but a ring-fenced EPR levy could raise funds for a large-scale campaign to change behaviour and/or help fund litter clean-up.
- **Disposable nappies.** It is estimated that some 350,000 tonnes of disposable nappies are landfilled each year. This would suggest a disposal cost in the region of £35 million p.a. to local authorities and while extensive studies have been carried out into the environmental arguments for disposable versus reusable nappies, disposal continues to create a significant cost. Although EPR

might do little for design or disposal habits – nappies have already been very significantly lightweighted over the years – it would at least mean a contribution by producers to the costs borne by local authorities.

No other Member State has imposed EPR on disposable nappies, possibly because those with the greatest concern about waste – Germany and the Netherlands, for example – have large-scale incineration capacity to treat this waste fraction safely.

The alternative to EPR might be voluntary measures, and indeed certain wastes are already subject to significant development for recycling alternatives such as the carpet sector. However, statutory measures that apply responsibility on a level playing field are generally recognised as being more effective.

APPENDIX A

Meeting EU legal obligations at minimum cost

The declared objective of the UK's producer responsibility regime for packaging has been to meet EU legal obligations at minimum cost. The PRN system was therefore designed to ensure that enough packaging was recycled to meet the targets, but no more. This is not the objective of the other European regimes, which took the EU targets as the minimum to be achieved.

Only 15 Member States have set targets in line with the Packaging and Packaging Waste Directive: the others have imposed higher targets for at least one material, and no Member State has "shadowed" the EU targets for glass, metals and plastics as closely as the UK. Some Member States have set separate recycling targets for household packaging waste.

The following table shows reported recycling rates in 2013, the latest year for which EUROSTAT data are available, for those Member States that have not set higher targets (Romania is missing, as it has not yet reported) and for the 15 countries in membership of the EU before May 2004:

GLASS		METALS		PLASTICS	
	2013 actual		2013 actual		2013 actual
Luxembourg	+35%	Austria	+38%	Slovenia	+59%
Slovenia	+26%	Luxembourg	+34%	Croatia	+23%
Austria	+24%	Spain	+31%	Cyprus	+23%
Ireland	+20%	EU-15	+27%	Bulgaria	+19%
EU-15	+16%	France	+26%	Spain	+18%
France	+14%	Portugal	+26%	Ireland	+18%
Croatia	+9%	Cyprus	+21%	EU-15	+15%
UK	+8%	Bulgaria	+20%	Portugal	+13%
Spain	+7%	Slovenia	+8%	Austria	+12%
Bulgaria	+1%	Latvia	+7%	Greece	+10%
EU target	60%	UK	+7%	Luxembourg	+10%
Portugal	-4%	EU target	50%	UK	+9%
Latvia	-5%	Greece	-2%	France	+3%
Malta	-11%	Ireland	-10%	Latvia	+1%
Cyprus	-28%	Malta	-16%	EU target	22.5%
Greece	-32%	Croatia	-48%	Malta	+0%

APPENDIX B

Calculating packaging placed on the market

The calculation methodologies used in other Member States have evolved over the years, but the basic sources of data known to have been used are as follows:

- Direct measurement from returns made by producers, usually packer/fillers. It is either assumed that the returns from compliance schemes and individual compliers represent the total market; or the data are scaled up to represent the total market in the sectors concerned.
- Estimates of waste entering the waste stream (by sampling the quantities delivered to landfill) and adding the amounts delivered to recyclers or exported for recycling.
- Combining packaging manufacturing data with the amounts of empty and filled packaging imported and exported.
- Combining returns from packaged goods producers, packaging manufacturing data and data on consumption of packaged products, and making assumptions on how these different information sources can be reconciled.

Estimates of packaging placed on the market are always less robust than estimates of the tonnages recycled, and an inaccurate estimation of the tonnage placed on the market will result in an inaccurate estimate of the recycling rate.

Denmark has made two changes of methodology in recent years, with the result that it reported a 60% recycling rate in 2008, 84% in 2009 and 2010, and 54% in 2011. Sweden's change in methodology increased the reported recycling rate from 57% in 2012 to 72% in 2013.

In the UK, the National Packaging Waste Database (NPWD) collects data from compliance schemes and individual compliers on packaging placed on the market, together with information on PRNs and PERNs bought by obligated companies and sold by reprocessors and exporters.

UK producers supplying no more than 50 tonnes of packaging to another stage in the supply chain and with an annual turnover of no more than £2 million have no reporting obligation, so the UK sets "business targets" designed to ensure that the recycling obligations of obligated producers are sufficient to enable the UK's EU obligations to be met. (Some other Member States have *de minimis* exemptions, but the "business targets" approach is unique to the UK.)

UK data seems to have been as reliable as most and better than some, but the recent amendments to the glass and plastics recycling targets to take account of revised estimates of the tonnages placed on the market show that the system could be improved. Latest information is that the shortfall in the estimated tonnage of paper & board placed on the market is considerably more serious, due largely to an underestimation of online sales.

The "business targets" for glass and plastics estimates have been revised downwards. The implication of this was that obligated producers had been obliged by UK law to recycle more glass and plastic packaging than EU legislation required, so the obligation has been reduced. The underestimate in the amount of paper & board placed on the market means that the UK "business targets" will have to be reviewed to ensure that the UK continues to meet EU obligations.

The Commission's December 2015 proposal for a Directive amending the WFD says that Member States shall ensure that EPR schemes "ensure equal treatment and non-discrimination between producers of products and with regard to small and medium enterprises." If this provision survives

into the text as finally adopted, this may mean that the UK would have no choice but to remove its *de minimis* exemption.¹²

However, some Member States – particularly small, less prosperous countries with a large number of small producers – may press for *de minimis* to remain while supporting the main objective of this provision, which is that large companies should not be able to negotiate fee discounts (as in Germany) and shareholders in a scheme should not get favourable treatment from it (as the Environment Ministry of one Member State has alleged).

Nevertheless, if some concessions for SMEs are still allowed – to protect small businesses and/or to reduce enforcement costs – then simplified reporting requirements should continue. The Packaging Regulation, like the WEEE and Batteries Regulations, already contain a “small producer” option for simplified data calculation.

There are two possible options:

- abandoning *de minimis* or reducing the thresholds; or
- adopting some form of mandatory simplified reporting for producers with no recycling obligations.

Some Member States require producers to report basic data even if they fall beneath the threshold for recycling obligations to apply. Even in Member States where there are no *de minimis* exemptions, there is often simplified reporting for small companies.

For example:

- In Belgium, companies placing less than 100 tonnes of household packaging on the market per year and that have made one declaration based on detailed packaging use, can pay on the basis of the tonnage they reported in their first declaration, adjusted according to changes in their turnover. They must submit detailed data every 5 years if they place less than 10 tonnes of packaging on the market, or every 3 years if they place between 10 and 100 tonnes of packaging on the market each year. A similar principle applies if they place less than 5 tonnes of C&I packaging on the market.
- Producers placing fewer than 180,000 SKUs on the French market per year can pay a fixed fee per sales unit, with a minimum annual fee of EUR 80. These standard fees are set for each product category.
- Producers placing less than 8 tonnes of packaging on the Spanish market and with a turnover of less than EUR 3 million can pay a flat fee in four bands – up to 1 tonne, 1-3 tonnes, 3-6 tonnes and 6-8 tonnes. 43% of participants in Ecoembes took this option in 2011, but they contributed little more than 1% of total tonnage reported.

In the UK, any producer placing more than 5 tonnes of electrical and electronic equipment on the market annually must join a compliance organisation which registers them with one of the UK environment agencies. Smaller producers do not have to join a compliance organisation but if they do not, they must register with one of the agencies directly. In practice, relatively few small producers have registered, and there is a trade-off between collection of more complete data and the costs of stricter enforcement.

¹² This would depend on the final wording, though, The Commission’s intention is clearly to prevent small producers being placed at a disadvantage through their larger competitors receiving discounts on their compliance fees. It is less certain whether the legislators intends to remove the discrimination between companies just above and just below the *de minimis* thresholds by banning *de minimis* exemptions altogether.

APPENDIX C

Lessons from elsewhere

C.1 Overview of compliance systems in European countries

No two European systems are alike, so the best way the UK can benefit from European experience is to mix and match individual elements of different systems. This Appendix provides an overview of how systems in selected European countries operate. It then considers elements of those systems that could usefully form part of a future UK system, either as they are or with modifications. It also analyses elements that failed and why they failed, in order to determine whether the UK should avoid these elements completely or whether they could be improved before adoption.

C.2 Systems for household packaging waste

Continental compliance systems for household packaging waste are often referred to as “Green Dot” systems, even those that do not license use of the Green Dot trademark. What these systems have in common is that the brandholder pays the fee (the packer/filler or importer for branded goods or the retailer for private label products) and they usually focus mainly on household packaging waste.

Regardless of who bears legal obligations, it is the brandholder that pays the fee in almost all European countries. The expectation was that this cost would be internalised in prices and passed up and down the chain. This is not the case in Italy (where the converter or packaging importer pays the fee and invoices it on to his customers) or in Ireland where the compliance scheme Repak has a similar shared obligation to the UK. In Ireland the brandholder pays the largest fee, which is material-specific while other stages in the chain pay a smaller fee, which is not material-specific. As such a large proportion of packaged products in Ireland are imported, in practice the fee is often paid by a single producer (the retailer that imports the packaged products) or is shared between two producers.

