



# Deposit Return Schemes for drinks containers

Keep Wales Tidy 2015



cadwch keep  
gymru'n wales  
daclus tidy

# Contents

Summary .....	3
Where are we now? .....	4
The effectiveness of Deposit Return Schemes .....	5
What's the current situation in the UK? .....	5
Spotlight: Sweden .....	6
Impact and Considerations .....	6
Expected trends from parallel kerbside and deposit schemes .....	9
Extended Producer Responsibility .....	9
Policy Instruments for Extended Producer Responsibility .....	10
Conclusion .....	11
Recommended Actions .....	12
Further Information: .....	12
Policy Links .....	12
References .....	13

# Summary

Deposit Return Schemes are current in the news and the subject of particular interest in Scotland and Northern Ireland where the devolved governments are considering options for implementing such a scheme for container beverages.

A Deposit Return Scheme is a simple financial mechanism where a surcharge is applied to the price of a polluting or harmful product. The harm is avoided by returning the product or packaging so that the producer or retailer can dispose of it responsibly and the deposit is refunded. Such schemes are more commonly associated with drinks containers, although they can apply to many products. There are many countries which operate these systems, including: Germany, Sweden, Norway, the US and Australia.

Research by Keep Wales Tidy has shown that drink related litter has the biggest impact of any litter type and makes up an average of 50% of all litter collected. Unlike many other types of litter, many drinks containers are commonly recyclable, meaning that not only are these items a persistent and growing litter issue, they also amount to a significant loss of resources. These valuable resources, if not recycled, end up as litter, or in landfill or end up in our oceans where they cause damage to the environment and wildlife and can last for many years.

There are significant direct and indirect costs of litter in Wales, tackling this would not only save costs but would have a positive impact on the environment, health, crime and anti-social behaviour. The survey carried out by Keep Wales Tidy on the issue of drink related litter asked the public about their perceptions of this type of litter and if they had any ideas to tackle the issue. The majority of respondents suggested a Deposit Return Scheme and/ or increased producer responsibility as a favoured way of addressing the problem.

This paper explores the effectiveness of Deposit Return schemes for drinks containers from a wide range of international examples and looks at the impact they have on litter, recycling rates and municipal recycling schemes. Particular attention has been given to examples where deposit schemes and kerbside collections coexist to ensure that the research is applicable to the Wales context. It is concluded that there is sufficient evidence to demonstrate that Deposit Return Schemes have a positive impact on litter and, if implemented correctly, can also have a positive impact on local authority waste and recycling management, increasing income and providing significant cost savings.

Extended Producer Responsibility (EPR) legislation for packaging was also considered, but current legislative frameworks in Europe were found not robust enough to have had any significant impact. Deposit schemes for other items have been considered in the course of this research and it should be noted that this is not a solution for every potentially harmful product, EPR legislation can sometimes be a more effective delivery mechanism.

Later in 2015, the European Commission will present a new Circular Economy strategy with the aim of *“transforming Europe into a more competitive resource-efficient economy, addressing a range of economic sectors, including waste”*. The new strategy will include new legislation on waste targets and will be aligned with the green economy agenda and job growth.

It is within this context that a Deposit Return Scheme should be considered for Wales, and as a tool for spurring the green growth agenda, reducing litter and increasing recycling return rates - with the ultimate aim of promoting positive behaviour change across Wales and enhancing the well-being of communities by reducing litter and creating a beautiful Wales, enjoyed and cared for by all.

### Keep Wales Tidy recommends that:

- **The future Welsh Government to consider the options for a plastic, glass and can deposit schemes in Wales.**
- **The future Welsh Government to issue a National Re-statement on the importance of recycling.**

## Where are we now?

Later this year, the European Commission will present a new Circular Economy strategy with the aim of transforming Europe into a more competitive resource-efficient economy, addressing a range of economic sectors, including waste. The new strategy will include new legislation on waste targets and will be aligned with the green economy agenda and job growth. As part of the UK response, there is an opportunity for Wales to embrace this strategy and to set in motion the roadmap to a Circular Economy which was identified in the Ellen MacArthur Foundation report in 2013 which stated: 'On top of net financial gains, (of a potential material cost savings of £2 billion per year) moving towards a circular economy through an inclusive (business, public sector, education) and clearly defined roadmap can reduce Wales's dependency on raw materials, have a positive impact on the jobs market and increase the value and productivity of agricultural systems'.<sup>1</sup>

