

Written submission from Have you got the Bottle?



A Modern Deposit Return System for Scotland



EXECUTIVE SUMMARY

A deposit return system is a collection system for used drinks container packaging, in which consumers pay a small deposit on every drinks container. This is refunded when the container is returned.

Overall Scottish recycling rates are still [below 50%](#), yet the Scottish Government has a target that 70% of all waste should be recycled or prepared for re-use by 2025.

Litter is a growing problem, with [MCS beach survey data](#) having found more than three empty drinks containers or lids for every 10m of Scottish beaches surveyed.

This causes problems for a wide range of bodies, including outdoor sports groups, local authorities, and businesses in the tourism sector.

Businesses are still paying high trade waste costs, and Scotland has significant room to expand the circular economy. Deposit return is a market-based solution that can help to tackle all these problems and change behaviour.

LEGISLATIVE BACKGROUND

- The Scottish Parliament gave Scottish Ministers the powers to introduce deposits in 2009.
- Unlike the carrier bag charge, the deposit paid on a can or bottle is refunded to the consumer in full when the empty item is returned.

PUBLIC ATTITUDES AND BEHAVIOUR

- 78.8% of Scottish residents [polled by Survation in 2015](#) supported deposits, with just 7.8% opposed.
- The ability of small economic incentives to change behaviour was demonstrated by the carrier bag charge, which [reduced bag usage by 80%](#) in the first year in Scotland and reduced litter.

RECYCLING AND LITTER

- UK-wide, around 57% of all plastic bottles are collected to be recycled: in places with modern deposit systems, like Norway, the figure for plastic drinks bottles is typically over 95%.
- Independent environmental research consultants [Eunomia estimate](#) that a deposit return system would lead to 18.25m fewer littered cans every year in Scotland, plus 21.9m fewer littered bottles.
- [Research](#) from Keep Scotland Beautiful supports the idea that “litter breeds litter”, i.e. reducing one sort of litter reduces the incidence of other items being littered.

LOCAL GOVERNMENT

- Litter collection and street bin emptying is a substantial cost to local authorities. Although in some situations councils receive a small revenue for sale of the mixed recycling they collect, sometimes they must pay to have it taken away. Either way, collection of refuse, litter and recycling is always a cost. [Research](#) commissioned by Zero Waste Scotland indicated deposits would save local government across Scotland £13m a year.
- That avoidable £13m cost is currently borne by all taxpayers: a deposit system would be fairer, as it would be funded in part by the small proportion of people who litter cans and bottles.
- Some deposit containers would be recycled through kerbside collections still, and [research](#) from New South Wales indicates the overall effect would be to increase councils' revenue from kerbside by 31% and cut local authorities' overall recycling costs by between 19% and 47%.
- No kerbside system is effective at collecting drinks consumed "on the go", which are typically either littered or left in street bins, increasing the frequency with which they have to be emptied.
- Litter significantly impacts on tourism, making visitors less likely to come back.

BUSINESS

- A handling fee would be paid to all businesses for each empty container they collect.
- Deposit return produces streams of high-quality and more valuable materials for recycling, which (alongside the small proportion of unredeemed deposits plus producer contributions) funds the system.
- The quality of the materials recovered through a deposit system would support a much stronger circular economy for Scotland, reducing dependence on oil and other raw materials, and boosting employment.
- All modern deposit systems have an exemption for small retailers who may not have space for even small volumes of returned empties. The appropriate size level for Scotland would have to be determined in consultation with small businesses
- Where shops are below the exemption size, they can still decide to take part where the handling fee makes it in their economic interest to do so.
- Most modern deposit systems allow businesses to use either manual "over the counter" return or a reverse vending machine. This is again a decision for businesses to make: the handling fee provides a revenue stream to cover the costs of participating in the system. These costs can include staff time, floorspace, and the acquisition or leasing of a machine if required.

- Businesses which sell drinks to be consumed on the premises, such as hotels, bars, and restaurants, already collect and separate their empty containers for trade waste collection. Instead of the often substantial costs of those trade waste contracts, their inclusion in the system would mean free collections plus the handling fee.
- Businesses supporting deposit return in Scotland include Coca-Cola GB, Black Isle Brewery, Changeworks Recycling, Boozy Cow, Luvians, Whitmuir Organics, Margiotta's, Jaw Brew, Williams Bros. Brewing Co., Bellfield Brewers, Kelburn Brewery, Giraffe Cafe, Skylark, Project Cafe, Cornelius Beer and Wine, the New Leaf Co-op, Locavore, Barney's Beer, Tattie Shaws, Fife Zoo and Wild Planet Explorers. The National Federation of Retail Newsagents have also pledged their support.

Deposit return systems in other countries work well for the public, for small businesses, and for local authorities. A system tailored to the needs of Scotland would bring the same benefits here, and help clean up our towns and cities as well as our seas and countryside, and would also increase high quality recycling.