The UK’s *de minimis* exemption is unusual in Europe. None of the other large countries has any *de minimis* exemption, though some of the smaller ones do. These include Ireland (10 tonnes), the Netherlands (50 tonnes, but larger producers do not report or pay on the first 50 tonnes) and Latvia (300 kg). In Finland the exemption is based on turnover - below EUR 1 million per year. Where there is no exemption, compliance organisations usually offer simplified reporting for small companies (based on turnover, typical pack weights or less frequent reporting etc). Although some other countries have a *de minimis* exemption, the UK’s separation of national and business targets is unique.

Even though most systems have a similar funding arrangement, there is significant variation in how they operate. Some of them directly fund and manage collection, while others provide funding to local authorities for the material they collect. Those that directly fund and manage operations generally pay the full cost of collection, while those that provide funding to local authorities generally fund only part of the cost of managing household packaging waste.

One aspect that almost all systems have in common is that financial contributions for collection are based on performance – funding is paid per tonne of material collected and made available for recycling. To benefit from producers’ funding, the collected materials must usually meet a quality specification negotiated by the system between collectors (either the local authority, a contractor appointed by the local authority or a contractor appointed by the compliance organisation), sorting plants and recyclers. It is rare for compliance systems to directly fund infrastructure, though HeRRCo, the only collective compliance scheme in Greece, does so. HeRRCo is also unusual in that local government has a 35% shareholding.

C.2.1 Systems for household packaging waste that directly fund and manage

C.2.1.1 Belgium

Belgian packaging legislation makes producers (packers/fillers or those who commission packaged products) responsible for meeting the recycling and recovery targets. These producers must also fund the “full and real” costs of collection, recovery and recycling. There are separate sets of targets for household packaging waste and for “industrial packaging waste”.

Belgium is a federal country whose three Regions are responsible for both making and implementing waste management policy on their territory. To ensure a single nationwide system, the packaging legislation takes the form of a Regional Co-operation Agreement negotiated jointly by the Regions. This Agreement provides for the establishment of an Inter-Regional Packaging Commission to ensure its uniform implementation. This Commission is responsible for enforcing the requirements, approving compliance systems, drawing up harmonised rules, etc.

Producers set up two nationwide compliance systems, one for household packaging waste and one for commercial/industrial packaging waste.

The compliance system for household packaging waste, FOST Plus, was set up in 1994 and is not-for-profit. FOST Plus remains a monopoly and operates under detailed terms and conditions set out in a formal approval agreement granted by the authorities for a period of approximately five years.

When FOST Plus was set up, segregated collection was not widespread and it devised a standard collection scenario which it considers to be the most cost-effective arrangement:

- Paper & board is collected kerbside once per month together with non-packaging paper.
- Glass is collected in colour-separated (clear and coloured) glass banks. The current approval specifies that glass banks must be evenly spread throughout each local authority area with a minimum density of 1 site per 700 inhabitants, except in areas of low population density.
- Lightweight packaging (plastics, metals and beverage cartons) is collected kerbside in transparent sacks once every 2 weeks. Only materials that are capable of being recycled are collected, so only plastic bottles (HDPE and PET), but no pots, tubs, EPS or films, and only metal cans, trays and aerosols, but no foils.

As FOST Plus pays the full cost of collection, it was able to insist that all local authorities use this collection system, although some were extremely reluctant to do so. As a result, collection arrangements are more or less identical throughout Belgium. These collection arrangements are complemented by containers at civic amenity sites that accept packaging waste.

Its current approval requires FOST Plus to trial the collection of a wider range of plastics (pots and films), although FOST Plus argues that this would add greatly to costs while generating only a very small increase in recycling. The trial, which involves different collection scenarios, is ongoing.

FOST Plus has also expanded its scope to collect away-from-home packaging (collection containers at public transport sites etc), and it offers a collection service for packaging waste in workplaces.

Packaging waste excluded from segregated collection is collected with residual waste and is recovered as energy (or the metals are extracted and sent separately for recycling). Although producers’ obligations originally extended only to meeting the targets, more recently they have also had to meet the “full and real” costs of collection. Thus FOST Plus now has to pay the regions a fee per capita of

population (currently 55 eurocents per person) to compensate them for what it does not collect. In practice FOST Plus negotiates with the Regions on how this is spent, on litter abatement for example.

Collection and sorting contracts are awarded jointly by FOST Plus and each local authority on the basis of competitive tenders. FOST Plus pays collection and sorting contractors (public or private) per tonne against evidence of collection/sorting submitted. Where the local authority collects, FOST Plus pays on the basis of “reference costs” (based on what it paid commercial operators) but subject to the approval of the authorities.

Contracts for recycling are awarded annually by competitive tender, based on a specification published by FOST Plus. FOST Plus sells the materials to recyclers at market price, and receives the income.

No changes to the Belgian system will be needed to meet future higher targets. Belgian targets are already higher than the Directive’s, and FOST Plus is already achieving recycling rates in line with the targets now proposed by the EU as part of the Circular Economy Package.

Assessment:

Arguably the best example of the “Green Dot” producer-owned monopoly systems. FOST Plus achieves very good recycling rates and works to improve the cost-effectiveness of its arrangements.

However, this model is not one that the UK is likely to emulate because FOST Plus can operate as it does only because it is a monopoly, because it pays the full operating cost and because the rules governing its operation are extremely detailed and prescriptive.

But Belgium’s three stream collection scenario (1 – glass; 2 – packaging and non-packaging paper; and 3 - plastics/metals/cartons) is fairly typical throughout Europe. That could be a useful model in the UK where there is a growing awareness that the patchwork of different collection arrangements adopted by individual local authorities vary in their cost-effectiveness and in the quality of materials they generate, and are confusing for residents. However, the FOST Plus scenario also involves identical container types and identical collection frequencies, which would not make sense in the UK where collection is already established and the demographic profile is less homogeneous. In any case, it is doubtful that this scenario makes sense in every locality in Belgium. This is acknowledged in the current approval which specifies who is responsible for deviations from the scenario (FOST Plus, the local authority or both).

Although waste management is the responsibility of each region in Belgium as in the UK, both countries have endeavoured to ensure a single national regime for packaging. For constitutional reasons, Belgium has established a single enforcement body for all three Regions whereas in the UK the regional enforcement authorities co-operate with each other, but the result is similar.

C.2.1.2 Sweden

Sweden already had a mandatory deposit on non-refillable plastic and metal beverage containers when EPR requirements for other packaging were introduced in 1994.

The Packaging Ordinance says that producers (manufacturers, importers or sellers of packaging or packaged products) must ensure that there is a suitable collection system for packaging and for removing packaging from collection sites and ensuring that it is sorted and recovered. The legislation also sets material-specific targets that do not distinguish between household and C&I packaging waste, but are separate for deposit and non-deposit metals and plastics.

But the legislation did not acknowledge the existence of compliance organisations until it was amended in 2014. The 2014 legislation established an approval procedure for compliance systems and says that producers must participate in an approved system. These requirements do not take effect until 2019 and no systems have as yet been approved under the new rules.

Although the original legislation did not provide for a compliance organisation, producers set up a system to meet their obligations. This was originally structured around separate organisations for each material. These material organisations established two subsidiary organisations to co-ordinate multi-material activities on their behalf: REPA, to which producers could report and pay fees once for all materials, and FTI, which co-ordinated multi-material collection, negotiation with the authorities, communications etc. In 2007 most material organisations merged with FTI and in 2013 REPA merged with FTI so producers now report directly to FTI. The material organisations still exist as legal entities and jointly own FTI, which operates on a not-for-profit basis. FTI mainly handles household packaging waste but has a role in C&I (see below).¹³

Materials are mainly collected through a national network of 5,800 bring sites in all 290 local authorities. They have containers that accept the following categories of materials:

- metals - food cans, aerosols, tubes, paint cans (if fully emptied) but not laminated pouches;
- plastics - bags and films, jars, bottles, tubs, EPS, laminated films (crisp packets etc);
- glass - clear and coloured;
- paper and board including cartons but not gift wrap;
- newspapers, flyers, catalogues, notepaper and paperback books, but not envelopes or post-it notes;

All plastics are collected together in the same container and then sorted automatically. Although most plastic drinks bottles and cans are deposit-bearing and should be returned in-store, in practice some of them end up in the bring containers. FTI and Returpack, which operates the deposit system, have an arrangement for this material.

The sites are directly managed by FTI, which funds them and appoints contractors by competitive tender to clean the sites, empty the containers, transport the materials, sort and/or bale the materials and recycle them. FTI tendered jointly with the Norwegian compliance organisation GPN for plastics recycling, in order to increase the quantity of material and get a wider choice of recyclers and thus a better price.

Only around 1/3 of households have kerbside collection. 80% of these are in apartment buildings, managed by the landlord who appoints a collection contractor with a financial contribution from FTI. FTI is encouraging local authorities to introduce kerbside collection and provides funding for this, but says that progress is slow.

As the legislation did not set rules governing relations between FTI and the local authorities, problems have arisen. Local authorities complain that bring sites are not emptied regularly enough, and often get complaints from consumers who assume that the municipality is responsible. Local authorities have lobbied to take over operational control of the system (which would continue to be funded by producers). The 2014 Ordinance was adopted after a lengthy review that considered this. The government decided to retain the current system, and to introduce new requirements for compliance schemes.