During the last ten years there has been a very significant improvement in recycling and waste prevention in Wales. In 2014, the Welsh Government announced that recycling rates had risen to an all-time high of 54.3%. This compares to statistics from 2002/2003, when just 10% of waste collected by local authorities in Wales was recycled or composted.<sup>2</sup> However, despite improvements in some areas, litter remains a persistent issue in our communities. In a survey, in 2010, which looked into the perceived impact and extent of litter problems amongst the Welsh public; cans and bottles were identified by 68% of respondents.<sup>3</sup> Recent research by Keep Wales Tidy has shown that people consider drink related litter as having the biggest impact of any litter type and data from our community group survey showed that drinks containers make up an average of 50% of all litter collected.<sup>4</sup> Unlike some fast food packaging (such as polystyrene), the majority of drinks containers (plastic and glass bottles, cans and cartons) are widely recyclable yet every day over 80 million food and drinks cans end up in landfill from the UK alone.<sup>5</sup>

The Zero Waste Strategy for Wales (2010) has set out an aim of a 70% recycling target by 2025, with the further ambition of becoming a Zero Waste Nation by 2050. To achieve the next step change in Wales' recycling rates will require the introduction of incentives aimed at common recyclable materials. Such incentives would not only bolster recycling targets, but they would also have a significant impact on litter and environmental harm. For example, it is estimated that only 50% of plastic bottles are currently recycled in Wales and 30% of glass bottles and jars in the UK overall.<sup>6</sup> The impacts of this extend further than recycling targets, for example, over 12% of violent crime involves the use of glass and bottles as weapons<sup>7</sup>, causing significant injury and costing the taxpayer millions in emergency health provision and compensatory claims. Tackling container litter would also save huge amounts in clean-up costs, particularly as much of this ends up on roadsides. According to Clean Up Britain; '*for every £1 spent on clearing litter, councils sometimes pay an additional £10 'coning off'/complying with health and safety requirements*'.<sup>8</sup>

The survey carried out by Keep Wales Tidy on the issue of drink related litter asked the public if they had any ideas to tackle the issue. The majority of respondents suggested a Deposit Return Scheme and/ or increased producer responsibility as a favoured way of addressing the problem.<sup>9</sup>

This briefing note gives an overview of the potential for deposit schemes to address drink related litter whilst addressing targets to achieve Wales' ambition to be a Zero Waste nation and considers the potential links for job growth within the circular economy.

## The effectiveness of Deposit Return Schemes

There is widespread evidence that legislating for DRSs leads to an increase in recycling rates and reduces litter. The OECD defines Deposit schemes as: *"The surcharge on the price of potentially polluting products. When pollution is avoided by returning the products or their residuals, a refund of the surcharge is granted."*

Most examples of DRSs are aimed at plastic, glass and tin containers although there are examples of other items such as batteries (notably in the USA) and tyres (see Appendix 1). Whilst there are now a variety of models for DRSs and cost-benefits can vary, the following impacts of these schemes are consistently reported:

- Increase in recycling of the containers covered by the scheme
- Reducing the extent of littering
- Increasing the use of / reducing the extent of decline in the use of refillables
- Avoidance of harmful chemicals leaked into the environment e.g.: lead acid batteries and plastics in the marine environment

A report commissioned by the Campaign for the Protection of Rural England (CPRE) 'Have we got the bottle?' provides an in-depth cost-benefit analysis and logistics modelling of a potential UK wide deposit scheme, drawing on a number of European examples. The conclusion of this study was that: *"The combined overall cost benefit analysis indicates that, even with the additional costs incurred in the running of the DRS, there is a high likelihood of a significant net benefit to society. The influence of the reduction in dis-amenity associated with litter appears to be particularly strong"*.<sup>10</sup>

In research from the USA, studies have shown clear links between deposit schemes and a reduction in litter. Following the establishment of the Oregon deposit program, studies showed a clear reduction in litter. Estimates of the extent of litter reduction varied from a 66 to 88 percent decrease in beverage container litter. In addition, there was a 42 percent decline in beverage container litter within the first year of the California program.<sup>11</sup>

## What's the current situation in the UK?

A Keep Wales Tidy Position Paper in 2006 concluded that 'in relation to the issues surrounding can and bottle litter, the best means of addressing the problem, whilst conferring minimal cost on the taxpayers, retailers and government, was to apply deposits to drinks containers'.

