From:

Sent:

11 November 2020 10:23

To:

wastecomments DRS submission

Subject: Attachments:

DRS Submission 09-11-2020.pdf

Categories:

Consultation Submission

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To whom it may concern,

Please find attached our submission on the proposed DRS.

Can you please send confirmation of receipt of this email and iots contents.



Mulleady's Ltd.

Managing Director







mulleadys.com | 043 33 24128







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09 November 2020

Deposit Return Scheme Consultation,
Waste Policy and Resource Efficiency,
Department Communications, Climate Action &
Environment, Newtown Road,
Carricklawn,
Wexford,
Y35 AP50.

By email only to Wastecomments@DCCAE.gov.ie

Re: Public Consultation on Deposit Return Scheme Consultation Document on Potential Models for Ireland

Dear Sir/Madam,

Further to your call for consultation on the above-referenced subject, we offer the following responses and comments on behalf of Mulleadys Ltd a family owned waste & recycling operator from Longford who is also a member of the Irish Waste Management Association (IWMA).

1.0 OVERVIEW OF MULLEADYS LTD

Our company has been in operation for over 27 years as part of the Mulleady Group of companies which is in existence for over 52 years. We employ over 120 people in the Longford and Mullingar region.

Our website, <u>www.mulleadys.com</u>, provides details of our company, its facilities and capabilities especially within the recycling division of waste management as 1 of 8 MRF's in Ireland.

We are the only Longford based waste company operating 2 EPA licensed facilities in Drumlish, Co. Longford and Mullingar Co. Westmeath with licences for all waste types up to 150,000 tons. We also process all our own dry recyclables at our MRF in Drumlish, Co. Longford and collaborate with as many local disposal facilities where possible. We have a non-landfill policy where we dispose of only the minimum volume of waste to landfill which cannot be recycled by any other method. In doing so we send much of our waste to incineration, RDF and SRF facilities. We have been nominated for the Repak waste operator of the year 2016 and 2017. Our company only recently achieved its re accreditation for ISO 14001, 18001 and 45001 thus ensuring our high standards.



Please note there will be a strong and parallel overlap with the IWMA submission due to our membership & opinions on the DRS project.

2.0 CURRENT RECYCLING OF PET BOTTLES AND ALUMINIUM CANS IN IRELAND

2.1 Introduction

In this section, we show the infrastructure involved in the collection and recycling of PET Bottles and Aluminium Cans in Ireland. We hold a very strong view that this collection system and its associated infrastructure should continue be used for any DRS or alternative solution introduced to Ireland. To by-pass that infrastructure would incur very high environmental & economic costs that we believe are unnecessary, wasteful and to date totally miscalculated.

2.2 Current Recycling Rates for PET Bottles and Aluminium Cans

REPAK, as the sole PRI Scheme for packaging waste in Ireland, is tasked with gathering and recording data on packaging waste generation and management within Ireland. REPAK provided the following data to the IWMA in November 2019, based on their 2018 estimations:

Table 2-1 REPAK 2018 Data on PET Bottles and Aluminium Cans

	Placed on Market (t)	Quantity Recycled (t)	Current Recycling Rate
PET Bottles	25,490	15,472	60.7%
Aluminium cans	11,456	8,363	73.0%

2.3 Household Bins

The private sector waste industry in Ireland has delivered the following bins to households in Ireland, based on the most recent reliable data recorded by the NWCPO:

- 1,259,870 houses serviced with a residual waste bin
- 1,232,765 houses serviced with a mixed dry recycling bin (98%)
- 812,358 houses serviced with a brown (organic) bin (64%)
- 24,286 houses serviced with a bag service
- 138,357 apartments serviced with waste collection service

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PET Bottles and Aluminum cans are collected in the Mixed Dry Recycling (MDR) Bins (1.23m). From there, they are delivered to waste transfer stations for bulking up prior to onward transfer to Materials Recovery Facilities (MRFs) of which we are 1 of 8 in the ROI.

Based on the EPA Waste Characterization study on Household waste conducted by the RPS, the following data was obtained:

- Quantity of Household Waste relevant to the characterisation study = 1,046,819 tonnes
- Quantity of PET Packaging in Recycling Bins = 12,589 tonnes (this includes PET bottles, traysand other PET packaging)
- Quantity of Aluminium Cans in Recycling Bins = 3,264 tonnes

It has been estimated that the Household MRFs within the IWMA (recycle 11,879 t/a PET Bottles currently (2020).

Data from a 2019 survey of these MRFs estimated that they are currently recycling approximately 4,444 tons of aluminum cans per annum.

This data is relatively consistent with the waste characterization study, allowing for 3 or 4 years growth and considering that household waste is high in 2020 due to the number of people working from home this year.

