

## **Scotland's Deposit Return Scheme (DRS) Update – January 2024**

### **1 Purpose**

- 1.1 The purpose of this update is to provide members of the Sustainability Committee with information relating to the impact on the theoretical carbon emissions based on the Deposit Return Scheme (DRS) if it was to be revived, mothballed, or completely removed.

### **2 Background/Current Status**

- 2.1 Scotland's DRS was due to commence in August 2023. However, it was announced in June 2023 that DRS was to be delayed until October 2025 at the very earliest. To allow DRS to proceed in Scotland, an exemption from the Internal Market Act required to be approved by the UK Government. Unfortunately due to concerns raised by some UK businesses and Ministers regarding potential issues if there were different schemes within the UK, an exemption would only have been granted if glass was removed from the Scottish DRS which would therefore align the Scottish DRS with the scheme that England are planning to introduce. Due to this a further delay to the scheme was announced.
- 2.2 Should DRS progress in October 2025, this will most likely be a UK wide scheme which will not include glass drinks bottles. The scheme proposed by the UK Government will only include PET plastic drinks bottles and aluminium/steel drinks cans.

### **3 Impact to Council**

- 3.1 Had DRS gone ahead as planned, the Council would have seen glass tonnages collected from household and trade collections drastically reduced, along with a reduction on the plastic PET drinks bottles and aluminium and steel drinks cans with these material streams being diverted from Council collections to DRS. This would have had a reduction on the Council's recycling rate as the Council would not be able to claim for the in-scope container tonnage that would have been captured by DRS in the authority area.
- 3.2 The current proposed DRS for aluminium and steel drinks cans and PET plastic drinks bottles will not have such a significant impact.
- 3.3 Using the sampling data from our new container recycling stream service provider we are able to forecast the potential maximum tonnage that will be diverted from the recycling collections undertaken by the Council should the DRS progress in October 2025. This includes recycling collections from households, trade and internal premises.
- 3.4 **Table 1** identifies the average percentage that each in-scope DRS material stream makes up of the mixed containers stream. The percentage of the

## Appendix 3: Scotland's Deposit Return Scheme (DRS) Update

material stream that is classed as beverage containers is then applied to this figure. This is based on information provided by Zero Waste Scotland which has been identified within these industries. This leaves a maximum percentage of what material in the mixed containers stream that could be recycled through DRS if and when it goes ahead. However, as we are aware with any recycling scheme, capturing 100% of the in-scope containers is very unlikely and therefore all calculations are based on a 90% capture rate. Applying this to the calculations gives a final expected percentage of the recycling stream that could be collected by DRS instead.

**Table 1**

Material Stream	% of container stream	% of material stream beverage	Maximum %	% of material captured	Expected % of recycling stream
Aluminium	9%	93%	8.37%	90%	7.53%
Steel	8%	14%	1.12%	90%	1.01%
PET Plastic Bottles	21%	90%	18.90%	90%	17.01%

- 3.5 Applying these percentages to the estimated 4,500 tonnes of mixed containers that is collected annually by Aberdeenshire Council, this could amount to the following tonnage being diverted from Council recycling to DRS annually:

Aluminium Drinks		
Cans	321.28	
Steel Drinks Cans	46.44	
PET Drinks Bottles	751.96	
	<u>1119.68</u>	Tonnes diverted from recycling stream

- 3.6 There is also potential to divert tonnage from the residual waste collected by the Council to DRS which includes collections from households, trade and internal collections. Using the waste compositional analysis carried out on households in June/July 2022 we can establish the percentage of the residual waste that was identified as in-scope DRS containers (see **Table 2**). The analysis identified specific DRS categories therefore we do not need to apply the percentage to the material stream in relation to beverage only containers.
- 3.7 Although this analysis was only carried out on household waste bins, we have not carried out any analysis of trade/internal waste, therefore without any composition information for those collections, we only have the household composition to use to give an indication of potential reduction/diversion from waste.

**Table 2**

Material Stream	% of residual bin	% of material captured	Expected %
PET plastic drinks bottles	0.30%	90%	0.27%
Aluminium drinks cans	0.30%	90%	0.27%
Steel drinks cans	0%	90%	0.00%

3.8 Applying these percentages to the current estimated 67,000 tonnes of residual waste that is collected annually by Aberdeenshire Council, this could amount to the following tonnage being diverted from Council residual waste to DRS annually:

Aluminium Drinks Cans	180.90	
Steel Drinks Cans	0	
PET Drinks Bottles	180.90	
	<u>361.80</u>	Tonnes diverted from residual waste

3.9 Therefore, rounding up, DRS has the potential to reduce our residual waste arisings by up to 362 tonnes and reduce our recycling tonnage by up to 1,120 tonnes should DRS go ahead from October 2025. It should be noted that the tonnage diverted from our recycling stream to DRS will mean a reduction in our recycling rate as we will not be able to include that tonnage when reporting to SEPA Waste Data Flow as that tonnage will be captured under the DRS scheme.

#### **4 Carbon Impact**

4.1 For carrying out calculations in relation to the carbon impact, the Waste Service use the Carbon Metric calculations from Zero Waste Scotland (ZWS). Carbon factors (CF) have been compiled by ZWS to quantify the whole-life carbon impact of Scotland’s waste ([cdn.zerowastescotland.org.uk/xlsx \(live.com\)](https://cdn.zerowastescotland.org.uk/xlsx/live.com)). The carbon factors are measured using a life cycle thinking approach and include the production (waste generated) through to the waste disposal impact which includes transport emissions from collection, waste management process emissions and disposal. Avoided production impacts are also included when waste is prevented and recycled.