A MODERN DEPOSIT RETURN SYSTEM FOR SCOTLAND

HISTORY IN SCOTLAND

A refundable deposit payable on drinks containers is not a new idea. An earlier version of this approach was introduced in 1905 in Scotland, when drinks manufacturers came together to agree a half penny deposit on empty bottles. Although this simple system worked well for refillable bottles for more than 50 years, [proposals to extend it](#) to cover single use cans and plastic bottles were defeated in Westminster in 1981.

INTERNATIONAL EXPERIENCE

In the early 1970s, modern deposit return systems, now also covering single use cans and bottles, began to come into effect in places like Oregon and British Columbia. This approach spread to other US states, and in the 1980s had begun to be adopted in Europe. As of 2017, more than a quarter of a billion people live in places which run modern deposit return systems. The newest system is Lithuania's, introduced in February 2016, with New South Wales scheduled to introduce deposits later in 2017.

"We feel an obligation to take care of our country, society and nature. That is why we wanted to design a deposit return system that would work as well as possible for citizens, producers, importers and traders. Today, we can be proud of our deposit return system, which brings us closer to the Lithuania we want to see - a cleaner, more beautiful and more modern country. A deposit return system in Scotland would benefit its people, its beautiful countryside and its producers and manufacturers. Any successful, modern business should be eager to get involved, as it will benefit them."

- Saulius Galadauskas, Head of the Lithuanian Brewers Association and Chairman of the Lithuanian deposit return system

In Australia, Canada and the US some territories use deposits and some do not. This illustrates how, although the adoption of deposits in the rest of the UK would be beneficial, there is no obstacle to Scotland adopting deposits first.

HOW DEPOSITS WORK

These systems vary according to local circumstances, but have a number of elements in common. A small deposit (for example, €0.10 in Estonia) is paid when a drink container is purchased, and then refunded in full to the consumer when the empty container is returned, either “over the counter” or through a reverse vending machine.

Containers bought in non-deposit territories (e.g. England, unless a similar system is adopted at the same time) cannot be returned to receive a fraudulent deposit, as barcodes on products or logos on their labels will indicate whether a deposit was paid. Many UK drinks manufacturers already sell into deposit territories, and are familiar with both of these requirements.

Cans and bottles are then returned to retail outlets or to delivery drivers when shopping is delivered from online retailers. “On-sales” companies such as bars, hotels and restaurants already separate their empties for trade waste collection, and in modern deposit systems like Norway’s, they are paid a handling fee by the deposit operator for each item returned to cover their costs, just as retailers are.

All modern deposit return systems use a not-for-profit system administrator, working under regulations that prescribe targets, the materials covered, handling fee levels and so on. The same would be expected to apply in Scotland.

“We’ve seen the benefits that a deposit return system for cans and bottles can have elsewhere in the world - here’s hoping Scotland can follow suit!”

- Royal Zoological Society of Scotland

A deposit system can apply to glass, metal and plastic drinks containers, and to both refillable and one-way drinks containers. The same system could also be used for Tetrapaks and similar drinks containers in future.

SYSTEM FUNDING

The following are the typical funding sources for modern deposit systems:

- unclaimed deposits - even with return rates above 90% this provides revenue for the system, and can be understood as those who litter or put empties in landfill paying the costs which would otherwise be externalised - for example, 45% of the system’s revenue in Norway comes from the roughly 5% of unredeemed deposits;
- a producer contribution, which in a best-practice system would be a fraction of a penny for each item sold; and
- recycle value - unlike the mixed and often low-quality material recovered through kerbside recycling, the high volumes of pure streams of high-quality

aluminium, glass and PET (plastic) recovered by deposit return systems provide a final revenue stream.

These high-quality materials can then be reused in manufacturing, reducing reliance on virgin raw materials, reducing costs, and supporting the circular economy. A single operator with the ability to plan strategically may well be able to smooth out the effects of price fluctuations, and also be supported by new circular economy businesses which would use those raw materials. Direct access to locally processed recyclate can offer producers consistent quality feedstock for use as recycled content in their bottles or cans, which substantially reduces their carbon footprint.

“Community Resources Network Scotland supports the concept of a Scottish deposit return system; its vision is a Scotland-wide system which will both fully engage with and benefit local community resource organisations.”

- CRNS

All deposit systems take a period of months to reach target return rates, given that many drinks being consumed in the first few months were purchased prior to the introduction of the system - i.e. initially more deposits are being brought into the system than are being paid out, even though the cost remains neutral for the consumer. For example, it took five months for the Lithuanian system to achieve an 80%+ return rate, and those early months help offset the setup cost for the system operator.

More information on potential setup costs is provided in the [2015 Eunomia report for Zero Waste Scotland](#). This report also considered the cost to retailers, especially those who might use reverse vending machines, which was estimated at between £28.5m and £29m per year. This is lower than the handling fees paid to businesses collecting empties, which were estimated in that document at between £36.1m and £37.2m a year. This would mean deposits would generate a net income for the retail sector of between £7.1m and £8.7m.