To meet the new requirements and the higher recycling targets for 2020, also set by the 2014 amendment, FTI has issued a five-point plan. This includes improving bring sites, increasing kerbside

¹³ A second, much smaller scheme called TMR operates in competition with FTI. TMR has reached agreement with FTI to share the materials collected at FTI's bring sites.

collection to 50% of households, revising agreements with local authorities, improving quality controls and better public information.

Assessment:

Although producers pay the full cost, the light touch regulation has enabled the system to opt for a low-cost bring arrangement.

The reliance on bring sites makes sense in view of Sweden's low population density and given that the most valuable fractions, deposit-bearing PET bottles and aluminium beverage cans, are excluded from the system. But this is out of line with practice in most EU countries, including the UK.

The absence of regulation has also resulted in an unclear division of responsibilities between local authorities and producers.

C.2.1.3 Germany

Germany was the first country in Europe to introduce EPR for packaging. Although the original legislation and system has changed significantly in the light of experience, the original model has been widely copied in other European countries, though with significant modifications.

The original 1991 Packaging Ordinance required all stages of the supply chain to take back packaging of the products they supplied. For consumer products, this would have required supermarkets and other retailers to accept packaging waste of all the consumer products they sold – a nightmare scenario. So when the proposal was still under discussion, industry negotiated an exemption from this take-back obligation if a “dual system”, funded and operated by producers, collected packaging waste from households and got it recycled. This concept was incorporated into the Ordinance. The conditions for approval of the dual system included that it had to collect all household packaging waste (regardless of whether it could be recycled), that it had to provide a universal close-to-home collection service for all households throughout Germany and that it had to meet very high recycling targets. Energy recovery did not count towards those targets, although Germany had a network of incinerators. Producers established a not-for-profit company, DSD, to operate the system.

Responsibility for making waste policy is shared between the federal government and the federal states (*Länder*), and the *Länder* are responsible for implementation. Thus DSD had to be approved separately by each *Land*. And although DSD had to pay the full operating cost, the Ordinance required it to get permission from each local authority for its collection arrangements. As a result, collection arrangements vary, and in some areas DSD was forced to operate inefficient and/or expensive collection.

The above approval conditions remain in place, although the system and legislation have changed significantly since the dual system was set up.

Key changes include:

- expansion of the scope of the dual system in 1998 to include consumer packaging that becomes waste at specified business sites. These are sites where packaging similar to household waste becomes waste (such as where food is consumed), including hotels, schools, hospitals etc;
- imposition of a mandatory deposit on non-refillable plastic, metal and glass drinks containers in 2003, with the result that these easy-to-recycle materials no longer paid fees to the dual system and could no longer help to meet DSD's targets;

- abandonment of DSD's not-for-profit status in 2004. In 2005 it was forced to put itself up for sale and was acquired by a private equity company.

In 2009 the dual system was opened up to competition and nine operators are currently approved to operate it. There is still only one collection contract for each stream in each local authority area. The dual system operators share the collected and sorted material based on their market share (i.e. tonnage participating in each dual system). Collection contracts are awarded by competitive tender. Since DSD's collection contracts expired, each dual system operator has been responsible for tendering for a proportion of the contracts, based on its market share. This process is managed by a clearing house that all dual system operators must participate in.

Since 2009 producers (the packer/filler or importer of branded products) must participate in a dual system for consumer packaging. There is an exemption, subject to certain conditions, for packaging becoming waste on the business sites specified in the legislation (hotels, schools, hospitals etc) that participates in an approved "branch solution". These arrangements are also operated by the companies that operate dual systems. They are usually cheaper because it costs less to collect from them than from households, so fees charged to producers are lower than for packaging collected through a dual system.

Key operating features:

- Collection contracts in each collection area are awarded separately for individual material categories: 1) glass; 2) paper & board, together with non-packaging paper; and 3) "lightweight packaging" (plastics, metals and beverage cartons).
- Dual system operators are responsible for passing materials to recyclers, so they receive the income from the materials.
- Fees paid by producers to dual systems are not published, but each producer can split its obligations between different operators and fees can be negotiated.

Assessment:

An extremely complex system, which is partly the result of the unforeseen consequences of Germany's initial requirements and system. Political interference in Germany's federal system has added to that complexity, with amendments made to legislation by the Bundesrat (the chamber of parliament that represents the Länder) during the adoption process. The Bundesrat has recently forced the government to make radical changes to a proposed reform of the dual system even though the proposal was based on a coalition agreement that had taken four years to negotiate. As in Sweden, the issue was whether the local authorities should take over operational control of segregated collection but still be funded by producers.

The basic German model has been widely copied by other member states, but with improvements. Those adaptations are better models for the UK to borrow from than the German original. The German model in its current form is useful mainly as a warning of the risks of getting it wrong.

We would advise against the UK adopting the German arrangements for reporting by producers and for enforcement. When it became mandatory to participate in a dual system in 2009, it also became mandatory for producers to register and submit packaging data to a central register. However a private organisation, the chamber of commerce (DIHK), was appointed to manage this register. It has no powers of inspection or prosecution. Producers are required to get their data audited by an expert approved by the register, but appointed and paid for by the producer. The Länder are responsible for enforcement, but this is problematic for EPR because each Land is responsible only

for what becomes waste on its territory. Also, this task is often delegated to the municipalities, so in practice there has been hardly any enforcement.

C.2.1.4 Austria

Austria changed its legislation in 2015 to facilitate competition between EPR systems for household packaging waste along very similar lines to Germany. But Austria introduced adjustments designed to combat problems that had arisen in Germany. For example, the data registration point for producers is a subsidiary of the Austrian environment ministry; each compliance scheme must charge identical fees to all producers (no negotiated discounts) and must publish its fees on its website; and the borderline between packaging waste in households and packaging waste and similar packaging on commercial sites is regulated by law so all producers and approved systems follow the same demarcation.

The new rules only took effect in 2015 so it is too early to tell whether the Austrian adjustments are succeeding in preventing the abuses that have occurred in Germany.

C.2.2 Systems for household packaging waste that provide funding through local authorities.

C.2.2.1 France

France was one of the first countries to introduce an adapted version of the German model. It introduced EPR obligations for household packaging waste in 1992, with separate rules for commercial/industrial packaging waste adopted later. France introduced a more flexible regime than Germany, with recovery and recycling counting towards the targets and a long timetable for meeting them, to allow producers and operators time to plan the increase in recycling.

The French regime was also based on the principle that because local authorities have an obligation to collect all household waste, including packaging, industry would provide funding to cover the additional cost of segregated collection.

Thus, the EPR system pays local authorities for each tonne of material that they collect and sort and make available for recycling. The amounts of funding, and the terms and conditions are set out in a detailed document, updated every six years, that sets out how the EPR system (Eco-Emballages) operates.

To qualify for funding each local authority must have a contract with Eco-Emballages. They are paid only if the material meets a quality specification set out in Eco-Emballages' approval and in the contracts. All local authorities are paid for collection on equal terms, and they receive a bonus for good performance (i.e. high collection yield). Thus the "additional cost" is notional as their costs vary significantly. Many local authorities contract out collection but the money from Eco-Emballages is always paid to the local authority, which uses it to pay contractors.

Segregated collection was introduced gradually, but Eco-Emballages now has contracts that cover just under 100% of the population of France.

Terms and conditions have evolved over time. Legislation adopted in 2009 set a target of 75% recycling of household packaging waste by 2012 and required producers to fund, through Eco-Emballages, "80% of the net cost of optimised collection and sorting", i.e. the cost of an efficient system. The rates of support paid by Eco-Emballages increased significantly, but support continues to be paid on equal terms to all municipalities, and the less efficient ones now complain that they are not

paid enough. Eco-Emballages has calculated that it was covering, on average, 78% of municipal costs in 2013.

Each of the 36,000 municipalities is individually responsible for organising collection, although in practice neighbouring authorities group together to provide waste management (and other services). As a result, there is a wide variation in collection arrangements. The municipalities are also responsible for sorting. This has also contributed to France having a large number of sorting plants (currently 228), many of which are old and only a few are automated.

The local authorities are in principle responsible for passing materials to a recycler, but most take advantage of the guarantee offered by Eco-Emballages or by waste contractors to take all materials that they have collected and sorted. Eco-Emballages takes materials that meet the quality specification and guarantees to pay zero or a positive price for the material. This part of the arrangement was introduced because fluctuating material prices, sometimes dropping below zero, were identified as a barrier to the introduction of segregated collection. The price paid depends on market prices, transport costs etc.

Assessment – see Spain below.

C.2.2.2 Spain

Unlike France, Spain introduced EPR legislation for packaging after the Directive had been adopted. Thus, the targets are those in the Directive and Spain's 1997 legislation covers both household and commercial packaging waste.

The basic obligation in the Law is that producers charge a deposit on all types of packaging unless they participate in an approved compliance organisation. In practice participation in a compliance scheme is the only option as no producer has opted for the deposit. Producers set up one system, Ecoembes, to handle all material except glass, and a separate system for glass, Ecovidrio. The two organisations operate in parallel and do not compete with each other. Both organisations focus primarily on packaging waste in the household waste stream.