2.4 Commercial Waste Bins

Commercial premises have variable waste collection services as the range of materials varies across different businesses. There is no accurate or definitive data on the numbers of bins or the volume of aluminium cans and PET bottles, but based on the EPA Waste Characterisation study on Non-Household waste conducted by the Clean Technology Centre³, we find the following data:

- Quantity of Commercial Waste relevant to the characterisation study = 715,227 tonnes
- Quantity of PET Packaging in Recycling Bins = 4.64% = 33,187 tonnes (this includes PET bottles, trays and other PET packaging)
- Quantity of Aluminium Cans in Recycling Bins = 0.63% = 4,506 tonnes

We assume that the proportion of PET bottles in the PET packaging figure is relatively small, probablyjust a few thousand tonnes, but we have no data on this other than the REPAK estimate of 15,472 tonnes of PET bottles recycled in 2018. This suggests about 3,000 to 4,000 tonnes of non-householdPET bottles were recycled in 2018.



2.5 Civic Amenity Sites and Bottle Banks

The National Waste Report for 2012 estimated that 1,304 tonnes of aluminum cans were dropped off at bring banks that year. We assume that this is likely to be higher now, but we do not have access to any more recent data.

PET bottles are generally not included at bring banks or CA sites, so we assume a negligible figure forthat material at those drop-off points.

2.6 Estimated Quantities of PET Bottles and Aluminum Cans Currently Recycled

Our estimates detailed above suggest that the following quantities of the target materials are currently recycled:

- Aluminium Cans = 9,000 (79%) to 10,000 (87%) tonnes per annum
- PET Bottles = 15,000 (59%) to 16,000 (63%) tonnes per annum

REPAK's latest estimates suggest that the recycling rate for aluminum cans was at 89% in 2019. Our estimates detailed above are consistent with that view. This suggests that a DRS is not necessary for aluminum cans and further suggests that they would only be included in a DRS to help finance the scheme. We strongly question the merits of taking that valuable material out of kerbside recycling to help finance a parallel collection and treatment route, when it is already successfully recycled. We believe could lead to confusion and a possible negative impact on our existing volumes recycled.

The data on PET bottles is less clear. REPAK previously calculated a recycling rate of 60.7% for this material. REPAK's latest estimation suggests that there are 29,900 tonnes placed on the market, which is higher than previously estimated. On that basis, the recycling rate is likely to be between 50% and 55%. We accept that strong measures will be required to increase the recycling rate to 2025 and 2029 targets, but we agree with Repak in so far as the 2025 targets can be achieved without any DRS especially 2029.

2.7 Waste Transfer Stations

There are approximately 80 such MSW Waste Transfer Stations in Ireland of significance, with some other smaller facilities focused on C&D Waste that handle small quantities of MSW.

Just over half of the identified facilities are comprised of large facilities regulated by EPA License, with the remainder comprising smaller facilities regulated by way of waste facility permits issued by the local authorities.

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2.8 Materials Recovery Facilities

Mixed Dry Recyclables (MDR) collected at kerbside are delivered to Materials Recovery Facilities (MRFs) for processing, usually after bulking at Waste Transfer Stations. There are 9 such facilities serving the household MDR market in Ireland.

As previously stated Mulleadys operate 1 of the 9 MRF's segregating aluminum cans and PET bottles for many years and have to date achieved excellent market feedback due to our ongoing quality.

3.0 CONVENTIONAL /TRADITIONAL DRS

3.1 SLR Report

As a member of the IWMA we contributed to an SLR Consulting report on the likely impact of a conventional DRS on waste management in Ireland. The following extracts from the Executive Summary of that report summarize SLR's findings in this regard.

Potential Impact on Kerbside Recycling

SLR consulted with each of the MRF Operators in Ireland to see what impact the removal of plastic bottles and aluminium cans would have on the Material Recovery Facilities in Ireland. The MRF Operators estimated that this would have a €20 to €40 per tonne impact on gate fees at their facilities. Some of the MRF Operators also commented that there would be other impacts to be considered, such as:

- Without good quality materials, such as plastic bottles and aluminium cans, it is
 difficult tomove lower quality materials such as plastic pots/tubs/trays and plastic
 films. Reduced recycling of these materials would impact negatively on Ireland's
 recycling performance.
- The processing lines at the MRFs would have to be re-configured to manage the changes to the input materials.
- A DRS is likely to impact on all REPAK subsidies, as the producers of aluminium cans and plastic bottles would not provide subsidy for MRF operations, so the existing subsidy could be reduced for all materials.

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Based on the tonnages and values of these materials as reported by the MRF Operators, SLR independently analysed the potential impact on the MRFs from a successful DRS. The results are shown in Tables 2 and 3 below.

Table 2 Expected Revenue Losses at MRFs if DRS Materials Removed

Material	Volume Handled (t/a)	Average Value of Material including REPAK subsidy (€)	Loss of Revenue (€)
Aluminium Cans	4,444	915	€ 4,066,260
PET Bottles	11,227	247	€ 2,773,069
Estimated Cost due to	Loss of Beverage Cont	ainers	€ 6,839,329
HDPE Bottles	7,283	415	€ 3,022,445
Estimated Cost due to	Loss of Beverage Cont	ainers and HDPE Bottles	€ 9,861,774

Table 3 Expected Increase in MRF Gate Fees for Household MDR if DRS Materials Removed

Material	Revenue Loss (€)	Household MDR Handled in 2016 (t/a)	Household MDR Handled after DRS materials removed (t/a)	Loss of Revenue per Unit / Potential Gate Fee increase (€)
Loss of Beverage Containers	€ 6,839,329	253,328	237,657	€ 28.78
Loss of Beverage Containers and HDPE Bottles	€ 9,861,774	253,328	230,374	€ 42.81

The increase in gate fees at the MRFs could have very serious consequences on kerbside recycling in Ireland as the incentive to collect any remaining recyclables (paper, cardboard, steel, hdpe bottles etc) at kerbside would be reduced to a point where it would favour rogue operators that collect household waste with no source segregation and lead to consumer confusion as to what is recyclable or not.