There are currently no deposit return schemes operating in the UK. The CPRE report has been taken into consideration by DEFRA in England although concerns were raised over the costs. The Northern Ireland Environment Minister has recently announced that he has commissioned an options paper on Deposit schemes there, based on the discussions which have been developing in Scotland, who have proposed a scheme as part of their Zero Waste Strategy. Scotland has recently released a feasibility study for a national DRS and is considering implementation.

Further research has been undertaken by the CPRE into how a potential Deposit scheme could be paid for by the non-returned deposits of the schemes and even how it could create employment. Based on their

modelling, the report concluded that such a scheme had potential for up to 4300 full time jobs.<sup>12</sup> It is highly recommended that a similar modelling approach be considered in Wales, building on the Green Growth Wales prospectus and circular economy ambitions.

## Spotlight: Sweden

Sweden is an international lead in recycling initiatives and has had deposit legislation in place for a variety of recyclables since the 1970s. According to the Swedish Government website, less than 1% of the country's waste ends up in landfill.<sup>13</sup> Sweden operates a deposit scheme for tin, glass and plastics drinks containers. (Beginning with cans in 1984 and extending to other containers in 1994). The scheme is operated by Returpak, a recycling company co-owned by the drinks companies and brewers and works by adding a small deposit on drinks containers which is refunded when the product is returned. The scheme has had an impressive impact on recycling rates (85% and 90% for tins and plastics respectively) and has contributed to a significant reduction of litter. It has also seen the creation of a new industry and employs nearly 7000 people nationally (a total of 15,734 in the Nordic Region).

### See:

Swedish Government website: [www.sweden.se/nature/the-swedish-recycling-revolution](http://www.sweden.se/nature/the-swedish-recycling-revolution)

Returpak website: [www.pantamera.nu/en/welcome-returpak](http://www.pantamera.nu/en/welcome-returpak)

AsvallSverige (Swedish Waste Management Association): [www.avfallsverige.se/in-english](http://www.avfallsverige.se/in-english)

## Impact and considerations

There is extensive research to show that DRSs not only have a positive impact on the environment and littering, but they also influence wider recycling behaviours<sup>14</sup> and tend to be popular initiatives with the public.

In all reported international examples, very few schemes see low rates of return, with some jurisdictions achieving close to 100% return rates.<sup>15</sup> Those with higher incentives yielded higher return rates. A new report which was commissioned by Zero Waste Scotland on the options for a Deposit scheme for drinks containers estimated that 27,000 tonnes of litter is collected every year in Scotland; of this amount it is estimated that 5,230 tonnes could be part of the DRS system. It is also estimated that 4,620 tonnes of this material will be captured within the DRS; a 90% reduction the DRS material littered.<sup>16</sup>

Monitoring the scheme will be key and should include litter data and recycling rates as part of its progress. Household recycling rates, for example, could go down in correlation with how successful the scheme is as more people take up the initiative, so effective monitoring will be crucial in order for the data to be included for overall recycling targets of local authorities. For example, data from Germany recorded recycling rates in 2005 were: 50%, 85%, 76% and 79% for plastics, tins, aluminium and glass respectively. The reported return rates under the deposit scheme are 95-99%.<sup>17</sup>

From 2015, Local Environmental Audit and Management System (LEAMS) data will include recording of instances of separate sources of litter including glass, cans and plastics and fast food. Results from all Local Authority surveys will be available in early 2016.

Litter reduction is a strong rationale for implementing deposit scheme legislation. According to John Read, Founding Director of Clean Up Britain; 'Littering in Britain has reached epidemic proportions and is costing at least £1bn a year to clean up, and that – Clean Up Britain (CLUB) estimates – is a considerable underestimate of the true cost'<sup>18</sup> Two recent studies undertaken by Zero Waste Scotland showed that:

- The cost of litter on Health and Social Impacts amounted to a staggering £53million in Scotland alone.
- The associated links between LEQ and crime /anti-social behaviour amounted to a further cost of over £22 million.

Perhaps because of the emotive connection with litter, public support for deposit schemes tend to be high when monitoring both short and long term public perceptions (from introduction to over a five-year period) with many in the US, Australia and Northern Europe showing over 85% in favour.<sup>19</sup> A recent study in Scotland shows that 78% of Scots would be in favour of a deposit scheme and only 3% of those surveyed consider themselves 'strongly opposed'.<sup>20</sup>

As well as tangible impacts, a DRS could demonstrate a significant shift towards pro-environmental behaviour change and spur new business and innovation in the green economy. Implementing deposits on containers will not eradicate littering but evidence from elsewhere has shown that they can contribute to a significant reduction of the issue. It is a logical assumption that if something has value, it will not be left on the ground for long. The idea of recyclable waste as something of value is an important – and necessary – cultural shift to reduce waste and address current wasteful behaviours. A DRS could be manufactured to give consumers the option to donate to environmental causes or keep the deposit themselves thus solidifying the connection between waste and environment, much like the introduction of the charge on single use carrier bags.