EARLY DISCUSSIONS

A deposit system for Scotland has been under consideration since Session 1 of the Scottish Parliament, and a [report](#) published in May 2003 noted that: *“Direct financial incentives, such as deposit schemes and reverse vending were generally supported in all focus groups. However, taxation or charging schemes were not.”*

In 2006 Woodlands Primary School in Cumbernauld submitted a petition to the Petitions Committee in support of deposit return ([PE986](#)), which was considered over the next three years, and the Committee wrote to the Scottish Government in 2008 requesting a Ministerial comment on the idea of a deposit system for Scotland.

PROGRESS IN SCOTLAND

SESSION THREE

The primary powers for deposit return were then passed by the Scottish Parliament as [Sections 84-87](#) of the Scottish Government’s Climate Change (Scotland) Act 2009 (Section 88 provides the primary basis for the carrier bag charge, eventually

introduced in 2014). The Act states that: “Scottish Ministers may make regulations under this section only where they consider it necessary or expedient to do so for the purpose of promoting or securing an increase in the recycling of materials.”

“We will also look to pilot a deposit return/reverse vending system for single use plastic, glass and aluminium containers and will work with partners in the retail sector to explore options.”

- The [2011 SNP manifesto](#)

SESSION FOUR

Following the election of a majority SNP Scottish Government at that election, pilots ran during 2013 at a number of locations across Scotland. [A report on the outcomes of this exercise](#) was produced by Zero Waste Scotland in 2015. That report concluded that “the material that was collected by the schemes was typically of very high quality”. As is inevitable, pilots in small “leaky” environments produce imperfect data, compared to a national system, and the report notes that “some challenges encountered were down to the fact these were standalone solutions, and would not be encountered in a wider, more consistent scheme”. These issues also apply to a single-manufacturer/single-product system like the glass returns previously operated by AG Barr.

In spring 2015 Zero Waste Scotland commissioned [a feasibility study into a national deposit return system](#), which concluded that:

“there were no parameters for which the Scottish market would cause critical problems such that a DRS was technically infeasible”;

“the effects of a DRS, in terms of recycling and litter reduction (including marine litter), would appear consistent with the aims of the European Commission to foster a circular economy”;

the estimated financial benefit associated with reduced air pollution and greenhouse gas emissions would be between £2.1m and £8.2m; and

there would be an estimated reduction in litter disamenity worth £205m across Scotland (note: this is separate from the direct costs of litter collection).

At the same time, Zero Waste Scotland published [a review of that feasibility study](#), which described the proposals as “a credible and well thought-through scheme design, based on overseas experience”.

SESSION FIVE

Prior to the 2016 Scottish election the Scottish Government began a series of stakeholder group meetings with organisations with an interest in this issue, and then in advance of that election three parties referenced deposit return in their manifestos.

“Deposit and Return schemes can increase the amount of high quality material being brought forward for recycling and help to reduce litter. They attach a value to the

materials and help end a throw away culture. We will give further consideration to proposals for a deposit and return scheme.”

- SNP

“Green MSPs will campaign for a Deposit Return Scheme for drinks bottles where a small deposit paid when buying cans or bottles is refunded when empty containers are returned.”

- Scottish Greens

“Develop a plan for a circular economy, using recycled materials as an economic resource and supporting a zero waste strategy, including taking forward successful pilot projects on reverse vending machines.”

- Liberal Democrats

Late in 2016, the Environment, Climate Change and Land Reform Committee established a subgroup to consider deposit return, comprising Kate Forbes MSP, Maurice Golden MSP, and Angus MacDonald MSP. This group’s work is now underway and Members on it have had discussions with relevant organisations. It is scheduled to report to the full Committee with recommendations before the 2017 summer recess.

INTERNATIONAL EXPERIENCE

The evidence from around the world is that modern deposit return systems deliver far higher rates of return and recycling of empty drinks containers than can be achieved by kerbside recycling alone.

The majority of household waste is still not recycled in Scotland ([SEPA figures](#)), and drinks containers are also regularly consumed “on the go” rather than at home, typically ending up in street bins or as litter rather than in kerbside recycling.

In contrast, the Norwegian deposit return system, one of the most modern in the world, saw 95.4% of plastic bottles and 96.6% of cans returned in 2014, according to the system operator’s [2015 annual report](#). The Finnish [rates for 2015](#) were 92% for plastic bottles, 95% for cans and 89% for glass bottles.

All systems of this sort take a while to bed in and achieve those return rates. However, the newest system, in Lithuania, announced its first year results in February 2017, with 74% of containers having been returned, significantly ahead of its target of 55% for the first twelve months. The year two target for Lithuania has been set at 90%.

The impact on litter is also very clear. A [DEFRA review of deposit systems](#) quoted research from the Danish Society for Nature Conservation, which reported that 95% of the cans collected during clean-ups were not part of the Danish deposit system, i.e. were originally sold outside Denmark.

“Spokes is very happy to support the APRS campaign for bottle deposits, which have been found to reduce broken glass on roads and paths in other countries.”