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Likely Increases in Recycling Rates

It is widely accepted that a DRS would have a positive impact on litter and that has been the focus of many DRS systems commissioned across the world. Typically, these DRS initiatives commenced with a high value deposit of c.25 cent which attracted litter pickers or new litter pickers perhaps in disadvantaged regions more so.

However, the impact on recycling rates is very unclear. In countries that do not have a kerbside collection system for recyclables and have a low recycling rate, the impact of a DRS on recycling rates will be greater than in countries with well advanced systems for collecting recyclables and this is why we believe a conventional DRS is not suitable for Ireland.

SLR examined the quantities of beverage containers already recycled in Ireland and assessed the impact on MSW recycling and packaging waste recycling of an increase to 90% recycling of those materials. The results were as follows:

PET Bottles:

- Total on the market = 25,490 t/a.
- Uplift from 60.7% to 90% = 29.3% = 7,469 t/a extra recycled.
- 7,469 t/a out of a total MSW generation of 2.8 million t/a = 0.27%

Aluminium Cans:

- Total on the market = c.11,456 t/a.5
- Uplift from 73% to 90% = 17% = 1,948 t/a extra recycled.
- 1,948 t/a out of a total MSW generation of 2.8 million t/a = 0.07%

Total Uplift in MSW Recycling rate = 0.34%

The data suggests that a successful DRS would only increase overall MSW recycling rates by 0.34% which would do little to assist with the WFD requirement to increase MSW Recycling rates from the current 41% rate to 65% by 2035, with intermediate targets for 2025 and 2030.

The extra tonnage of PET bottles would increase the plastic packaging recycling rate from 34% to 36.5%, still well short of the 50% target by 2025 and the 55% target by 2030.

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It appears that Ireland has already exceeded the 2025 and 2030 targets for aluminium packaging recycling, so the uplift in that category would be welcome, but is not of greatest concern at this time.

The effect of a successful DRS on the overall packaging recycling targets would be about 0.7% increase in the recycling rate from 65.6% to 66.3%.

A DRS would undoubtedly increase recycling rates for PET bottles and aluminium cans and would assist Ireland in meeting the SUP Directive targets for 2025 and 2029 but would clearly have very little impact on the other recycling targets that are currently not on track. This would lead one to believe that considerable consideration must be given to the other materials within the waste stream, to achieve Irelands compliance targets and not focus all our attention and money on a DRS and its exuberant costs.

Costs of a DRS in Ireland

Various sector experts have estimated the likely costs associated with developing and operating a comprehensive and successful DRS in Ireland. The costs within the IWMA and Eunomia reports were very similar but if we prudently spread the capital costs over 10 years to view all the costs as 'annual costs' estimated annual costs would be in the region of €70m.

If true, this would result in the cost of recycling the additional tonnage to approx. at €7,500 per tonne. To put this figure in perspective and as accepted by industry parties the calculated cost of kerbside recycling to be approx. €500 per tonne and the cost of CA Site recycling at about €240 per tonne.

If this is to be partially true, the totally miscalculated cost of the proposed DRS would not be financially feasible and would result in the consumer feeling like they have paid a new tax indirectly without any value for money.

To simply state that the DCCAE would not have to fund this DRS project may be true but also a very important point in so far as the rational behind a DRS is to increase recycling whilst utilising any available unclaimed deposits to improve environmental practices in that jurisdiction which historically have been proven not to materialise.

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4.0 MULLEADYS POSITION ON DRS

4.1 Mulleadys View of Traditional DRS

Mulleadys strongly oppose the traditional or conventional DRS proposed by Eunomia as it does not in any way utilise the existing waste collection and treatment infrastructure and would directly pose a significant threat to kerbside recycling. We believe that the consumer would find this solution inconvenient, it would be difficult for retailers, very costly, inflexible and ineffective or only partially effective in achieving the stated goals.

The present pandemic situation has posed challenging for all sectors no more so waste and recycling especially with rapidly falling markets for commodities. However, reference must be seriously apportioned to the reality of consumers queuing at RVM's in shops and other locations to avail of their returns. It has been well documented that such RVM's have been removed from locations in the UK and Europe to reduce the impact of noncompliance to social distancing rules due to the lack of space.

It should also be noted that the IWMA operators continued to provide a full kerbside collection during lockdown unlike many other EU countries and obtained fair recognition from the Minister Richard Bruton for same. This also proves the level of commitment by the waste operators unlike other countries where the infrastructure is non comparable in many aspects.