Some concerns have been raised about the limited space that some small retailers have to store the take back machines and how people of a limited mobility can access the scheme. Whilst it is not in the scope of this paper to carry out detailed modelling, it is not thought that these issues are insurmountable through engagement with the local authorities and larger retailers who provide delivery services which could cater to this demographic. Concerns have also been raised over possibilities of fraudulent use of the scheme although this risk can be mitigated by utilising similar take-back mechanisms that operate in the US with the use of barcode scanners. This latter element also offers a solution to the issues raised over how the scheme would operate across national borders in the UK.

The costs of implementing a national DRS would be dependent on the model implemented. Separate data for Wales is not available from recent studies although work has already been undertaken in Scotland. The Feasibility study for Scotland on a National DRS, released in July 2015, summarised the costs and benefits for a scheme in Scotland although it is worth noting that the study did not include leasing options for reverse vending machines which would considerably reduce the estimated capital requirement for such a scheme. Other models could be considered within a Welsh context which could reduce this cost or spread expenditure over a longer time frame.

The Industry Council for Research on Packaging and the Environment (INCPEN) has previously argued that encouraging the use of existing recycling processes through kerbside collection would be better value for money. In Wales, kerbside collections in recent years have improved significantly and many local authorities are reaching higher levels than ever before. However, all schemes have their limitations, and recycling rates will inevitably plateau unless investment in new initiatives are considered in the future. Additionally, in the 2012 report, *Public Participation in Waste Recycling*, Wales Audit Office argues that the Welsh Government will not reach its target of a 75 per cent reduction in the ecological footprint of waste by 2050 if Wales does not significantly reduce waste production as well as increase recycling rates.<sup>21</sup>

Lobby groups from the drinks industry, including INCPEN, argue that deposit return schemes do not increase instances of recycling as they divert material from kerbside collections and prove too costly for local authorities. Not only does this argument not consider the nature of container materials being mainly consumed outside of the home and contributing to the growing problem of litter from 'food on the go'

but many countries where deposit schemes are in place, they serve to complement kerbside collections run by municipal authorities and have led to cost savings and increased efficiency.

A great deal of evidence on how these complementary recycling models work come from the US and Canada. The USA is also a good example of how such schemes can operate within regional and national borders. Recovery rates for these schemes are high, especially when compared to states without deposit schemes where the average recycling rate is around 24%. <sup>22</sup>Independent research from the Congressional Research Service (CRS) states that both a deposit return program and kerbside recycling are necessary to achieve high recycling rates and that having both programs result in less costs for kerbside recycling. Specifically;

*“Both systems can serve as elements of comprehensive recycling programs. Neither constitutes a comprehensive program by itself. Neither excludes the use of the other. Deposit systems skim potential sources of revenue from kerbside programs, but they also reduce the operating costs of kerbside programs. Local governments would appear to achieve greater diversion of solid waste from disposal at a lower cost per ton if both a bottle bill and a kerbside collection program were in place.”* <sup>23</sup>

In 2005, Germany began a container deposit program for nearly all beverage types (about 15 billion containers), and now these containers are being recovered at a rate of 98.5%. The complementary residential kerbside recycling system is focused on household-based packaging which is funded by industry through material-based fees. After the introduction of the deposit return program, program fees for the kerbside system actually decreased. Collectively, both programs report a recycling rate of approximately 75%. <sup>24</sup>

In 2007 Ontario, Canada expanded their deposit return program from beer only, to include wine and spirit containers. This program boasts a 92% recovery rate, and collects slightly more packaging by weight than the complementary kerbside program. <sup>25</sup>The kerbside program, which services more than 98% of the population, recycled approximately 50% of all residentially-based packaging. <sup>26</sup> In the case of Ontario, after the introduction of deposit return on all wine and spirit containers (mostly glass) industry fees for glass packaging in the kerbside program were unaffected. In addition, municipalities, who are responsible for a larger share of the costs, report cost savings from the reduction in container glass handling in their system. <sup>27</sup> In fact, it was the municipalities that operate the kerbside systems that almost unilaterally called for deposit return on wine and spirit containers due to the high costs of managing these containers. <sup>28</sup> It should be noted however, that non-alcoholic beverages without a deposit have recycling rates of approximately 40%,<sup>29</sup> even after nearly 17 years of comprehensive, mandated municipal kerbside collection.