Waste management legislation in Spain is made at national level but is implemented separately by each autonomous region. Until 2012 the compliance organisations were required to obtain the approval of each autonomous region individually and Ecoembes operates through framework agreements with the regions or through direct agreements with some municipalities. Despite that, Ecoembes operates fairly uniformly throughout Spain.

Ecoembes and Ecovidrio are required to fund “at least the additional cost” of segregated collection and the cost of public information campaigns.¹⁴ They must also fund the cost of transporting recyclable materials from the islands and from the North African enclaves Ceuta and Melilla.

Although Ecoembes also only pays the additional cost, collection arrangements are far more harmonised than in France. Ecoembes has three standard collection methods, all based on bring arrangements:

- Bring sites (the most common option) – with three colour-coded containers (green for glass, blue for paper and yellow for lightweight packaging - plastics, metals and beverage cartons¹⁵). They are located on sites that are convenient for consumers but also accessible to collection vehicles, and are emptied weekly or as required. They yield good quality materials but in lower quantities

¹⁴ Segregated collection covers around 99% of the Spanish population.

¹⁵ Spain used to collect beverage cartons with paper, but now include them in the lightweight fraction.

than the on-street containers (below) which are more convenient. Non-packaging and packaging paper are collected together and Ecoembes pays for 40% of the weight of paper collected.

- On-street bring containers – yellow bins for the lightweight fraction only. Smaller containers than at the bring sites and located next to the bins for residual waste. Material is often of poor quality because they are confused with the waste bins. They complement the bring sites.
- Closed-lid bring containers – yellow containers for the lightweight fraction with a sealed lid and small openings. These are also next to domestic waste bins but yield better quality materials.

Local authorities receive from Ecoembes a small payment per tonne of material delivered to a transfer station, to cover transport costs only. They then receive a second payment after the material has been sorted, provided that the materials meet the quality specification.

For energy recovery, Ecoembes pays local authorities at a rate designed to refund their costs minus the value of the energy generated.

Ecoembes guarantees to take all materials collected by the municipalities if they cannot find somebody to take them for recycling or recovery. As in France, local authorities can choose whether to take advantage of the take-back guarantee and in most cases they opt to do so.

Paper and board is transported directly to recyclers while the lightweight fraction is sorted first. There were 95 sorting plants in Spain in 2014, 54 of which were automated.

Assessment:

The systems in both France and Spain operate on similar principles but with different results. Although in both countries local authorities remain responsible for collection and the EPR system funds only the additional cost, it is clear that in Spain, Ecoembes has had far greater influence than Eco-Emballages in France on how materials are collected and sorted. As a result, collection arrangements are far more harmonised in Spain than in France, with colour-coded bring containers. Whereas Eco-Emballages has identified the large number of small, old sorting plants as a problem, Spain has fewer but more modern sorting plants.

C.2.3 Competition versus monopoly systems for household packaging waste

Most of the European systems for household packaging waste were originally set up as monopolies. Some continue to operate as monopolies, but in other countries the market has been opened up to competition. And in some countries the regime was designed around competing systems from the outset. The trend is towards competition – for example, Germany and Austria have recently opened up their systems to competition and in France two potential competitors to Eco-Emballages are seeking approval to operate.

Where there is a monopoly system, producers have no choice but to sign up with it, as individual compliance is impossible for most producers. Thus, there is a single pot of funding that can be used to finance or subsidise operations but there is nonetheless competition within that system. There is usually competition at the level of collection, as contracts are awarded by competitive tender by compliance schemes that directly fund and manage systems, and in the systems that provide subsidies, each local authority organises collection. Similarly, materials are usually passed to recyclers at market prices.

The existence of monopoly systems was permitted by both the EU and national competition authorities because they acknowledged that a single system was the best way to develop recycling

nationwide. However, competition bodies have insisted on various operational changes to the way the schemes operated because they were deemed to breach competition rules and would prevent new schemes from setting up in competition. For example, schemes had extremely long contracts with producers that did not permit them to leave, collection contracts were not always awarded by competitive tender and were unreasonably long, and in Germany recyclers received materials free of charge regardless of the market price, which distorted the market in those materials.

Monopoly systems have undoubtedly ensured that segregated collection and recycling developed more quickly and consistently than where competing schemes operated from the outset. Rival systems compete on fees charged to producers, so fierce competition can result in inadequate funding being available to increase recycling. Monopoly systems can also undertake additional activities on behalf of producers such as litter abatement, promoting eco-design, public communications etc. They often support enforcement by auditing producers' data. As a monopoly system contributes to the increase of recycling, it is also in a strong position to lobby the authorities on behalf of producers.

However, once systems are up and running, monopoly systems may lose their impetus over time and may be slow to respond to changes in circumstances. Producers complain that the monopoly systems are bureaucratic and require far more data from them than competing schemes do and they may have complex fee structures. For example, the scheme that wants to compete with Eco-Emballages in France wishes to offer simpler reporting and fee structures, if the terms of its approval permit this.

It is mainly in the newer Member States where competing schemes have operated from the outset. In many of these countries waste management was rudimentary, and not all households even had access to a basic refuse collection service. In some countries segregated collection and recycling has developed unevenly and inconsistently. This is often because the legislation did not establish clear approval and operating requirements, so in practice many "compliance schemes" were either service providers or did not function at all. Although policymakers hoped that they would ensure collection of some household packaging waste, because there was no specific obligation for them to do so, they met their targets mainly from C&I material.

One disadvantage of competing schemes is that free-riding tends to be high, either due to producers not complying at all or through under-reporting. Competing schemes are often unwilling to audit producers which might encourage them to switch to another scheme. Several Member States are now addressing these problems by establishing clear operating requirements and a formal approval procedure. To address free-riding, several are now establishing a state-run register where producers and systems must submit data and report on achievements.

Assessment: The UK competition authorities did not permit a monopoly scheme when the Regulations were first adopted and the existence of several schemes makes it even more unlikely that a monopoly would be permitted now.

C.3 Systems for packaging waste in the commercial and industrial waste stream

Systems for packaging in the C&I waste stream are more diverse and less structured than those for household packaging waste. As a proportion of this material is already collected for recycling, their focus is on tracking what is already being recycled and on increasing the quantity collected and recycled.

It is rare for such systems to operate as monopolies and small, specialised systems handling a particular type of pack (e.g. steel drums) or in a particular sector (chemicals etc) sometimes operate. Individual compliance is also more likely to be possible than for household packaging.

Below is an overview of arrangements:

- The same organisations handle both household and commercial material, e.g. in Sweden and Austria and most of the systems in eastern Europe. Fees charged to producers are lower for C&I packaging than for household material. The schemes are less directly involved in operations than for household packaging waste, and part of their role is to track tonnages placed on the market and tonnages recycled. ARA in Austria (which competes with other schemes for C&I materials) has organised a nationwide network of drop-off points where end-users can take packaging waste free of charge (although they pay transport costs) or receive payment for the material in certain circumstances. Some of ARA's competitors focus on particular sectors (e.g. catering) but others handle all types of B2B packaging waste. FTI in Sweden also operates a drop-off network, but there are far fewer sites than those for household packaging waste. In Spain, business end-users whose waste is handled through the municipal waste system (such as small shops and cafes) are covered by the EcoEmbres compliance scheme, but larger end-users organise waste management themselves.
- End-users are individually responsible for ensuring compliance. In France the legal obligation to manage packaging waste falls on the end-user, not the producer. There are no approved compliance schemes although organisations representing certain pack types (EPS, plastic drums, wood etc) have established operating standards and put end-users in contact with suitable contractors, but each end-user negotiates prices individually with the contractor.
- A single approved organisation for C&I material, which operates separately from the organisation for household waste. Belgium is the only country with this arrangement. The VAL-I-PAC compliance scheme, which handles only what is called "industrial packaging waste" in Belgium, is funded by brandholders and offers financial incentives to business end-users to sort their waste. The incentives are either paid annually per container (to cover the rental cost) or per sack of plastic film, or for mixed plastics or wood they are paid per tonne. The money is paid to the end-user when the contractor sends a certificate of collection to VAL-I-PAC. VAL-I-PAC also pays operators for the administrative costs of providing data including for issuing certificates of collection.
- Specialist organisations operate in several member states, particularly for packaging of agricultural chemicals (fertilisers and pesticides) funded by the chemical producers.