4.2 IWMA Support of Smart DRS (or Digital DRS)

4.2.1 Introduction

Mulleadys is interested in exploring hybrid DRS options that use the existing infrastructure and we believe that such options would be better both environmentally and economically for Ireland, as well as advancing digital business in line with Government and EU policy. There is also the potential to progress several policies favoured in the recently published Waste Action Plan, as later referenced in this submission and detailed within the IWMA submission.

Bins are given a unique code, such as a QR Code or an RFID Chip.
Materials with deposits paid have a unique code, such as QR Code or similar.
Consumer pays a deposit at the point of purchase.

We therefore support the delivery of a Smart DRS, along the following lines:

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Consumer downloads	the free Apr	on to any	v smartphone or	tablet
	THE RESERVE	J OIL CO GILL	, annuithmonic or	LUDICE.

☐ After consumption — the consumer scans the recycling bin followed by the packaging item and redeems the deposit electronically via the App. The consumer is allowed 30 seconds between each item, but many items can be scanned one after another ina short time period.

This would allow <u>ALL</u>(1.23m) existing household and commercial recycling bins and collection systems to be used in the DRS and would only require to be supplemented by existing and new drop-off points, such as CA sites, bottle/can banks, street recycling bins, shopping center bins, train station bins, airport bins, etc.

4.2.2 Catering for those without Smartphones

A limited number of Reverse Vending Machines could be provided in locations stated in 4.2.1. for people that do not have a smartphone or do not wish to register on the App. However, we believe this would be a limited number of RVMs rather than the thousands needed in a conventional DRS.

4.2.3 Smart DRS Trials

A trial of a Smart DRS, called Reward4Waste, is currently ongoing in Whitehead near Carrickfergus in County Antrim, Northern Ireland. The company behind the technology used in the trial is Cryptocycle, who has developed an App for a Smart DRS, as shown in the image below.

Mid & East Antrim Borough Council and Bryson Recycling are partners in the trial, which is also supported by Britvic, SPAR, PepsiCo and Encirc. Details of the trial can be found here: https://reward4waste.com/.

The Whitehead trial is based on rewards rather than deposits that are returned, so it may not be as effective as a deposit return system in terms of public response. This indicates the flexibility with a Smart DRS that there are many options available and that it can be changed. Cryptocycle has proposed a DRS trial

to the Welsh Government and it recommends charging and refunding deposits in that trial as that is expected to be more effective than the rewards system in Whitehead.

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Photo 1 - Cryptocycle App used for Rewrd4Waste Trial in Whitehead



Cryptocycle are not the only technology provider in this field. The IWMA has also engaged with EconPro, a technology company that also provides a Smart DRS solution called PolyTag.

The Polytag technology uses a specially developed printing process to 'tag' each item of packaging with a unique PAC code at its point of manufacture. This tag will be stored on a Polytag database until it is paired up with the same code that has been 'traced' by the consumer.

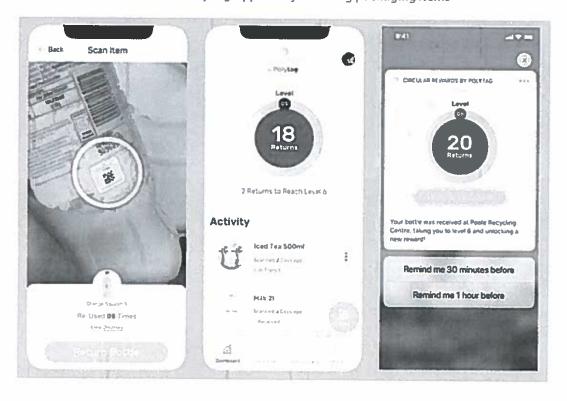
The consumer tracing function will be facilitated through the use of a Polytag mobile phone app which enables consumers to scan the Polytag PAC codes themselves. We provide an image of the App below.

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Photo 2 - PolyTag App used for tracing packaging items



EconPro is planning to carry out a Smart DRS Pilot Project in Conwy in Wales in partnership with the Welsh Government and WRAP. The trial will cover 550 houses and involves supplying houses with water bottles labelled with unique codes and tracking the return of those bottles.

There are undoubtedly other companies that can bid for the operation of a Smart DRS in Ireland.

4.2.4 Proposed Pilot Projects for Smart DRS in the Republic of Ireland

Mulleadys in conjunction with the IWMA is interested in supporting one or more pilot projects in the Republic of Ireland, both financially and logistically. Ideally, we suggest that such a pilot project should be realistic enough to roll-out nationally, if found to be successful. It should involve the charging of deposits and return of those deposits once the material is scanned by the correct bin.