California has a robust municipal kerbside recycling in place and a deposit scheme which was expanded in 2000 to include a greater variety of beverage containers including water bottles, sports beverages and other cartons. This expansion added 3.5 billion containers to the program, and those containers now have an 82% recycling rate. Due to the parallel recycling programs, the State-wide recycling rate is 65%, <sup>30</sup>which is among the highest in the country.

Whilst specific impacts of a deposit program on existing kerbside collections will vary depending local economies and models, research from the Container Recycling Institute (CRI) has suggested that by implementing parallel complementary schemes, the following trends can be expected;

It is beyond the scope of this paper to detail potential costs and savings of a national DRS and it will be hard to estimate the wider economic impacts unless a comprehensive trial is developed. However, it would appear that a DRS has the potential to reduce costs associated with litter and kerbside collections, provide revenue for local authorities and existing community groups but also an incentive to mobilise new community groups into action, inspire greater efficiency in the recycling system and impact on



recycling behaviours. Further economic impacts could potentially include job creation and new technological innovation as well as the qualitative impact of decreased litter entering our marine environment, associated impacts on the visitor economy and reduction of roadside litter clearances.

## Expected trends from parallel kerbside and deposit schemes (Container Recycling Institute)

- Overall beverage container recovery rates will increase significantly.
- The quality of materials in both systems will improve, as the breaking of glass and its associated contamination, particularly in commingled systems, to other material streams is drastically reduced.
- Kerbside programs will lose aluminium revenue. However, loss of aluminium revenue is likely to result anyway due to the continued growth of plastics over aluminium in the container market.
- Loss of aluminium revenue will be offset by the loss of low-value glass and plastics, which either have high cost per volume collection rates or low-end market prices.
- A deposit program in conjunction with a kerbside program will result in savings to local governments, as it will shift the financial responsibility of beverage container recovery to the producers, thus saving the local government collection and processing costs.

See:

<http://www.container-recycling.org/assets/pdfs/reports/bear/2002-1-ExecSum.pdf>  
<http://www.bottlebill.org/about/benefits/curbside.htm>

## Extended Producer Responsibility

Extended Producer Responsibility (EPR) is defined by the OECD as:

*'... a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products. Assigning such responsibility could in principle provide incentives to prevent wastes at the source, promote product design for the environment and support the achievement of public recycling and materials management goals'*<sup>31</sup>

In the EU of the 25 Million of tones of generated plastic waste 48.7% was landfilled, 51.3% was incinerated, and only 21.3% was recycled. Currently there are plastic recycling targets for municipal solid waste, construction and demolition (C&D) waste, end-of-life vehicles (ELV), Packaging, Battery and WEEE. If the targets were met it would mean that 16 Mt of plastic waste would have been recycled (i.e. 64%, three times what is being recycled now).<sup>32</sup>

According to a 2015 report by Zero Waste Europe on EPR in the context of Europe's Circular Economy Strategy which is currently under review; *'Current legal and economic incentives are not strong enough to steer plastic recycling. The separate collection of waste is not efficient enough and too many plastics – and*

other waste streams- end up in disposal facilities. Moreover, the extended producer responsibility schemes for plastic waste are scarce and its performance uneven; Germany recycles 98,5% of plastic packaging whereas Spain collects less than 30%' <sup>33</sup>

In the cities which were assessed in the study, waste covered by EPR made up less than a third of all municipal collection and, when separate collections were taken into account, amounted to just 18% overall. <sup>34</sup>

Current EPR legislation is currently not robust enough to tackle the issue of packaging waste. In the context of this paper, deposit schemes are part of the economic instruments which can encourage responsibility within the packaging industry and can be considered as a necessary step toward developing more robust EPR which will lead to future innovation and efficiency in the industry and create new business and growth.

Keep Wales Tidy are supportive of the principle of EPR and would welcome robust and effective legislation to address producer responsibility. However, it is recognised that this sort of legislation will take time to develop and implement if it is to be effective. If kerbside recycling puts emphasis on the consumer to recycle waste and EPR puts the emphasis on the producer, a DRS is an instrument of EPR that could be viewed as the intermediate option for responsibility between the two, relying on action from both consumer and industry in order to be effective.