APPENDIX D

Comparison of our options with existing WEEE and batteries provisions

Our Option 1	The WEEE Regulations	The Waste Batteries and Accumulators Regulations
<i>B2C and B2B</i>		
<p>The PPWD and UK Packaging Regulations make no distinction between B2C and B2B packaging waste obligations.</p> <p>However, the WFD requires separate collection of packaging materials from households.</p>	<p>The WEEE Directive and UK Regulations contain different legal requirements for B2C and B2B WEEE.</p> <p>The UK used to allow POM reporting to be split into B2C and B2B for the same product, but the WEEE Directive says that dual-use EEE should be considered B2C.</p>	<p>The Batteries Regulations contain different legal requirements for portable and industrial/automotive batteries.</p>
<i>The role of local authorities</i>		
<p>In all UK jurisdictions, local authorities are obliged to carry out separate collection of packaging materials.</p>	<p>Local authorities have no obligation to collect WEEE, but can continue to collect it at civic amenity sites if registered as Designated Collection Facilities, or else collect and treat it themselves outside the EPR system.</p> <p>A local authority Designated Collection Facility can require a compliance scheme to pick up material if the council has been unable to secure a collection contract.</p> <p><i>[The WEEE Directive says that Member States shall designate the operators allowed to collect WEEE from private households, so it would be legally possible for local authorities, waste management companies or producers to be given this responsibility.]</i></p>	<p>Local authorities have no obligation to collect waste batteries, but may collect them at civic amenity sites or from the kerbside.</p>

Targets		
The structure of the targets is outside the scope of this report, but assuming the <i>de minimis</i> exemptions remain unchanged, “business targets” for recovery and recycling would continue to be set.	The WEEE Regulations set collection targets for B2C waste, but there are no targets for B2B waste. However, the EU Directive’s collection target applies to all WEEE.	The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.
Producers’ obligations – B2C waste		
Compliance schemes and individual compliers would contract with collectors of packaging waste for the PRNs they need to meet the targets. B2C or B2B waste could be used.	Producers above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf. If they sell direct to consumers they must also take on distributors’ responsibilities.	Producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf.
Compliance schemes and individual compliers would have no direct responsibility for the costs of collection and treatment.	Schemes finance collection, treatment, recovery and environmentally sound disposal of WEEE from private households, in proportion to their market share.	Schemes finance collection, treatment and recycling.
Collectors would only be able to sell PRNs obtained from accredited reproprocessors and exporters.	Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.	Only Approved Battery Treatment Operators and Approved Battery Exporters can issue evidence, based on waste delivered by a compliance scheme.
Retailers’ obligations – B2C waste		
We assume that retailers would continue to have no specific responsibilities beyond that of a producer, other than a strengthened Consumer Information Obligation. However, provision of “bring” containers in large retailers’ car parks would be optional.	Retailers either take back WEEE themselves, or register with the Distributor Take Back Scheme and pay for Designated Collection Facilities to be set up and operated.	Retailers above the <i>de minimis</i> level must take back battery waste from end-users free of charge [<i>the Directive adds “unless alternative arrangements are equally effective.”</i>]. They can request any scheme to collect from them portable batteries they have taken back.

Producers' obligations - foreign distance sellers		
<p>The Regulations are silent. As a result, foreign suppliers selling direct to UK private consumers are not obligated.</p> <p>This is a growing problem, but is outside the scope of this report.</p>	<p>Must either appoint an authorised representative or join a compliance scheme.</p> <p>Importers should satisfy themselves that any manufacturer they deal with is registered. Enforcement action is likely to be taken first against the UK-based importer.</p>	<p>Definition of "producers" specifically includes distance sellers. There are no special provisions, but they would be caught by the requirement that producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme and that producers of industrial/automotive batteries must ensure that they are able to be taken back.</p>
Producers' obligations – B2B waste		
<p>Compliance schemes and individual compliers would contract with collectors of packaging waste for the PRNs they need to meet the targets. B2C or B2B waste could be used.</p> <p>Compliance schemes and individual compliers would have no direct responsibility for the costs of collection and treatment.</p>	<p>All producers of non-household EEE above the <i>de minimis</i> level must join a compliance scheme and take responsibility for the management of B2B WEEE.</p> <p>The final user of the WEEE or his compliance scheme finances collection, treatment, recovery and environmentally sound disposal of WEEE, unless alternative arrangements are made with a third party.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>As 'the vast majority of industrial and automotive batteries are already collected and recycled because it is cost effective to do so' the Government designed the regulations 'to underpin these existing collection arrangements rather than replace them ... to provide a safety net should the cost [of waste management] ever outweigh the value of the recycled products'.</p> <p>Producers must take back waste industrial batteries of any chemistry, on request, from an end-user when supplying new industrial batteries or when the end-user is not able to return them to their supplier.</p>

Compliance schemes		
<p>Membership of a compliance scheme is optional.</p> <p>Compliance schemes would be subject to a robust approval process to ensure they have the ability to finance and manage collections. They would have to submit an application to the Agencies setting out an operating plan and evidence of funding etc. To ensure continuity, we suggest that schemes are approved for periods of five years. They would also have to submit a full report on activities with accounts to the authorities each year.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level. A single-member scheme is allowed, but has to bear its share of the overall cost.</p> <p>Schemes must be approved and must co-operate with other organisations in developing working relationships with Waste Disposal Authorities and Designated Collection Facilities.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level.</p> <p>Compliance schemes must be approved and must publish an operational plan annually (to demonstrate compliance over the next 3 years).</p> <p>Evidence trading is permitted. Evidence distinguishes between lead-acid, NiCd and other batteries.</p>
Evidence trading		
<p>PRNs can currently be traded between accredited reprocessors and obligated companies, and there would seem to be no reason why they should not be traded between accredited collectors and obligated companies.</p>	<p>Trading of evidence between schemes is not permitted, but sub-contracting in advance of WEEE collection and processing is allowed.</p>	<p>Evidence trading is permitted. Evidence distinguishes between lead-acid, NiCd and other batteries.</p>
Producers below the <i>de minimis</i> level		
<p>Producers that POM less than 50 tpa and a turnover of no more than £2 million p.a. have no obligations.</p> <p>Hence the Regulations set “business targets” for obligated companies to plug the gap.</p>	<p>Producers that POM less than 5 tpa must register with an agency and report tonnage POM unless they join a scheme.</p> <p>A lot of WEEE is collected by commercial operators outside the formal WEEE system, and doesn't get counted towards achievement of the targets. The authorities may deduct an estimate of this from the obligated tonnage.</p>	<p>Producers that POM less than 1 tpa must register with an agency and report tonnage POM.</p>

Collection		
<p>Compliance schemes would contract with collectors of packaging waste for the PRNs they need to meet the targets. Compliance schemes' obligations would continue to be the sum of their members' obligations.</p> <p>The schemes would pay the collectors when the PRNs are handed over to them. The price paid by the schemes could be determined by market forces, a variation of the current system.</p> <p>Alternatively, revised UK regulations might specify that producers have to fund the net cost of collection, sorting and related treatment operations if so required by EU legislation, or whatever share of costs the UK Government decided. In that case, the regulations would have to specify a formula for calculating that.</p>	<p>The WEEE Regulations are based on collection targets for B2C demonstrated by material delivered to an Approved Authorised Treatment Facility (AATF) or Approved Exporter (AE).</p> <p>A compliance fee must be paid if the targets aren't met. This is set after the end of each compliance period, so relying on it would be a risky compliance option.</p> <p>Designated Collection Facilities can be operated by a waste management company, a local authority or a compliance scheme.</p>	<p>The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.</p> <p>Producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme and finance collection, treatment, recycling, information for consumers and environment agency monitoring.</p> <p>They may collect batteries themselves, have their scheme take them back or obtain recycling evidence from an authorised facility which could be traded to the scheme in exchange for a fee reduction.</p>
<p>Contracted collectors could be waste management companies, local authorities or voluntary organisations who collect and sort household and/or C&I packaging waste.</p> <p>As the schemes would be obligated only to the level of the targets, some PRNs might remain unsold. The collectors would only lose the fee covering the administrative cost of buying unsold PRNs but would still benefit from the income from selling the materials in most cases. However, that reprocessing activity should nonetheless count towards the UK's national targets as, if all reproducers are accredited, it would be recorded. However, if not funded by producers it would not count towards producers' achievement of those targets.</p>	<p>WEEE compliance schemes must take back all waste offered to them.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment of B2B waste. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>Battery compliance schemes must take back all waste offered to them.</p>

<i>The role of reprocessors and exporters</i>		
<p>PRNs would continue to serve as evidence of recycling, but would no longer be the funding mechanism for reprocessors and exporters.</p> <p>PRNs/PERNs would be issued to collectors or their agents (e.g. MRFs) by accredited reprocessors and exporters when qualifying material is delivered to them.</p> <p>Accredited reprocessors and exporters would not sell PRNs/PERNs for a market price, but would be paid a small fee to cover their administrative costs. All reprocessors with the necessary operating licences would be automatically accredited. The Agencies would audit all reprocessors.</p>	<p>Similar to packaging Option 1.</p> <p>Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.</p> <p>All evidence must be generated and issued to a PCS through the government-controlled Settlement Centre [which is not mentioned in the Regulations]. AATFs and AEs enter evidence details on the Centre's website, and PCSs can see how much evidence they have been allocated.</p>	<p>Similar to packaging Option 1.</p> <p>All collected batteries must be handed to Approved Battery Treatment Operators or Approved Battery Exporters, who record spent batteries received from the scheme concerned. Only ABTOs and ABEs can issue evidence.</p> <p>Once recorded, schemes may sell the evidence to other schemes.</p>