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We sugg	est something along the following lines:
	Select a village that has one or two convenience stores that are willing to participate.
	The project can commit to compensating any lost business during the course of the trial, if the convenience store or its parent company does not wish to financially sponsor the trial.
	A unique code should be applied to each beverage container sold in the village. This will have to be done manually with stickers or sticker-guns (but would be printed on the label by the producer if rolled out nationally). The project will finance that element of the pilot.
	All customers of the shops should be encouraged to download the App, but a take-back option preferably at a local CA site offered to those that do not use smartphones or refuse to engage with the App.
	The outlets should be supplied with a scanner to manage take-back and can place the take-back items in recycling bins supplied by their waste contractor.
	All household and commercial recycling bins in the village should be fitted with unique QR codes by way of appropriate stickers. These can be applied by the customer or the waste collector – preferably by the customer.
	Any street recycling bins in the village should also be fitted with a unique QR codes.
	The trial should be run for 3 months, but the returned materials counted for a longer periodto allow for slow returns.
	Repeat the trial in 2 or 3 villages in different parts of the country with different waste contractors and different technology companies.
	ct that these pilot projects will iron out any teething issues and highlight any strengths and ses with the Smart DRS system.
4.2.5	Advantages of Smart DRS
The adva	antages of a Smart DRS include the following:
I	Can use the existing 1.2 million kerbside recycling bins as well as commercial packdoor recycling bins and develop some new 'on the go' recycling bins.
	Can use existing MRFs without need for additional counting centres. It also protects the MRFs and associated kerbside recycling system.

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Can use existing logistical and transport infrastructure without the need to replicate this
Flexibility to vary deposits depending on environmental performance.
Simple to increase or decrease deposits at any time. This will prevent producers switching tonon-deposit packaging materials such as tetra-pak.
Potential to integrate with Northern Ireland.
A number of Reverse Vending Machines could be provided for people at suitable locations that do not use smartphones or do not wish to register on the App.
The unique identifier will prevent fraud as deposits can only be claimed once and the system will automatically recognise any attempt to claim a deposit on any item more than once. A user can be locked out of the system if they attempt to claim a deposit twice.
It supports the EU and Irish Government Policy to promote digital business and consumer engagement, as this is more efficient, and less resource intensive compared with traditional methods of conducting business and public engagement.

4.2.6 Digital Nature of Smart DRS

On the final bullet point above, the European Commission is planning and promoting "A Europe fit for the digital age" and includes the following introductory paragraphs on its website⁶:

"Digital technology is changing people's lives. The EU's digital strategy aims to make this transformation work for people and businesses, while helping to achieve its target of a climate- neutral Europe by 2050.

The Commission is determined to make this Europe's "Digital Decade". Europe must now strengthen its digital sovereignty and set standards, rather than following those of others – with a clear focus on data, technology, and infrastructure."

It is clear to us, that a Smart DRS presents a great opportunity for Ireland to *set standards* by way of a fully digital DRS *rather than following those of others* that have developed manual or semi-manual DRS systems.

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Ireland is probably the only country in the world where every household bin has been fitted with an RFID chip and the weight of every bin-lift recorded and reported to the customer. We are already ahead of the rest of the world in using technology in waste management and we therefore welcome the opportunity to set even higher standards for the rest of the world to follow. The implementation of a conventional DRS would be a backward step in that context.

4.2.7 Flexibility of a Smart DRS

A Smart DRS can be used on all packaging materials. Waste companies can issue identifier codes on stickers to all customers to be placed on all 3 bins. The stickers should be consistent with national messaging and even a national colour coding scheme, as foreseen in the recently published Waste Action Plan.

A deposit of 10 to 20 cent could be placed on all recyclable packaging materials and this can be reclaimed via the App as people place these materials in recycling bins. This could easily extend to other materials such as steel cans, cardboard packaging (e.g. cereal boxes), cartons, milk bottles, glass jars/bottles, plastic pots/tubs/trays, etc. as technology develops and producers buy into the scheme. However, initially we see it being used for the main purpose of PET bottles.

Initially a sticker gun could be used to attach the unique codes in situations where labels are not country specific to Ireland, for example wine bottles. In this way, retailers would encourage country-specific labels on imported products, which would greatly assist recycling efforts in Ireland. The requirement to bring glass to bottle banks to reclaim deposits would greatly reduce contamination of the recycling bins and greatly reduce the weight of residual waste. The unredeemed deposits can be partly used to extend the network of bottle banks and other methods of improving collection efficiencies within the industry, as a Smart DRS would cost a fraction of a conventional DRS.

4.2.8 Progression from Manual to Digital Transactions

The progression in banking over the past decades has been used as an example from 'over the counter' to 'semi-automated' with the introduction of cash machines, followed by 'digital banking' where Apps and other electronic means are used in normal everyday banking.

A similar progression is inevitable with DRS schemes, so it would be a lost opportunity for Ireland to invest so heavily in a system of the past (conventional DRS), when a system of the future is in our grasp (Smart DRS).

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4.2.9 Education and Awareness from a Smart DRS

A smart system such as this, would really help to educate the consumer and would have a very positive impact on recycling rates, contamination levels and litter prevention. Deposits can be increased and

decreased to assist with the implementation of Government environmental policy. The waste characterisation work carried out by RPS and the Clean Technology Centre on behalf of the EPA shows that there are significant gains to be made if consumers make a better effort to sort their waste.