4.2 **Table 3** (overleaf) details the estimated carbon impact in relation to the reduction of waste generated and managed by Aberdeenshire Council if and when DRS comes into force. This is based on current tonnage data and current waste analysis / sampling and therefore may be subject to change depending upon any changes to this data/analysis between now and when DRS gets rolled out. Please note this is based on total waste and recycling tonnage collected and managed by Aberdeenshire Council.

**Table 3**

	Tonnage	Carbon Impact - Reduction TCO <sub>2</sub> e
Reduction in residual waste	361.8	1,298.50
Reduction in aluminium recycling	321.28	958.06
Reduction in steel recycling	46.44	53.5
Reduction in PET plastic recycling	751.96	1,989.69
Total reduction in Carbon TCO <sub>2</sub> e		4,299.75

- 4.3 This reduction is based on the waste and recycling tonnages that are managed by Aberdeenshire Council. The material streams will still be being recycled through DRS which will still have a carbon impact however this will be noted as a Scotland wide impact.

## **5 Carbon Budget Impact**

- 5.1 In relation to the Council's carbon budget in relation to waste and recycling, this relates only to the tonnage of waste and recycling that is generated/collected from internal Council premises.
- 5.2 In relation to residual waste, including all the internal bin collections and skips for Woodhill House and Robertson schools, the total tonnage of waste to be used in the calculation is 2,989 tonnes. Please note that this does not include skips of waste from one off clearances, etc. as this type of waste would not include the typical waste found in a normal bin.
- 5.3 Applying the percentages of DRS in-scope containers calculated from the household waste composition analysis to the internal waste tonnage of 2,989 tonnes, this could amount to the following tonnage being diverted from internal waste to DRS annually:

Aluminium Drinks Cans	8.07	
Steel Drinks Cans	0	
PET Drinks Bottles	8.07	
	16.14	Tonnes diverted from internal waste

- 5.4 In relation to recycling, including all the collections for fully mixed recycling, the total tonnage of recycling relevant for this calculation is 986 tonnes.
- 5.5 As the recycling tonnages being used relate to fully mixed dry recycling (MDR), the sampling percentages for fully mixed recycling will apply to this tonnage as noted in **Table 4** (overleaf).

**Table 4**

Material Stream	% of MDR	% of material stream beverage	Maximum %	% of material captured	Expected %
Aluminium	3%	93%	2.79%	90%	2.51%
Steel	4%	14%	0.56%	90%	0.50%
PET Bottles	5.45%	90%	4.91%	90%	4.41%

5.6 Applying these percentages to the estimated 986 tonnes of MDR to the internal recycling tonnages this could amount to the following tonnage being diverted from internal recycling to DRS annually:

Aluminium Drinks Cans	24.75	
Steel Drinks Cans	4.93	
PET Drinks Bottles	43.48	
	<u>73.16</u>	Tonnes diverted from internal recycling

5.7 Therefore, DRS has the potential to reduce the internal waste arisings by up to 16.14 tonnes and reduce internal recycling tonnage by up to 73.16 tonnes should DRS go ahead from October 2025.

5.8 Although the Waste Service use ZWS Carbon Metric system when calculating savings in relation to carbon impact, the Council Carbon Budget is reported to the Scottish Government through Public Bodies Climate Change Duties who use the Department for Business, Energy & Industrial Strategy (BEIS) Greenhouse Gas Conversion Factors for carbon impact which differs from Zero Waste Scotland carbon metric factors based on what is being considered for each analysis. The BEIS factors are provided to support company reporting and therefore do not take into account the full impact from waste generation and disposal and relates only to the activity that the reporting company carries out. For Aberdeenshire Council reporting, this means that the carbon impact being reported in relation to the waste being produced internally by the Council includes the collection of the waste and recycling streams, and onward transportation to the disposal/recycling facility. The carbon impact of waste generation, recycling, diversion and combustion are not included as a factor in the reporting undertaken by Public Bodies Climate Change Duties which is why the carbon impact figures per kg CO<sub>2</sub>e per tonne for combustion of waste and recycling of waste are identical as this relates only to the collection and transporting of the waste streams. The carbon impact is therefore 21.2808kg CO<sub>2</sub>e/tonnes for both General Waste (combustion) and Recycling (all types).

5.9 Therefore based on the carbon budget reporting figures, the impact that DRS would have on the carbon budget due to the estimated reduction in tonnage by DRS in-scope containers being diverted from internal waste and recycling streams would be as follows:

## Appendix 3: Scotland's Deposit Return Scheme (DRS) Update

	<b>Tonnage</b>	<b>Carbon Impact - Reduction TCO2e</b>
Reduction in residual waste	16.14	0.34
Reduction in aluminium recycling	24.75	0.53
Reduction in steel recycling	4.93	0.10
Reduction in PET plastic recycling	43.48	0.93
<b>Total reduction in Carbon TCO2e</b>		<b>1.90</b>

### **6**     **Summary**

- 6.1     In summary, the impact on the reported carbon budget would be minimal should DRS go ahead, be further delayed or completely removed altogether. The larger impact in relation to DRS is with regards to the household collections in that there could be up to a 25% reduction in the recyclate collected through the mixed container stream.