- Spokes

In 2014 Ocean Conservancy [surveyed](#) beaches in Germany (which has a deposit return system) and Spain (which does not yet). On the German beaches they found an average of 24 drinks containers per kilometre. The comparable Spanish figure was more than thirteen times higher, at more than 330 containers per kilometre.

Australia provides perhaps [a more direct comparison](#). Drinks containers make up only 2.2% of litter in South Australia, which uses deposits. In Western Australia, which will introduce deposits in 2018, the figure is 13.2%.

“The Marine Conservation Society strongly supports the introduction of a deposit return system in Scotland as our Beach Litter surveys show that drinks containers can make up to 14% of litter on Scottish beaches.”

- Marine Conservation Society

With 40 countries or territories now using deposits for one-way drinks containers around the world, there is growing international expertise in establishing such systems, which would be available to Scotland when adopting deposits.

BUSINESS BENEFITS BY SECTOR

A wide range of businesses would have a role to play if Scotland were to introduce a deposit return system.

1. PRODUCERS AND IMPORTERS

Producers and importers of soft and alcoholic drinks typically contribute a small fee per item sold through a deposit system. For example, in Estonia this fee varies between 0.02 and 0.3 Euro cents per plastic or glass bottle.

When they sell their products on to retailers and wholesalers, they charge the deposit on each item. This money is passed on to the system operator, and is then returned to retail and catering businesses when their empties are collected.

Businesses then benefit from the greater availability of better quality recycled materials. Coca Cola’s communications director in Norway, Stein Rømmerud, [has said](#) that being able to use 50% recycled materials allows Coca Cola to reduce environmental emissions and oil consumption, and that this wouldn’t have been possible without the deposit system Norway uses. Lidl in Germany have been able to almost completely [close the loop](#) here, collecting their own-brand bottles, then recycling and remanufacturing new bottles from them for sale in their shops.

The adoption of deposits by some US states but not others allows an assessment of the impact of deposits on prices to consumers. 2006 research by the Tennessee campaign for a deposit system found that a 12-pack of Pepsi cans cost an average of \$4.22 in states which used deposits, excluding the deposit, and an average of \$4.34 in states which did not yet use deposits.

There are brand benefits too: Keep Britain Tidy did [research](#) which suggested a third of the public would be less likely to buy from companies whose products they see littered on the streets.

“We would absolutely love to see a deposit return system introduced into Scotland and the rest of the UK on glass, metal and plastic containers. The mechanics would be fairly simple to organise, the reward in terms of the environment on many levels would be tremendous. What’s not to like?” - Williams Bros Ltd, brewers

2. RETAILERS

Retailers pay the deposit on each item they buy from producers, importers or wholesalers, and then charge that deposit on to consumers, meaning deposits are again financially neutral for them. When empty containers are returned, retailers similarly pay out the deposit which is returned to them when those containers are collected by the system operator.

All retailers that take part in a deposit system are only required to accept returns of item types they sell - so, for example, if they only sell drinks in cans and plastic bottles, they are not required to accept glass returns.

In modern deposit systems, small retailers with a floorspace below a certain size are exempt from having to accept returns. For example, in Lithuania, shops below 300m² (3229ft²) do not have to take part.

A level set according to floorspace, rather than rateable value, would be more appropriate for Scotland: the issue is space, after all, and an approach based on rateable value would risk unfairness to retailers with small city-centre premises which may have a higher rateable value.

Businesses with premises below the exemption level can choose to accept returns if they decide it is in their economic interest to do so. Reasons for choosing to do so would include:

- the handling fee paid on each item;

- the increased footfall from customers bringing empties back; and

- the likelihood of those customers spending their returned deposits in the same shop.

“Small Scottish grocers like ours are at the heart of our communities. We want to be part of a culture where nothing is wasted, and where empties are reused or recycled. A deposit return system needs to take account of the needs of shops that are too small to take part, and it needs to work well for all the retailers who do get involved.”

- Tattie Shaws

Those retailers who choose to participate can also decide between a small reverse vending machine or “over the counter” returns, which some in Scotland still do with bottles from producers like Dunns or Bon Accord. For example, the Norwegian operator reported in 2015 that there were just 3,700 machines across all 15,000

outlets. Either way they receive a revenue stream through the handling fee. Same-day free collections of returned items can typically be requested through an app, as in Norway, which will also provide live updates on the revenue each collection has generated.

Supermarkets and other larger retailers are required to accept returns of item types they sell, to ensure convenience for customers. International experience shows that those larger retailers will typically find it cost-effective to use reverse vending machines to accept returns. The volume of drinks they sell and the volume they can expect to see returned mean the small handling fee on each item will relatively quickly cover the up-front cost of machine acquisition.

“Margiotta Food and Wine is a family-run chain of convenience stores in Edinburgh. We would happily to provide a drop off location for bottle returns in the capital. Not only would this help reduce the litter and waste throughout local communities but it is one more simple thing we can do to help conserve the environment.”

- Margiotta Food and Wine

In some deposit systems manufacturers of reverse vending machines offer those machines either leased or free of charge in return for a greater share of the handling fee.