Based on the EPA data sourced from those waste characterisation studies, we estimate that kerbside household recycling could increase from 28% to 56% and commercial backdoor recycling could increase from 22% to 80% if consumers placed materials in the correct bins, as depicted in the images below.

The DRS could act as a learning tool for every consumer in Ireland. They will clearly learn directly from the App if they use it to reclaim their deposits.

Clearly such a system can contribute to solving several waste management issues and is much more comprehensive than a conventional semi-automated/manual DRS. It may be prudent to introduce measures progressively, rather than immediately in a 'big bang' move. The system could be developed to address a limited range of materials initially, such as PET bottles and then be expanded as the public gets comfortable with it and the usage levels of the App are high enough to justify expansion.

4.2.10 Costs of a Smart DRS

SLR Consulting's Report on the 'Likely Impact of a Deposit & Return Scheme on Waste Management in Ireland' published in January 2020 estimate that a Conventional DRS in Ireland would cost about €73million per annum to operate. The capital costs were annualised in that calculation, to give a cost per annum for development and operation of the scheme. Eunomia's report uses different figures but comes to a similar conclusion for the annual costs of the scheme.

We have compared the costs of a Smart DRS with a conventional DRS, using the same methodology that was used by SLR Consulting.

We believe that a fully comprehensive Smart DRS would require less than 10% of the new centralised drop-off points compared with a conventional DRS, so the costs associated with the

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installation, space, labour and logistics due to the vast existing network of licensed and permitted facilities throughout the country would not apply.

There would be no need for counting centers and centralised depots with a Smart DRS as the system counts every item as it is claimed and the centralised collection points can be serviced by the existing waste collection service, particularly if a range of recyclable materials are accepted.

We estimate a saving of close to €50 million per annum for a Smart DRS. The other cost implication which also must be taken into context is that any unclaimed deposits would be used to reinvest into an environmental fund after a set period on an agreed timescale quarterly, biannual, annually etc. This would mean that indirectly those consumers who have purchased products and paid their deposit would be contributing towards Irelands environmental efficiency. This may be deliberate or otherwise but either way it's a win win scenario for Ireland as the unclaimed deposit catches the non recycler as the concept is always to convert non recyclers.

A Smart DRS can also generate much more revenue as it can be applied to a much wider range of packaging materials. Eunomia estimated that a DRS on PET Bottles and Aluminium cans would generate €31.74million per annum in unredeemed deposits, based on 10% unredeemed PET bottles and aluminium cans. At this point it is critical to point out that <u>ALL unclaimed deposits in a typical DRS go back to the producer therefore Ireland inc loses out on a valuable revenue stream for many many years into the future.</u>

If the scheme was extended to other materials in time 10% unredeemed deposits would comprise hundreds of millions of euro per annum. Even if it was just extended to all beverage containers, regardless of materials, it would generate significantly higher revenues. That money should be ring-fenced to pay for the operation of the DRS as well as supporting the following areas:

development of reception points for recyclable materials including bottle banks, civic amenity sites, festivals and street recycling.
Litter clean-ups.
Education and awareness initiatives for waste prevention and waste management.
Recovery operator subsidies to support recycling efforts.
Financial support/grants for indigenous reprocessing of recyclables.

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Research into materials being exported overseas.
Research and identification/development of opportunities for reuse/recyclable alternative (packaging) materials.
Reuse initiatives, including grant-aid and subsidies for repair and restoration services as well as promotion of reuse hubs.

4.2.11 Contribution to Waste Action Plan and EU Targets

A conventional DRS on its own in Ireland would do little to assist Ireland with meeting national and EU targets and objectives apart from the targets set in the Single Use Plastics Directive. However, for many reasons already referenced too we believe that a Smart DRS or similar alternative can assist Ireland in their quest for full compliance with all targets especially 2030.

5.0 EUNOMIA REPORT

5.1 Need for Independent Cost-Benefit Analysis

As a member of the IWMA we have concerns over the appointment of Eunomia to conduct an unbiased cost-benefit analysis of a DRS in Ireland. We respectfully suggest that an independent consultant should have been appointed to complete that task. Eunomia lobbied the Oireachtas Joint Committee on Communications, Climate Action and Environment in favour of a DRS in the debates on the Waste Reduction Bill 2017. The Report that was issued by that Committee provided details of those that lobbied for and against a DRS, as follows:

	Arguments
Supportive	AGAINST
Eunomia VOICE	Convenience Stores and Newsagents Association (CSNA) Department of Communications, Climate Action and Environment Food Drink Ireland IBEC PMCA Consulting Repak Retail Ireland

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Eunomia's lack of independence gives very little consideration to the impact of such a scheme on the existing kerbside recycling system in Ireland which is the envy of many European countries.

Whilst the conclusions of the Eunomia report were unsurprising & disappointing, we are greatly concerned about the inaccuracies and the bias exhibited in the report. We provide some examples in the following sections.