Our Option 2	The WEEE Regulations	The Waste Batteries and Accumulators Regulations
B2C and B2B		
<p>The PPWD and UK Packaging Regulations make no distinction between B2C and B2B packaging waste obligations.</p> <p>However, the WFD requires separate collection of packaging materials from households.</p>	<p>The WEEE Directive and UK Regulations contain different legal requirements for B2C and B2B WEEE.</p> <p>The UK used to allow POM reporting to be split into B2C and B2B for the same product, but the Recast WEEE Directive says that dual-use EEE should be considered B2C.</p>	<p>The Batteries Regulations contain different legal requirements for portable and industrial/automotive batteries.</p>
The role of local authorities		
<p>In all UK jurisdictions, local authorities are obliged to carry out separate collection of packaging materials.</p>	<p>Local authorities have no obligation to collect WEEE, but can continue to collect it at civic amenity sites if registered as Designated Collection Facilities, or else collect and treat it themselves outside the EPR system.</p> <p>A local authority Designated Collection Facility can require a compliance scheme to pick up material if the council has been unable to secure a collection contract.</p> <p><i>[The WEEE Directive says that Member States shall designate the operators allowed to collect WEEE from private households, so it would be legally possible for local authorities, waste management companies or producers to be given this responsibility.]</i></p>	<p>Local authorities have no obligation to collect waste batteries, but may collect them at civic amenity sites or from the kerbside.</p>

Targets		
<p>The structure of the targets is outside the scope of this report, but assuming the <i>de minimis</i> exemptions remain unchanged, “business targets” for recovery and recycling would continue to be set.</p> <p>With different funding systems for B2C and B2B waste, it is implicit that there would be household packaging waste targets. x% of recycling should be met through household waste until there is sufficient data to set a household waste collection target.</p>	<p>The WEEE Regulations set collection targets for B2C waste, but there are no targets for B2B waste. However, the EU Directive’s collection target applies to all WEEE.</p>	<p>The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.</p>
Producers’ obligations – B2C waste		
<p>Compliance schemes and individual compliers would contract with collectors of packaging waste for the “household PRNs” they need to meet the targets.</p>	<p>Producers above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf.</p> <p>If they sell direct to consumers they must also take on distributors’ responsibilities.</p>	<p>Producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf.</p>
<p>Compliance schemes and individual compliers have no direct responsibility for the costs of collection and treatment.</p>	<p>Schemes finance collection, treatment, recovery and environmentally sound disposal of WEEE from private households, in proportion to their market share.</p>	<p>Schemes finance collection, treatment and recycling.</p>
<p>Only accredited collectors would be able to sell “household PRNs” and “general PRNs”.</p>	<p>Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.</p>	<p>Only Approved Battery Treatment Operators and Approved Battery Exporters can issue evidence, based on waste delivered by a compliance scheme.</p>
Retailers’ obligations – B2C waste		
<p>We assume that retailers would continue to bear responsibility for imports and supply, but no obligation for collection.</p> <p>However, provision of “bring” containers in large retailers’ car parks would be optional.</p>	<p>Retailers either take back WEEE themselves, or register with the Distributor Take Back Scheme and pay for Designated Collection Facilities to be set up and operated.</p>	<p>Retailers above the <i>de minimis</i> level must take back battery waste from end-users free of charge [the Directive adds “unless alternative arrangements are equally effective.”]. They can request any scheme to collect from them portable batteries they have taken back.</p>

Producers' obligations - foreign distance sellers		
<p>The Regulations are silent. As a result, foreign suppliers selling direct to UK private consumers are not obligated.</p> <p>This is a growing problem, but is outside the scope of this report.</p>	<p>Must either appoint an authorised representative or join a compliance scheme.</p> <p>Importers should satisfy themselves that any manufacturer they deal with is registered. Enforcement action is likely to be taken first against the UK-based importer.</p>	<p>Definition of "producers" specifically includes distance sellers. There are no special provisions, but they would be caught by the requirement that producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme and that producers of industrial/automotive batteries must ensure that they are able to be taken back.</p>
Producers' obligations – B2B waste		
<p>C&I packaging waste would be subject to the same rules as B2C packaging waste, but the targets would be different.</p> <p>Compliance schemes and individual compliers would contract with collectors of packaging waste for the PRNs they need to meet the targets. In principle, they could use "household PRNs" or "general PRNs" but household PRNs would probably be more expensive and so would only be used as a top-up.</p> <p>Compliance schemes and individual compliers have no direct responsibility for the costs of collection and treatment.</p>	<p>All producers of non-household EEE above the <i>de minimis</i> level must join a compliance scheme and take responsibility for the management of B2B WEEE.</p> <p>The final user of the WEEE or his compliance scheme finances collection, treatment, recovery and environmentally sound disposal of WEEE, unless alternative arrangements are made with a third party.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>As 'the vast majority of industrial and automotive batteries are already collected and recycled because it is cost effective to do so' the Government designed the regulations 'to underpin these existing collection arrangements rather than replace them ... to provide a safety net should the cost [of waste management] ever outweigh the value of the recycled products'.</p> <p>Producers must take back waste industrial batteries of any chemistry, on request, from an end-user when supplying new industrial batteries or when the end-user is not able to return them to their supplier.</p>

Compliance schemes		
<p>Membership of a compliance scheme is optional.</p> <p>Compliance schemes would be subject to a robust approval process to ensure they have the ability to finance and manage collections. They would have to submit an application to the Agencies setting out an operating plan and evidence of funding etc. To ensure continuity, we suggest that schemes are approved for periods of five years. They would also have to submit a full report on activities with accounts to the authorities each year.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level. A single-member scheme is allowed, but has to bear its share of the overall cost (approval fee of £12,150 every 3 years and high admin costs limit attractiveness of this option).</p> <p>Schemes must be approved, and must co-operate with other organisations in developing working relationships with Waste Disposal Authorities and Designated Collection Facilities.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level.</p> <p>Compliance schemes must be approved and must publish an operational plan annually (to demonstrate compliance over the next 3 years).</p>
Evidence trading		
<p>PRNs can currently be traded between accredited reprocessors and obligated companies, and there would seem to be no reason why they should not be traded between accredited collectors and obligated companies.</p>	<p>Trading of evidence between schemes is not permitted, but sub-contracting in advance of WEEE collection and processing is allowed.</p>	<p>Evidence trading is permitted. Evidence distinguishes between lead-acid, NiCd and other batteries.</p>
Producers below the <i>de minimis</i> level		
<p>Producers that POM less than 50 tpa and a turnover of no more than £2 million p.a. have no obligations.</p> <p>Hence the Regulations set “business targets” for obligated companies to plug the gap.</p>	<p>Producers that POM less than 5 tpa must register with an agency and report tonnage POM unless they join a scheme.</p> <p>A lot of WEEE is collected by commercial operators outside the formal WEEE system, and doesn't get counted towards achievement of the targets. The authorities may deduct an estimate of this from the obligated tonnage.</p>	<p>Producers that POM less than 1 tpa must register with an agency and report tonnage POM.</p>

Collection		
<p>Compliance schemes would contract with collectors of packaging waste for the PRNs they need to meet the targets. A certain %age of the total obligation would have to come from household PRNs, which would presumably command a different price from general PRNs, depending on their different supply and demand patterns.</p> <p>The schemes would pay the collectors when the PRNs are handed over to them. The price paid by the schemes could be determined by market forces, as in the current system.</p> <p>Alternatively, revised UK regulations might specify that producers have to fund the net cost of collection, sorting and related treatment operations if so required by EU legislation, or whatever share of costs the UK Government decided. In that case, the regulations would have to specify a formula for calculating that. Contracted collectors could be waste management companies, local authorities or voluntary organisations who collect and sort household and/or C&I packaging waste.</p>	<p>The WEEE Regulations are based on collection targets for B2C demonstrated by material delivered to an Approved Authorised Treatment Facility (AATF) or Approved Exporter (AE).</p> <p>A compliance fee must be paid if the targets aren't met. This is set after the end of each compliance period, so relying on it would be a risky compliance option.</p> <p>Designated Collection Facilities can be operated by a waste management company, a local authority or a compliance scheme.</p>	<p>The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.</p> <p>Producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme and finance collection, treatment, recycling, information for consumers and environment agency monitoring.</p> <p>They may collect batteries themselves, have their scheme take them back or obtain recycling evidence from an authorised facility which could be traded to the scheme in exchange for a fee reduction.</p>
<p>As the schemes would be obligated only to the level of the targets, some PRNs might remain unsold. The collectors would only lose the fee covering the administrative cost of buying unsold PRNs but would still benefit from the income from selling the materials in most cases. However, that reprocessing activity should nonetheless count towards the UK's national targets as, if all reproducers are accredited, it would be recorded. However, if not funded by producers it would not count towards producers' achievement of those targets. .</p>	<p>WEEE compliance schemes must take back all waste offered to them.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment of B2B waste. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>Battery compliance schemes must take back all waste offered to them.</p>

<i>The role of reprocessors and exporters</i>		
<p>PRNs would continue to serve as evidence of recycling, but would no longer be the funding mechanism.</p> <p>PRNs/PERNs would be issued to collectors by accredited reprocessors and exporters when qualifying material is delivered to them.</p> <p>Accredited reprocessors and exporters would not sell PRNs/PERNs (or whatever the evidence is called in future) for a market price, but would be paid a small fee to cover their administrative costs. All reprocessors with the necessary operating licences would be automatically accredited. The Agencies would audit all reprocessors.</p>	<p>Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.</p> <p>All evidence must be generated and issued to a PCS through the government-controlled Settlement Centre [which is not mentioned in the Regulations]. AATFs and AEs enter evidence details on the Centre's website, and PCSs can see how much evidence they have been allocated.</p>	<p>All collected batteries must be handed to Approved Battery Treatment Operators or Approved Battery Exporters, who record spent batteries received from the scheme concerned. Only ABTOs and ABEs can issue evidence.</p> <p>Once recorded, schemes may sell the evidence to other schemes.</p>