Because collection from rural areas, especially island communities, is more expensive than collection from urban Scotland, a free collection usually operates as a subsidy from urban to rural areas. Commercial premises often pay more for trade waste disposal in these circumstances in rural areas.

“Not only is a deposit return system staggeringly effective, it would also be easy - even for a small business like ours. Over the counter collection of tins and PET could (and should) be implemented tomorrow, dramatically reducing waste and making a small dent in our overheads.” - Cornelius Beer and Wine

3. ON-SALES

Companies which sell drinks to be consumed on the premises, such as hotels, bars, cafes and restaurants (also known as HORECA, for Hotels, Restaurants and Catering), are one of the sectors which would see the most striking benefits from the adoption of a deposit return system.

These businesses are already doing the work of collecting and separating empty cans and bottles for collection through trade waste contracts. These contracts are often expensive, in some cases thousands of pounds a year. Under a deposit return system the collections would be free, removing the whole of that cost, and can also be arranged more flexibly than through a typical trade waste contract.

“Changeworks Recycling believes a deposit system would be good not only for the waste management industry but also for the companies for whom we currently provide trade waste collections. Larger restaurants, for example, currently pay up to £5,000 a year just to have their glass collected, a cost that would instead be met by the deposit system operator.” - Ken McLean, General Manager, Changeworks

In addition, with systems like Norway's such businesses would receive the handling fee for each item returned. This is typically a small revenue, but busy bars and restaurants could see a substantial new income stream from the fee.

As with retailers, bars, cafes, restaurants and so on would pay the deposit to their suppliers for each item. They typically do not add the deposit to the purchase price, recouping the deposit directly when they return their empties. Premises where customers may leave with empties, such as beachside cafes, can choose to charge the deposit and return it to customers when empties are brought back to the counter. Either way, the deposit itself is neutral.

"We are a small Perth-based social enterprise that operates two busy cafes and an outside catering business amongst other projects. We are passionate about creating awareness and making a difference to our environment on a local and national scale. This innovative scheme will not only be good for litter and waste reduction, it will also help the local economy and create more opportunities for businesses." - Giraffe Trading

4. TOURISM

In addition to the on-sales benefits which would be of benefit to a proportion of the hospitality sector, all tourism is affected by the prevalence of litter. [In 2015](#) 14.6m tourists visited Scotland, spending a total of around £8.9bn. In 2013 [Eunomia reviewed](#) the evidence of the indirect costs of litter around the world, including data from Sweden which suggested beach litter reduced tourism by between 1% and 5%.

"As users of beautiful places, it's always disappointing to find glass and cans discarded there and posing a threat to tourism and wildlife. A deposit return system in Scotland would reduce broken glass and litter, like such systems have done in other countries." - Backcountry.scot

5. WASTE INDUSTRY

Waste management companies already involved in the collection of recyclable materials would see more business overall, given that more drinks containers will be diverted from landfill and from litter. Existing trade waste contracts for non-deposit materials like cardboard and food waste would be unaffected. Working through a single non-profit operator for deposit materials would also provide a clearer and more predictable commercial environment for these companies.

"A bottle deposit scheme would help consumers and producers make the step-change required to reinvigorate the country's stalling recycling performance and help us to unlock the value in packaging as a commodity, which can be put back into the supply chain rather than throwing it away."

- David Palmer-Jones, chief executive of Suez Recycling and Recovery UK, February 2017

6. CIRCULAR ECONOMY

All parties at Holyrood are on record as supporting the circular economy, where valuable materials are recovered for reuse or recycling. This brings environmental

benefits, such as lower dependence on oil and reduced climate impact, and economic benefits, including better quality materials available locally at more affordable prices.

“More extensive expansion of circular economy activities could more than double these figures in the UK, creating around half a million jobs (gross), reducing unemployment by around 102,000, and potentially offsetting around 18 per cent of the expected loss in skilled employment over the next decade.”

- WRAP and Green Alliance, 2015

Manufacturers of soft and alcoholic drinks alike could benefit from this approach in Scotland, cutting packaging costs as well as emissions, and reducing dependence on international supplies of raw materials that are often subject to substantial price fluctuation.

Food and drink is our largest export sector, [80% by value](#) of which is from the whisky industry. Being able to access a better stream of clean returned glass bottles would allow a higher proportion of whisky bottles to be made from recycled materials, cutting energy costs and helping to improve the industry’s environmental performance. WRAP and Green Alliance [estimated in 2015](#) that, UK-wide, the circular economy could generate up to 517,000 new jobs by 2030.

“Jaw Brew is a family run brewery and prides itself in doing business the most eco-friendly way possible. We only use natural ingredients and our spent grain goes to feed pigs, waste hops are used as garden mulch and we even make a beer out of unsold bread as part of the Circular Economy movement. Having lived in Germany in an earlier life, we have experienced the benefits and simplicity of being able to re-use bottles of all types. We would be delighted to be part of a deposit return system and think this should be an industry-wide initiative. Any help we can give to make this happen would be willingly given.”