5.2 Current Recycling Rates

REPAK, as the sole PRI Scheme for packaging waste in Ireland, is tasked with gathering and recording data on packaging waste generation and management in Ireland. REPAK provided the following data to the IWMA in 2019, based on their 2018 estimations:

Table 5-1 REPAK 2018 Data on PET Bottles and Aluminium Cans

	Placed on Market (t)	Quantity Recycled (t)	Current Recycling Rate
PET Bottles	25,490	15,472	60.7%
Aluminium cans	11,456	8,363	73.0%

The Eunomia Report contradicts this data and presents the following estimations for PET bottle and aluminium can recycling:

Table 2-2: Current Final Destinations of Beverage Containers Placed on the Market Annually

	PET Beverage Bottles	Aluminium Beverage Cana
Units Placed on the Market	959,000,000	790,000,000
Placed on the Market (tonnes)	28,751	12,774
Recycling Rate (%) sent to re- processors	54.9%	55.0%
Recycling Rate (%) adjusted for losses at re-processors	43.9%	69.4%

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In reaching the figure of 43.9% for PET Bottles, Eunomia stated the following:

"Recycling rates for PET were based on tonnages provided by Repak showing the proportions funded by Repak, recycled and recovered. The total tonnage funded as recycling was 16,569 tonnes out of a total 28,751 tonnes funded by Repak, which results in a rate of 55%. A loss rate in re-processing of 20%, as per data provided by other stakeholders, was then applied to result in a final recycling rate of 44%."

We agree with the IWMA and believe that the 20% reduction in PET bottle recycling was not merited and no evidence is provided by Eunomia to support such a significant change to the REPAK/EPA figures. We believe that the actual figure for PET bottle recycling is between 50% and 55% as detailed earlier in this report for 2020, so 43.9% is a significant under-estimate in our view and has serious implications on some of the conclusions of the Eunomia Report.

Also mentioned earlier in this report is the latest REPAK estimate of aluminium can recycling, which is 89%, which is much higher than the 69.4% used by Eunomia and that also has serious implications on some of the conclusions of the Eunomia Report.

5.3 Analysis of Recycling Rates in Other Countries

We note that the Eunomia Report downgrades the recycling rates in Ireland and Belgium but does not downgrade recycling rates in countries that operate a DRS. Eunomia has previously reported that many EU countries have exaggerated their municipal waste recycling rates.

According to Eunomia's previous work, the greatest exaggeration is in Germany and the IWMA agrees with that view, as we have reviewed a report commissioned by the German Waste Management Association that provides details of the erroneous calculation of MSW recycling rates in that country. In fact, that report suggests an even lower recycling rate for Germany in the range of 47% to 52%.

5.4 Impact on Kerbside Recycling

We consider that Eunomia's analysis of the impact on kerbside recycling is completely flawed. Eunomia uses baseline information from a Peter Bacon report that was published in 2008 in response to a recycling crisis at the time when Chinese markets collapsed. This was not a good baseline and was not accurate on the costs that Eunomia gleaned from it not withstanding that it was 12 years old at the time of publishing.

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SLR's in-depth analysis in the attached report shows that collection costs for dry recyclables are approximately €500 per ton, not the €130 per ton that Bacon estimated. Their €8 figure for impact on collections therefore increases to a €30 impact. By the same token, the material revenue impact should be €28, not €13.

Later, their figure of €21 per ton should be corrected to €63/ton = €12.50 per house i.e. 4.5% increase.

The Eunomia analysis is convoluted and we do not endorse the methodology that was used, but we have identified some very significant errors in the figures used, so it does not stand up to scrutiny and should not be considered a fair analysis of the impact on kerbside collections.

Eunomia claims that the returned deposit materials will be worth €15.35million in intrinsic value (Table 5-3), based on a 90% return rate. The report goes on to state:

"The DRS modelling has used the same material prices as the modelling for the impact on kerbside collections, so has conservatively assumed that there is no premium for the higher quality material. If a system operator secured higher prices for the PET and aluminium, the net cost to producers would be lower."

However, the analysis of the impact on kerbside recycling in Section 5.3.2 estimates that the loss due to removal of deposit materials from the existing system would only be €2.9 million. This analysis is highly inconsistent and does not stand up to scrutiny, so we consider it to be highly flawed.

The SLR report shows in detail how the loss to kerbside recycling would be €6.8 million per annum (see section 3-1 of this submission).

The impact on kerbside recycling from a conventional DRS is very simple to calculate. There would beno discernible impact on collections as waste collectors would still be required to visit every house on the route and the removal of PET bottles and cans would only represent a 6% reduction in weight based on historical data. That would not lead to a 6% saving as a lot of time is spent travelling to and from transfer stations. The real difference is the loss of value of the materials so Eunomia's figure of €2.9 million is a significant under-estimate.

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We also take issue with Eunomia's ridiculous suggestion in Section 5.1.5.2, where it states:

"Finally, it is expected that a proportion of deposit-bearing containers will still be collected in MDR bins. In this case (and providing the containers are still intact), household waste collectors or MRF operators could redeem the deposits on these containers through the DRS system, evenif they are not the operator directly involved in collecting the deposit-bearing containers through the official DRS collection points. This would mean that some or much of the lost material revenue and subsidy can be mitigated, as the deposit value per container is greater than the material value and Repak subsidy per tonne combined."