## Policy Instruments for Extended Producer Responsibility

Administrative instruments	<ul style="list-style-type: none"> <li>• Collection and/or take-back of discarded products</li> <li>• Substance and landfill restrictions (achievement of collection)</li> <li>• Re-use (refill) and recycling targets</li> <li>• Fulfilment of environmentally sound treatment standards</li> <li>• Fulfilment of minimum recycled material content standards</li> <li>• Product standards</li> </ul>
Economic instruments	<ul style="list-style-type: none"> <li>• Material/product taxes subsidies</li> <li>• Advance disposal fee systems</li> <li>• Deposit-refund systems</li> <li>• Upstream combined tax/subsidies</li> <li>• Tradable recycling credits</li> </ul>
Informative instruments	<ul style="list-style-type: none"> <li>• Reporting To Authorities</li> <li>• Marking/Labeling Of Products And Components</li> <li>• Consultation With Local Governments About The Collection Network</li> <li>• Information Provision To Consumers About Producer Responsibility/Source Separation</li> </ul>

**Source:** Rossem, C et al (2006) *Extended producer responsibility - An examination of its impact on innovation and greening products*, International institute for industrial environmental economics. Adopted from Lifset (1992), OECD (2001), Stevens (2004), Walls (2004).

## Conclusion

Keep Wales Tidy believes that a DRS could have a significant impact on recycling rates and believe that such a scheme could impact on litter and LEQ locally. By adding value to recyclables and by including manufacturer responsibility, a DRS would be the first step towards achieving the necessary cultural shift for the circular economy to flourish and the achievement of a Zero Waste nation.

As a stand-alone scheme, the costs of a DRS may be a deterrent to policy makers, but it is critical that this is viewed in the context of wider ambitions for green growth and part of a wider producer responsibility programme to tackle waste. Whilst recycling rates are improving in Wales it is likely that, in the near future, rates will plateau as efforts to increase recycling by local authorities are exhausted. If Wales is to achieve its ambition of zero waste, additional incentive must be considered. Studies from elsewhere have shown that high recycling rates are achieved when kerbside collections and deposit systems coexist and have led to cost savings. Furthermore, there is a strong argument that deposit schemes contribute to litter reduction which would lead to further benefits for communities across Wales and the subsequent impact on clean-up costs which are incurred by local government.

In this context, a potential DRS should be viewed as a tool for changing attitudes to waste and reducing litter, as a way of adding value to resources and as an investment in the green economy.

*'If we were to change the philosophy, as we propose, into one that believes that instead of cutting costs you should generate more value with what you have, then you have a completely different approach to business'.<sup>35</sup>*

Keep Wales Tidy believes that the time is now right for the consideration of a DRS scheme for Wales and supports the potential for a DRS as part of a wider LEQ and litter reduction strategy. We welcome an options paper for a national scheme to complement existing collection models and is framed within the circular economy context and green growth ambitions for Wales.



# Recommended Actions

## **The future Welsh Government to consider the options for a plastic, glass and can deposit schemes in Wales**

In order to achieve the ambition of a Zero Waste nation, KWT supports the consideration of a DRS for common recyclables. We recommend that an options paper be considered, drawing on International best practice and supporting the growth of the green economy industry in Wales. Policymakers should be aware of the activities which are currently under proposal for similar schemes in Scotland and Northern Ireland but also consider other models in Europe and further afield to identify solutions which have not been widely acknowledged in the studies for Scotland. Local authorities should be closely involved in the process so that any DRS would work co-operatively with current kerbside collection methods.

## **The future Welsh Government to issue a National Re-statement on the importance of recycling**

Keep Wales Tidy recognises that the above intervention should not be in isolation to other strategies and campaigns and more needs to be done in order to educate and raise awareness around recycling and waste. We support the recommendation contained in the recent NAW Inquiry into Recycling in Wales to issue a National Restatement on the importance of Recycling and support related campaigns to that end.