- Jaw Brew

LOCAL GOVERNMENT IMPACTS

There are three main ways in which deposits affect the work done by local councils:

- reduced need for litter collection;
- lower pressure on street bins, so fewer collections required and lower gate fees or landfill tax associated with disposal; and
- a changed mix of materials collected through kerbside and on-street recycling, and optimisation of collection frequency given the presence of fewer empty containers (largely air, for volume purposes).

It is highly significant that two local authorities, [Aberdeenshire](#) and [Midlothian](#), have already unanimously backed the campaign and written to the Scottish Government to urge Ministers to introduce a deposit system for Scotland.

1. COST SAVINGS

The [Zero Waste Scotland review](#) of the 2015 feasibility study suggested Scotland's 32 local authorities would see a net aggregate saving of £13m per year, comprised of £1m reduced costs for household waste recycling centres, £5m from changes to kerbside recycling, and £7m from lower levels of littering, leading to fewer street bin collections being required. It should be noted that the balance of these savings will depend on the geography and size of each local authority.

These figures are consistent with international research into the benefits for local government of a deposit return system. A 2012 report commissioned by the Local Government Association of New South Wales estimated annual savings from deposits at AU\$9-\$24 per household. Research conducted into a pilot deposit system in Cadaqués, a town in Catalunya with a population below 3,000, showed net annual savings for local government there of between €23,000 and €33,605.

The issues of litter and street bins are closely related. One estimate from a council waste official is that empty cans and bottles make up between 30% and 40% of the material recovered from urban street bins by volume. Most of this volume will be air, but this means bins fill up and potentially spill over far more quickly. City of Edinburgh Council, for example, received [53,000 complaints](#) about missed collections or overflowing bins in the year to July 2016. In terms of the volume of litter that could be avoided, [Eunomia calculate](#) that a deposit system would reduce littered cans by 60,000 a day and bottles by 50,000 a day in Scotland, equivalent to 18.25m fewer littered bottles every year, plus 21.9m fewer littered cans.

2. BEHAVIOURAL CHANGE

Although cans and bottles make up a substantial proportion of litter in Scotland by weight or volume, many frequently littered items would of course not be covered by a deposit system. However, the [research is consistent](#) that "litter breeds litter", i.e. people are more likely to drop litter where there is already litter present, so reducing the incidence of one set of currently littered and highly visible items would have a knock-on effect on other items.

One area that would have to be resolved is where local authorities have signed long-term contracts with waste management firms that require the flow of a certain volume of waste. Already some local authorities report that they are "paying for air" through contracts which failed to predict future declines in waste, although one such facility, the Lerwick District Heating and Energy Recovery Plant, is aging and its future [has been in doubt](#).

"Many people have fond memories of bottle deposits and we know that a modern deposit return system could work here just as well as it does in so many places around the world. The international evidence is mounting that this is a win-win situation, an opportunity to save substantial sums of money and protect the environment at the same time. Better use of resources means we can reduce waste and litter, boost employment in the circular economy and contribute to tackling climate change. Aberdeenshire Council's leaders will now be writing to the Scottish Government to support the introduction of deposit return for Scotland."

- Councillor Paul Johnston, Aberdeenshire, March 2016

It seems likely assistance from the Scottish Government may be required in these cases. Where communities have long-term incinerator contracts, such support may also be required, although glass and cans cannot be disposed of in this way in any case.

3. RELATIONSHIP WITH KERBSIDE COLLECTIONS

Scotland already uses kerbside bins to collect recyclable materials from homes, and research conducted for the Local Government and Shires Association of New South Wales shows that the introduction of a deposit return system would make kerbside more financially sustainable for local authorities. The [full report](#) concludes that:

- Kerbside recycling would contain 17% less material [by weight];
- 5% of the material in the remaining kerbside bin would be unreturned [deposit] material;
- Due to the value of the unredeemed deposits, MRF [materials recycling facility] revenues would be 31% higher;
- Recycling is likely to result in a payment as opposed to a charge to councils at the MRF gate;
- Councils' overall recycling costs would be reduced by 19-47%;
- NSW councils could save \$23 to \$62 million annually on recycling costs; and
- Councils across Australia could save \$69 to \$183 million annually.

4. RESPONSIBILITY FOR LITTER COSTS

The current model of waste management means costs are effectively met by taxpayers, whether through council tax or via central government, with those who litter paying the same as those who do not. This unfairness would be greatly eased with a deposit system funded in part through unreturned deposits. A deposit system would also mean drinks manufacturers and importers would be making a contribution to tackling the litter problem caused by their products, effectively [best practice within Extended Producer Responsibility](#).

“For far too long local authorities have been left to pick up after the drinks industry. Local taxpayers across Scotland pay substantial sums to collect littered cans and bottles, to empty street bins, and to pick up household waste. Deposit return would bring us very welcome cost savings, estimated at £13 million a year across Scotland, as well as sharply reducing our litter problem and bringing the prospect of more jobs locally in the recycling industry. I’m therefore delighted to secure backing for this approach from all parties here on Midlothian Council. We will be urging the Scottish Government to bring forward a deposit return system for drinks cans and bottles as soon as possible after the Holyrood election. We will also be working with other councils, including Aberdeenshire, to ensure that the system chosen fits well with our existing services and delivers the maximum benefit for Midlothian residents.”