Our Option 3	The WEEE Regulations	The Waste Batteries and Accumulators Regulations
<i>B2C and B2B</i>		
<p>The PPWD makes no distinction between B2C and B2B packaging waste obligations, but Option 3 would involve different funding systems for B2C and B2B which implies separate targets.</p>	<p>The WEEE Directive and UK Regulations contain different legal requirements for B2C and B2B WEEE.</p> <p>The UK used to allow POM reporting to be split into B2C and B2B for the same product, but the Recast WEEE Directive says that dual-use EEE should be considered B2C.</p>	<p>The Batteries Regulations contain different legal requirements for portable and industrial/automotive batteries.</p>
<i>The role of local authorities</i>		
<p>To collect packaging waste, either directly or via their waste collection contractor, and pass the collected material on to compliance schemes (or individual producers).</p>	<p>Local authorities have no obligation to collect WEEE, but can continue to collect it at civic amenity sites if registered as Designated Collection Facilities, or else collect and treat it themselves outside the EPR system.</p> <p>A local authority Designated Collection Facility can require a compliance scheme to pick up material if the council has been unable to secure a collection contract.</p> <p><i>[The WEEE Directive says that Member States shall designate the operators allowed to collect WEEE from private households, so it would be legally possible for local authorities, waste management companies or producers to be given this responsibility.]</i></p>	<p>Local authorities have no obligation to collect waste batteries, but may collect them at civic amenity sites or from the kerbside.</p>

Targets		
<p>The structure of the targets is outside the scope of this report, but assuming the <i>de minimis</i> exemptions remain unchanged, “business targets” for recovery and recycling would continue to be set.</p> <p>With different funding systems for B2C and B2B waste, it is implicit that there would be household packaging waste targets. x% of recycling should be met through household waste until there is sufficient data to set a household waste collection target.</p>	<p>The WEEE Regulations set collection targets for B2C waste, but there are no targets for B2B waste. However, the EU Directive’s collection target applies to all WEEE.</p>	<p>The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.</p>
Producers’ obligations – B2C waste		
<p>Compliance schemes [and individual compliers?] would contract directly with local authorities for household packaging waste, even where segregated collection is undertaken by a private collector appointed by the local authority.</p>	<p>Producers above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf.</p> <p>If they sell direct to consumers they must also take on distributors’ responsibilities.</p>	<p>Producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf.</p>
<p>Schemes would fund a proportion of the collection cost.</p>	<p>Schemes finance collection, treatment, recovery and environmentally sound disposal of WEEE from private households, in proportion to their market share.</p>	<p>Schemes finance collection, treatment and recycling.</p>
<p>There would have to be a control system to ensure that material was actually recycled, either by agency audits or through evidence supplied by accredited reproducers and exporters.</p>	<p>Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.</p>	<p>Only Approved Battery Treatment Operators and Approved Battery Exporters can issue evidence, based on waste delivered by a compliance scheme.</p>
Retailers’ obligations – B2C waste		
<p>We assume that retailers would continue to bear responsibility for imports and supply, but no obligation for collection.</p> <p>However, provision of “bring” containers in large retailers’ car parks would be optional.</p>	<p>Retailers either take back WEEE themselves, or pay for Designated Collection Facilities to be set up and operated.</p>	<p>Retailers above the <i>de minimis</i> level must take back battery waste from end-users free of charge [the Directive adds “unless alternative arrangements are equally effective.”]. They can request any scheme to collect from them portable batteries they have taken back.</p>

<i>Producers' obligations - foreign distance sellers</i>		
<p>The Regulations are silent. As a result, foreign suppliers selling direct to UK private consumers are not obligated.</p> <p>This is a growing problem, but is outside the scope of this report.</p>	<p>Must either appoint an authorised representative or join a compliance scheme.</p> <p>Importers should satisfy themselves that any manufacturer they deal with is registered. Enforcement action is likely to be taken first against the UK-based importer.</p>	<p>Definition of “producers” specifically includes distance sellers. There are no special provisions, but they would be caught by the requirement that producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme and that producers of industrial/automotive batteries must ensure that they are able to be taken back.</p>
<i>Producers' obligations – B2B waste</i>		
<p>In practice, large end-users already sort their waste where facilities are in place, but only in Scotland is it a legal requirement for end-users to separate their waste for recycling. We recommend this for the other UK jurisdictions.</p> <p>Alternatively, sorting by end-users could be promoted by.</p> <ul style="list-style-type: none"> waste management companies accepting packaging waste at their transfer stations free of charge. Transport between end-user and depot would be funded by the end-user or from fees paid by producers; or end-users could be paid as an incentive to sort packaging waste for recycling. End-users could also be paid a recycling incentive per tonne. 	<p>All producers of non-household EEE above the <i>de minimis</i> level must join a compliance scheme and take responsibility for the management of B2B WEEE.</p> <p>The final user of the WEEE or his compliance scheme finances collection, treatment, recovery and environmentally sound disposal of WEEE, unless alternative arrangements are made with a third party.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>As ‘the vast majority of industrial and automotive batteries are already collected and recycled because it is cost effective to do so’ the Government designed the regulations ‘to underpin these existing collection arrangements rather than replace them ... to provide a safety net should the cost [of waste management] ever outweigh the value of the recycled products’.</p> <p>Producers must take back waste industrial batteries of any chemistry, on request, from an end-user when supplying new industrial batteries or when the end-user is not able to return them to their supplier.</p> <p>Individual compliance is preferable for producers of industrial batteries.</p>

<i>Compliance schemes</i>		
<p>Membership of a compliance scheme is optional.</p> <p>Compliance schemes would be subject to a robust approval process to ensure they have the ability to finance and manage collections. They would have to submit an application to the Agencies setting out an operating plan and evidence of funding etc. To ensure continuity, we suggest that schemes are approved for periods of five years. They would also have to submit a full report on activities with accounts to the authorities each year.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level. A single-member scheme is allowed, but has to bear its share of the overall cost.</p> <p>Schemes must be approved and must co-operate with other organisations in developing working relationships with Waste Disposal Authorities and Designated Collection Facilities.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level.</p> <p>Compliance schemes must be approved and must publish an operational plan annually (to demonstrate compliance over the next 3 years).</p>
<i>Evidence trading</i>		
<p>There would be no opportunity for evidence trading, as there would be a direct contractual relationship between local authorities/waste management companies and obligated producers for household material, For B2B waste, individual arrangements could be facilitated through the activities of compliance schemes.</p>	<p>Trading of evidence between schemes is not permitted, but sub-contracting in advance of WEEE collection and processing is allowed.</p>	<p>Evidence trading is permitted. Evidence distinguishes between lead-acid, NiCd and other batteries.</p>
<i>Producers below the de minimis level</i>		
<p>Producers that POM less than 50 tpa and a turnover of no more than £2 million p.a. have no obligations.</p> <p>Hence the Regulations set “business targets” for obligated companies to plug the gap.</p>	<p>Producers that POM less than 5 tpa must register with an agency and report tonnage POM unless they join a scheme.</p> <p>A lot of WEEE is collected by commercial operators outside the formal WEEE system, and doesn't get counted towards achievement of the targets. The authorities may deduct an estimate of this from the obligated tonnage.</p>	<p>Producers that POM less than 1 tpa must register with an agency and report tonnage POM.</p>

Collection		
<p>Compliance schemes and individual compliers would contract with local authorities for the material they need to meet their targets.</p> <p>Compliance schemes' obligations would continue to be the sum of their members' obligations.</p>	<p>The WEEE Regulations are based on collection targets for B2C demonstrated by material delivered to an Approved Authorised Treatment Facility (AATF) or Approved Exporter (AE).</p> <p>A compliance fee must be paid if the targets aren't met. This is set after the end of each compliance period, so relying on it would be a risky compliance option.</p> <p>Designated Collection Facilities can be operated by a waste management company, a local authority or a compliance scheme.</p>	<p>The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.</p> <p>Producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme and finance collection, treatment, recycling, information for consumers and environment agency monitoring.</p> <p>They may collect batteries themselves, have their scheme take them back or obtain recycling evidence from an authorised facility which could be traded to the scheme in exchange for a fee reduction.</p> <p>Retailers above the <i>de minimis</i> level must take back battery waste from end-users free of charge. They can request any scheme to collect from them portable batteries they have taken back.</p>
<p>Compliance schemes and individual compliers would pay for material only on condition that it meets agreed quality specifications.</p>	<p>WEEE compliance schemes must take back all waste offered to them.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment of B2B waste. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>Battery compliance schemes must take back all waste offered to them.</p>

<i>The role of reprocessors and exporters</i>		
<p>UK reprocessors would be licensed and would ensure that waste was tracked and counted separately from non-packaging.</p> <p>Schemes would liaise with exporters who would provide evidence that exported waste was reprocessed in a way equivalent to EU standards.</p>	<p>Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.</p> <p>All evidence must be generated and issued to a PCS through the government-controlled Settlement Centre [which is not mentioned in the Regulations]. AATFs and AEs enter evidence details on the Centre's website, and PCSs can see how much evidence they have been allocated.</p>	<p>All collected batteries must be handed to Approved Battery Treatment Operators or Approved Battery Exporters, who record spent batteries received from the scheme concerned. Only ABTOs and ABEs can issue evidence.</p> <p>Once recorded, schemes may sell the evidence to other schemes.</p>