## Further Information:

Eunomia / Serco, January 2014 *'Investigating the Impact of Recycling Schemes'*

[http://www.serco.com/Images/Serco%20Eunomia%20Incentives%20Full%20Report\\_tcm3-44276.pdf](http://www.serco.com/Images/Serco%20Eunomia%20Incentives%20Full%20Report_tcm3-44276.pdf)

Eunomia [CPRE], September 2010 *'Have we got the Bottle? Implementing a Deposit Refund Scheme in the UK'*

<http://www.cpre.org.uk/resources/energy-and-waste/litter-and-fly-tipping/item/1917-have-we-got-the-bottle>

Hogg, D et al, [CPRE], July 2011 *'From Waste to Work: the potential for a deposit refund system to create jobs in the UK'*

<http://www.cpre.org.uk/resources/energy-and-waste/litter-and-fly-tipping/item/2359-from-waste-to-work>

Ellen MacArthur Foundation, (WRAP/ WG) (2013), *'Wales and the Circular Economy; Favourable system conditions and economic impacts'*

[http://www.wrap.org.uk/sites/files/wrap/Wales\\_and\\_the\\_Circular\\_Economy\\_Final\\_Report.pdf](http://www.wrap.org.uk/sites/files/wrap/Wales_and_the_Circular_Economy_Final_Report.pdf)

## Policy Links:

[Programme for Government in Wales](#)

[Towards Zero Waste Strategy \(2010\)](#)

[Climate Change Strategy for Wales \(2011\)](#)

[Environment \(Wales\) Act \(2015\)](#)

[Wellbeing and Future Generations Act \(2015\)](#)

[Clean Neighbourhoods& Environment Act \(2005\)](#)

[Local Environment Audit & Management Systems \(LEAMS\)](#)

# Contact

Jemma Bere, Policy and Research Manager  
[leq@keepwalestidy.cymru](mailto:leq@keepwalestidy.cymru)