- Councillor Ian Baxter, Midlothian, March 2016

THE PUBLIC

For consumers, of course, deposits are financially neutral except on items which they choose not to return. Successful deposit systems require a wide range of possible return locations, and this clearly increases the convenience for the public. When people shop for consumption at home, empty containers can be easily returned on their next visit. Where households order groceries online, empty drinks containers can be returned in the same vehicle that delivered them.

The most recent polling on public attitudes to deposits in Scotland was conducted by Survation for the Have You Got The Bottle? campaign in February 2015.

The question asked was:

Elsewhere, including in Denmark, Canada and Germany, a small deposit is paid to retailers when you buy drinks cans and bottles and fully refunded by retailers when you return the container, in order to increase recycling and reduce litter. To what extent would you support or oppose the introduction of a similar type of system in Scotland?

Strongly support: 41.1%

Somewhat support: 37.7%

TOTAL SUPPORT: 78.8%

Neither support nor oppose: 12.7%

Somewhat oppose: 5.2%

Strongly oppose: 3.3%

TOTAL OPPOSE: 8.5%

This figure is even higher than support for the carrier bag charge, where [Zero Waste Scotland found](#) 59% of the public supported it while 20% were opposed. This charge was a similar policy initiative to inspire behaviour change, and has been [widely welcomed](#): both policies have the potential to reduce the rates of littering of unrelated items, given the principle that “litter breeds litter”, [widely accepted](#) by industry.

“The carrier bag charge in Scotland has been very successful, bringing about a reduction in plastic bag use by 80% in its first 6 months and changing people’s shopping habits permanently.” - Friends of the Earth Scotland, June 2015

The level of support in Scotland is comparable to international data, such as the [80% support](#) found in Australia in 2008, although more recent data there showed [90% support](#) in New South Wales. In Iowa, where deposits have been in use since 1978, current polling also shows [almost 90%](#) back the existing system.

Polls also show significant concern with the status quo, especially marine litter. In November 2016 Survation found that [90% of Scottish residents polled](#) were concerned about marine litter.

“University of Dundee were part of Zero Waste Scotland’s ‘Reverse Vending trial’ in 2012-13, where we introduced reverse vending machines on our campus. A survey of our students during the trial showed that over 70% of those respondents who had used the machines were encouraged to recycle more. Because of this deposit return system, we have definitely seen greater willingness among our students to recycle more. We have actually continued using the reverse vending machines and they are now a permanent feature that people use. People in Scotland deserve the opportunity to be rewarded for recycling more through a national deposit return system and we encourage other universities and colleges to take part in this campaign.” - University of Dundee

OTHER BENEFITS

1. HELPING TACKLE CLIMATE CHANGE

The European Container Glass Federation [calculate](#) that using 100% recycled glass rather than new raw materials reduces CO2 emissions by about 58%, in addition to saving on transport-related emissions.

The benefits are even clearer with [aluminium cans](#). The energy required to make a new can from a clean supply of recycled cans is 95% lower than the energy required to use completely new materials.

“Deposit return systems have been shown to work elsewhere, and so are certainly worth exploring here. Our wasteful lifestyles damage nature and the climate, so reducing the waste we produce is essential if we are to reduce our environmental footprints.” - WWF Scotland

2. REDUCING MARINE LITTER

This country, like others around the world, has a growing problem of littered plastics in the marine environment. A [recent report](#) by the Ellen MacArthur Foundation estimated that 8 million tonnes of plastic go into the oceans every year, and that by 2050 this waste plastic will outweigh all fish. Although the costs are less obvious than those associated with litter cleanup on land, the problems are more persistent in part because there is no effective option for collecting these items in the marine environment.

The Marine Conservation Society, which conducts [an annual national beach clean](#), found an average of 35.3 drinks container items, including lids, for each 100m stretch of Scottish beaches they surveyed.

“Surfers Against Sewage is campaigning for a 50% reduction in marine litter by 2020. Surfers Against Sewage support the introduction of a container deposit system for Scotland as it would be a great step towards achieving our goal and reducing marine litter.” - Surfers Against Sewage

3. BOOSTING RECYCLING RATES

A Recycle Now [report from October 2016](#) estimated that, UK-wide, 16 million plastic bottles are not recycled each year, around 44% of the total sold, in contrast to return rates of around 95% achieved in countries like Norway that use deposits. Scottish Government [figures from 2013](#) indicated that 22,000 tonnes of plastic bottles alone are landfilled in Scotland each year, a resource that would be worth £6m if recovered.

The [Scottish Government's Zero Waste Plan](#), published in 2010, sets a target of 70% of all waste to be recycled by 2025. On current trends there is no prospect of cans and bottles approaching this level, which reduces the likelihood of meeting that overall target. Conversely, in year one of the Lithuanian deposit return system 75% of cans and bottles were returned, and they have set a target of 90% for the second year.