Our Option 4	The WEEE Regulations	The Waste Batteries and Accumulators Regulations
<p><i>B2C and B2B</i></p> <p>The PPWD makes no distinction between B2C and B2B packaging waste obligations, but Option 4 would imply separate targets for B2C and B2B.</p>	<p>The WEEE Directive and UK Regulations contain different legal requirements for B2C and B2B WEEE.</p> <p>The UK used to allow POM reporting to be split into B2C and B2B for the same product, but the Recast WEEE Directive says that dual-use EEE should be considered B2C.</p>	<p>The Batteries Regulations contain different legal requirements for portable and industrial/automotive batteries.</p>
<p><i>The role of local authorities</i></p> <p>Local authorities would have no operational role in the segregated collection of packaging waste (and probably non-packaging paper) from households, unless contracted to do so by a compliance scheme.</p> <p>Local authorities' main involvement would be to give permission for collection containers to be sited on public land.</p>	<p>Local authorities have no obligation to collect WEEE, but can continue to collect it at civic amenity sites if registered as Designated Collection Facilities, or else collect and treat it themselves outside the EPR system.</p> <p>A local authority Designated Collection Facility can require a compliance scheme to pick up material if the council has been unable to secure a collection contract.</p> <p><i>[The WEEE Directive says that Member States shall designate the operators allowed to collect WEEE from private households, so it would be legally possible for local authorities, waste management companies or producers to be given this responsibility.]</i></p>	<p>Local authorities have no obligation to collect waste batteries, but may collect them at civic amenity sites or from the kerbside.</p>

Targets		
<p>The structure of the targets is outside the scope of this report, but assuming the <i>de minimis</i> exemptions remain unchanged, “business targets” for recovery and recycling would continue to be set.</p> <p>With different funding systems for B2C and B2B waste, it is implicit that there would be household packaging waste targets. x% of recycling should be met through household waste until there is sufficient data to set a household waste collection target.</p>	<p>The WEEE Regulations set collection targets for B2C waste, but there are no targets for B2B waste. However, the EU Directive’s collection target applies to all WEEE.</p>	<p>The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.</p>
Producers’ obligations – B2C waste		
<p>Producers would be obliged to pay the full cost of segregated collection. To ensure equitability, schemes would have to ensure nationwide coverage so that all local authorities receive a service.</p> <p>Therefore, schemes would take full operational and financial responsibility for the collection of packaging waste from household sources.</p>	<p>Producers above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf.</p> <p>If they sell direct to consumers they must also take on distributors’ responsibilities.</p>	<p>Producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme that has to meet collection targets on their behalf.</p>
	<p>Schemes finance collection, treatment, recovery and environmentally sound disposal of WEEE from private households, in proportion to their market share.</p>	<p>Schemes finance collection, treatment and recycling.</p>
<p>There would be no opportunity for evidence trading, as compliance schemes would take direct responsibility for collection and delivery to accredited reproducers and exporters.</p>	<p>Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.</p> <p>Direct trading of evidence notes between schemes has not been possible since January 2014.</p>	<p>Only Approved Battery Treatment Operators and Approved Battery Exporters can issue evidence, based on waste delivered by a compliance scheme.</p> <p>Evidence trading is permitted. Evidence distinguishes between lead-acid, NiCd and other batteries.</p>

Retailers' obligations – B2C waste		
<p>We assume that retailers would continue to bear responsibility for imports and supply, but no obligation for collection.</p> <p>However, provision of “bring” containers in large retailers' car parks would be optional.</p>	<p>Retailers either take back WEEE themselves, or register with the Distributor Take Back Scheme and pay for Designated Collection Facilities to be set up and operated.</p>	<p>Retailers above the <i>de minimis</i> level must take back battery waste from end-users free of charge [<i>the Directive adds “unless alternative arrangements are equally effective.”</i>]. They can request any scheme to collect from them portable batteries they have taken back.</p>
Producers' obligations - foreign distance sellers		
<p>The Regulations are silent. As a result, foreign suppliers selling direct to UK private consumers are not obligated.</p> <p>This is a growing problem, but is outside the scope of this report.</p>	<p>Must either appoint an authorised representative or join a compliance scheme.</p> <p>Importers should satisfy themselves that any manufacturer they deal with is registered. Enforcement action is likely to be taken first against the UK-based importer.</p>	<p>Definition of “producers” specifically includes distance sellers. There are no special provisions, but they would be caught by the requirement that producers of portable batteries above the <i>de minimis</i> level must join a compliance scheme and that producers of industrial/automotive batteries must ensure that they are able to be taken back.</p>
Producers' obligations –B2B waste		
<p>Compliance schemes could provide specialist collection services for particular sectors on request (e.g. for chemicals drums, catering packaging waste alongside food waste, building trade packaging waste alongside construction waste, etc.)</p>	<p>All producers of non-household EEE above the <i>de minimis</i> level must join a compliance scheme and take responsibility for the management of B2B WEEE.</p> <p>The final user of the WEEE or his compliance scheme finances collection, treatment, recovery and environmentally sound disposal of WEEE, unless alternative arrangements are made with a third party.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>As ‘the vast majority of industrial and automotive batteries are already collected and recycled because it is cost effective to do so’ the Government designed the regulations ‘to underpin these existing collection arrangements rather than replace them ... to provide a safety net should the cost [of waste management] ever outweigh the value of the recycled products’.</p> <p>Producers must take back waste industrial batteries of any chemistry, on request, from an end-user when supplying new industrial batteries or when the end-user is not able to return them to their supplier.</p>

Compliance schemes		
<p>Membership of a compliance scheme is optional.</p> <p>Compliance schemes would be subject to a robust approval process to ensure they have the ability to finance and manage collections. They would have to submit an application to the Agencies setting out an operating plan and evidence of funding etc. To ensure continuity, we suggest that schemes are approved for periods of five years. They would also have to submit a full report on activities with accounts to the authorities each year.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level. A single-member scheme is allowed, but has to bear its share of the overall cost (approval fee of £12,150 every 3 years and high admin costs limit attractiveness of this option).</p> <p>Schemes must be approved and must co-operate with other organisations in developing working relationships with Waste Disposal Authorities and Designated Collection Facilities.</p>	<p>Membership of a compliance scheme is mandatory for producers above the <i>de minimis</i> level.</p> <p>Compliance schemes must be approved and must publish an operational plan annually (to demonstrate compliance over the next 3 years).</p>
Producers below the <i>de minimis</i> level		
<p>Producers that POM less than 50 tpa and a turnover of no more than £2 million p.a. have no obligations.</p> <p>Hence the Regulations set “business targets” for obligated companies to plug the gap.</p>	<p>Producers that POM less than 5 tpa must register with an agency and report tonnage POM unless they join a scheme.</p> <p>A lot of WEEE is collected by commercial operators outside the formal WEEE system, and doesn't get counted towards achievement of the targets. The authorities may deduct an estimate of this from the obligated tonnage.</p>	<p>Producers that POM less than 1 tpa must register with an agency and report tonnage POM.</p>
Collection		
<p>Schemes would contract with operators to provide a segregated collection service for packaging waste.</p> <p>This would be separate from collection services for non-packaging waste such as residual waste and food waste.</p>	<p>The WEEE Regulations are based on collection targets for B2C demonstrated by material delivered to an Approved Authorised Treatment Facility (AATF) or Approved Exporter (AE).</p> <p>A compliance fee must be paid if the targets aren't met. This is set after the end of each compliance period, so relying on it would be a risky compliance option.</p> <p>Designated Collection Facilities can be operated by a waste management company, a local authority or a compliance scheme.</p>	<p>The Batteries Regulations are based on collection targets for B2C rather than material delivered to a reprocessor or exporter.</p>

<p>Schemes would be obliged to take back all waste offered them which was capable of being recycled.</p>	<p>WEEE compliance schemes must take back all waste offered to them.</p> <p>Producers and business end-users are free to make alternative arrangements between themselves to finance collection and treatment of B2B waste. The end-user does not have a legal right to collection from their premises. The producer should have documented and auditable proof of any agreement that transfers obligations to the end-user.</p>	<p>Battery compliance schemes must take back all waste offered to them.</p>
<p><i>The role of reprocessors and exporters</i></p>		
<p>UK reprocessors would be licensed and would ensure that waste was tracked and counted separately from non-packaging.</p> <p>Schemes would liaise with exporters who would provide evidence that exported waste was reprocessed in a way equivalent to EU standards.</p>	<p>Only Approved Authorised Treatment Facilities and Approved Exporters can issue evidence, based on waste delivered from a Designated Collection Facility under an advance agreement with a compliance scheme.</p> <p>All evidence must be generated and issued to a PCS through the government- controlled Settlement Centre [which is not mentioned in the Regulations]. AATFs and AEs enter evidence details on the Centre's website, and PCSs can see how much evidence they have been allocated.</p>	<p>All collected batteries must be handed to Approved Battery Treatment Operators or Approved Battery Exporters, who record spent batteries received from the scheme concerned. Only ABTOs and ABEs can issue evidence.</p> <p>Once recorded, schemes may sell the evidence to other schemes.</p>