# References

- <sup>1</sup> Ellen Macarthur Foundation, (WRAP/ WG) (2013), *Wales and the Circular Economy; Favourable system conditions and economic impacts* [http://www.wrap.org.uk/sites/files/wrap/Wales\\_and\\_the\\_Circular\\_Economy\\_Final\\_Report.pdf](http://www.wrap.org.uk/sites/files/wrap/Wales_and_the_Circular_Economy_Final_Report.pdf)
- <sup>2</sup> *Briefing: Zero Waste In Wales*, FoE, 2003: [http://www.foe.co.uk/sites/default/files/downloads/zero\\_waste\\_wales.pdf](http://www.foe.co.uk/sites/default/files/downloads/zero_waste_wales.pdf)
- <sup>3</sup> Beaufort Research; (2010) *Litter in Wales: Understanding littering and litterers*
- <sup>4</sup> Keep Wales Tidy, (2015), *Drink Related Litter report*
- <sup>5</sup> Recycling Bins- facts,2015, <http://www.recyclingbins.co.uk/recycling-facts/> (19.8.15)
- <sup>6</sup> Recycle for Wales, WLGA-CILC, 2014: <http://recycleforwales.org.uk/why-recycle/fascinating-facts/know-your-waste-more-facts/glass#.VZpX6 IViko>
- <sup>7</sup> Rogerson. N & Kerr. L (2005), Violence & Society Research Group, University of Cardiff, '*Risk Factors for Glass Assault in the United Kingdom and Scandinavia: A Tale of Two Capital Cities*'
- <sup>8</sup> Read, J (10th August 2015) Winning the fight against litter, <http://www.localgov.co.uk/Winning-the-fight-against-litter/39196> (18.08.15).
- <sup>9</sup> Keep Wales Tidy, (2015), *Drink Related Litter report*
- <sup>10</sup> '*Have We Got the Bottle?*' (Eunomia Research), CPRE, 2010: <http://www.cpre.org.uk/resources/energy-and-waste/litter-and-fly-tipping/item/1917-have-we-got-the-bottle>
- <sup>11</sup> University of Maryland (2011), Impact Analysis of a Beverage Container Deposit Program in Maryland. <http://efc.umd.edu/assets/2011impactanalybevcontmd.pdf> (13.8.15)
- <sup>12</sup> 'From Waste to Work', Hogg, D et al, (CPRE), 2011: <http://www.cpre.org.uk/resources/energy-and-waste/litter-and-fly-tipping/item/2359-from-waste-to-work>
- <sup>13</sup> Swedish Government; 2015 <https://sweden.se/nature/the-swedish-recycling-revolution/>
- <sup>14</sup> 'Investigating the Impact of Recycling Incentive Schemes', Eunomia Research, 2014: <http://www.eunomia.co.uk/reports-tools/investigating-the-impact-of-recycling-incentive-schemes/>
- <sup>15</sup> Study on coherence of waste legislation, European Commission (DG ENV), 2011: [http://ec.europa.eu/environment/waste/studies/pdf/Coherence\\_waste\\_legislation.pdf](http://ec.europa.eu/environment/waste/studies/pdf/Coherence_waste_legislation.pdf)
- <sup>16</sup> Deposit Return System Report, Eunomia (Zero Waste Scotland), 2015 [http://www.zerowastescotland.org.uk/sites/files/zws/Deposit\\_return\\_system\\_report.pdf](http://www.zerowastescotland.org.uk/sites/files/zws/Deposit_return_system_report.pdf)
- <sup>17</sup> Study on coherence of waste legislation, European Commission (DG ENV), 2011: [http://ec.europa.eu/environment/waste/studies/pdf/Coherence\\_waste\\_legislation.pdf](http://ec.europa.eu/environment/waste/studies/pdf/Coherence_waste_legislation.pdf)
- <sup>18</sup> Read, J (10.8.15) *Op Cit*
- <sup>19</sup> 'Litter Heroes' 2014: <http://litterheroes.co.uk/bottlebill.htm>
- <sup>20</sup> Moore, D, CIWM Journal, 26.05.20, *78% Of Scots In Favour Of Drinks Deposit scheme*, 15: <http://www.ciwm-journal.co.uk/archives/13666>
- <sup>21</sup> WAO, (2012), '*Public participation in waste recycling*'. <http://www.audit.wales/publication/public-participation-waste-recycling> (20.7.15)
- <sup>22</sup> Container Recycling Institute (2015) *Facts*, <http://www.container-recycling.org/index.php/factsstatistics/allcontainers> (18.8.15)
- <sup>23</sup> McCarthy. J (Specialist, Environment & Natural Resources Policy Division) Congressional Research Service. 1993. *Bottle Bills and Curbside Recycling: Are They Compatible?*
- <sup>24</sup> Container Recycling Institute (2011) *Why Universal Recycling in Vermont Requires Deposit Return*, <http://www.container-recycling.org/assets/pdfs/letters/2011-UniversalRecyclingVT.pdf> (18.8.15)
- <sup>25</sup> Beer Store (2014) *Investing in Ontario's Common Future*, <http://www.thebeerstore.ca/tbs-environmental-report.html> (18.8.15)
- <sup>26</sup> *Ibid*
- <sup>27</sup> Amendments to Processing Fees Due to LCBO Deposit Return Program, report to Public Works and Infrastructure Committee from General Manager, Solid Waste Management Services: October 29, 2008. <http://www.toronto.ca/legdocs/mmis/2015/pw/bgrd/backgroundfile-81082.pdf> (18.8.15)
- <sup>28</sup> Improving the Efficiency of the Blue Box Program, An AMO-AMRC Position Paper, June 2006
- <sup>29</sup> CM Consulting (2010) Who Pays What? An Analysis of Beverage Container Collection & Costs in Canada, <http://www.cmconsultinginc.com/wp-content/uploads/2014/07/EXECUTIVE-SUMMARY.pdf> (18.8.15)
- <sup>30</sup> Container Recycling Institute (2011), *Op Cit*
- <sup>31</sup> OECD (2001), Extended Producer Responsibility: A Guidance Manual for Governments, OECD Publishing, Paris. DOI: <http://dx.doi.org/10.1787/9789264189867-en>
- <sup>32</sup> Zero Waste Europe (2015) Redesigning Producer Responsibility, <http://www.zerowasteurope.eu/downloads/redesigning-producer-responsibility-executive-summary> (18.8.15)
- <sup>33</sup> *Ibid*
- <sup>34</sup> *Ibid*
- <sup>35</sup> Webster, K (2015). *The Circular Economy; A Wealth of Flows*. UK: Ellen MacArthur Foundation.



cadwch keep  
gymru'n wales  
daclus tidy

33-35 Heol yr Eglwys Gadeiriol, Caerdydd, CF11 9HB | 33-35 Cathedral Rd, Cardiff, CF11 9HB

☎ 029 2025 6767 🌐 [keepwalestidy.cymru](http://keepwalestidy.cymru) ✉ [info@keepwalestidy.cymru](mailto:info@keepwalestidy.cymru)

Cadwch Gymru'n Daclus yn gwmni wedi ei gyfyngu trwy warant. Rhif Cwmni: 4011164 Rhif Elusen: 1082058 Rhif TAW: 850 3958 13  
Keep Wales Tidy is a Company Limited by Guarantee. Company Registration Number: 4011164 Charity Registration Number: 1082058 VAT Registration Number: 850 3958 13