Currently, cans and bottles are a drag on our overall recycling rate, whereas with a deposit system they would be likely to be recycled at a higher rate than other materials, contributing to a higher national figure.

There is no reason Scotland could not expect to see similar return rates to those already seen in countries which operate deposit systems, rates which would significantly exceed the overall target level and contribute to us meeting the objective of 70% by 2025. Work will still of course be required to improve kerbside collection for materials that cannot be brought into a deposit system, although there may be opportunities for other economic measures, such as charges on items like single-use coffee cups.

“Eco Congregation Scotland supports a Scottish deposit return system as a sensible step towards reducing litter and increasing recycling rates. This will benefit local communities, the natural world and help reduce carbon emissions.” - Eco Congregation Scotland

UK-WIDE CONTEXT

Interest in the idea of a deposit return system is growing at Westminster. In November 2016 an [Early Day Motion](#) supporting the idea was signed by MPs from eight parties. Then, in March 2017, the Environmental Audit Committee [launched an inquiry](#) into disposable packaging, focussing on coffee cups and plastic bottles.

The Chair of the committee said: *“Our inquiry will be taking a serious look at solutions like the use of different materials, behaviour change, better recycling and bottle deposit return schemes.”*

Meanwhile [DEFRA's litter strategy](#), published in April 2017, includes the following commitment: *“As well as voluntary models, the working group will consider regulatory options and measures to target particular types of item or product. For its first piece of work, Ministers will ask the group to consider the advantages and disadvantages of different types of deposit and reward and return schemes for drinks containers, and to provide advice by the end of 2017.”*

The issue was also [debated in the Welsh Assembly](#) in December 2015, and the Welsh Conservatives have backed the idea. Their leader, Andrew Davies, [said](#):

“Deposit refund schemes operate effectively the world over, and can financially incentivise recycling and reduce waste significantly.” In April 2017 Plaid Cymru [secured majority support for a deposit return system](#) in the Welsh Assembly.

“... a deposit-return scheme, through which customers pay a small additional charge for cans and bottles and are paid back when they return the empties, will incentivise people who do not already recycle and, indeed, will introduce an element of resource saving into our economy. This scheme should be available for plastic cans and bottles as well as metal ones and glass ones. Deposit schemes could also save local authorities money in the long-term through lowering the amount of household waste to be managed, reducing the need for sorting and disposal facilities, such as incinerators and landfill, and reducing the need for street cleaning.” - Simon Thomas AM

The idea that Scotland might lead the way on deposits and subsequently be followed by other parts of the UK was also raised by Coca Cola in their February 2017 statement supporting deposit return. A spokesperson told Holyrood Magazine that *“it’s already clear from our conversations with experts that the time is right to trial new interventions such as a well-designed deposit scheme for drinks containers, starting in Scotland where conversations are underway”*.

NEXT STEPS: DESIGNING A SYSTEM

There are a lot of myths and misunderstandings around deposit return, especially from organisations which may be less familiar with the practical operation of such systems. However, there is also a legitimate uncertainty about the details of any deposit system Scotland would adopt, uncertainty which can only be resolved by the design of a specific system suited to this country’s needs, whether such work is undertaken by Zero Waste Scotland or by business or both together.

Such a process would be able to draw on the substantial international expertise, especially in Northern Europe, and consult widely with all those concerned, including off- and on-sale outlets, producers, local authorities, and the public. It would then need to consider a range of practical questions, including the following:

- * Who should design it? (should it be Zero Waste Scotland or relevant businesses, for example?)
- * What materials and sizes should be covered?
- * How could it be future-proofed to allow subsequent extension to cover other containers? (e.g. cosmetics packaging)
- * What should the deposit level be set at?
- * Should the deposit be set at a higher level for larger containers, and either way, what should the deposit be set at? Places like Belgium, Denmark and Quebec use a variable rate: in Denmark this ranges from 1kr to 3kr (roughly 12p to 36p). Conversely, Estonia and Lithuania use a flat rate of €0.10, just below 9p, and many US states a flat rate of \$0.05 is applied, equivalent to around 4p.
- * What should be the size exemption for small businesses?

* How should an operator be run? In particular, which sectors should be represented on the board? The Norwegian operator Infinitum is equally owned by the producers and the retailers, a model also used in Lithuania. In most cases operators are established on a not-for-profit basis.

* How should the handling fee be set and divided between the various participants?

* How can deposit return be made as easy as possible to use for customers and for those companies handling returns (for example, would there be an app available for business operators to request collections and track their income from handling fees?)

* What should the relationship be between manual returns and returns via reverse vending machines?

* How can local authorities get the best benefits from deposits, including through efficient ways for them to claim deposits on empties put into kerbside mixed recycling?

* How can a system be made as robust as possible to take account of fluctuating prices for recycle?

Final proposals would then of course require Ministerial signoff and transposition into the relevant statutory instruments.

30 May 2017

Have you got the bottle?