So Eunomia expects that the aluminium cans and PET bottles placed in the MDR bins will not be crushed by the compactors in the collection trucks and a MRF site operative can collect these uncrushed cans and bottles from the sorting lines and can bring them to a retail store to reclaim the 20 cent deposits. Eunomia suggests that this will mitigate the MRFs' losses, which we estimate at €6.8 million per annum. This is clearly ludicrous suggestion and in no way credible.

We also note that Eunomia has not analysed the impact on kerbside recycling associated with the loss of the REPAK subsidy on PET Bottles and aluminium cans.

5.5 Contamination Levels

The Eunomia Report states in Section 4.3.3:

"Evidence from recyclers also suggests that beverage containers collected via a DRS will be less contaminated than those collected through the kerbside. Indeed, a representative of the Irish recycling industry commented that their "biggest problem is cross contamination which is very difficult to sort out."

The MDR bins we collect have variable levels of contamination and that is certainly an issue for our MRF to deal with. However, we do deal with it and produce high quality bales of aluminium cans and various grades of PET Bottles.

The grade of PET Bottles produced depends on the market price and demand. The machinery can beadjusted to produce a very high grade if that is what the market forces demand. Our MRF



alreadyproduce bales that are close to 100% PET Bottles, whereas others produce an 80:20 mix of PET Bottles (80%) and PET Trays (20%). In the next stage of the recycling process PET Trays are flaked, washed, extruded and pelletised alongside PET Bottles to produce rPET (recycled PET), so this is not considered to be contamination.

Industry knowledge reliably informs us that the rPET produced from PET bottles and trays collected in MDR bins can be used to make PET Food Trays. The sorting is more intensive for PET and aluminium cans collected in the MDR bins, but the final recycled raw material is of comparable quality and can be used as 'food grade' raw material.

5.6 Litter

It is undeniable that Litter is a concern for every country including Ireland. The statistics used by Eunomia in this section of their report bares no comparison to the reality of the facts and data as surveyed by leading Irish experts Tobin Consultants for the local authorities.

We agree that the revenue generated by a DRS could go towards Litter but as previously stated there will be multiples less available funds to invest in this issue if the unclaimed deposits are returned to the producers. This is where a Smart DRS or similar alternative can be used to better guarantee a more consistent annual fund towards litter clean up in Ireland.

5.7 Space Requirements at Retailers

In Table 6-18 of the Eunomia Report, the estimated storage cost to retailers assumes that they only need 1m² for storage of returned cans and bottles (more for RVMs). This is surely an underestimate as the cans and bottles will be uncompacted and will take a lot more room than that to store. We note that some premises would have weekly collections and some monthly. Extra storage space would drive costs much higher as it applies to nearly 14,000 premises. If 4m² was required for all premises, the annual cost of storage space would be nearly €20 million more than the cost estimated by Eunomia.

5.8 Transport Costs

The assumptions on transport costs in Section A.6.4 are questionable. For example, it is assumed that

"Retailers are located an average drive time of 30 minutes from the vehicle depot and it takes 15 minutes to travel between pick up points;"

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The vehicle depot would have to be located at the sorting center as this is where the material must be delivered. If the depots are located elsewhere, the transport costs would be even higher. Eunomia proposes 5 sorting centers in Ireland. We fail to see how an average drivetime of 30 minutes from 5 points in Ireland would reach the 16,000 take-back locations. This is a very loose assumption and the actual transport costs could be multiple times the predicted €11.7 million per annum.

5.9 Environmental Impacts

The Eunomia report speaks positively about the environmental benefits of recycling 90% of PET Bottles and Aluminium cans, but also recognises the environmental impacts associated with the development of a new collection and processing system that would operate in parallel with the existing collection and processing system for mixed dry recyclables.

Earlier in this submission, we promote the development of a Smart DRS that uses the existing collection and processing infrastructure with only a marginal increase in transport and energy demands. That system would have all the environmental benefits detailed in the Eunomia report, without the negative environmental impacts.

SUMMARY

Ireland with the cooperation of its private waste collectors, processors and Repak have an existing high recycling rate in comparison to many EU countries.
Ireland has an existing kerbside infrastructure of 1.23m households + commercial customers which needs to be utilised more efficiently for Packaging targets compliance as opposed to the proposed DRS.
The cost of a conventional DRS is hugely excessive and most likely underestimated.
The roll out of an alternative to the proposed DRS would be much quicker and provide more credible information for the relevant authorities.
Any unclaimed deposits from our proposed alternative can be utilised for wider environmental projects and enhancements of same as opposed to conventional DRS where unclaimed deposits go back to the producer's.

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The transport and logistics costs estimated in the Eunomia report are totally unrealistic and, will result in significantly higher costs. In addition, this will lead to a significant increase in carbon emissions for this project which contradicts the entire rational of what we are trying to achieve from an environmental perspective.
A Smart DRS will comply with the ever-changing IT and development of a digital infrastructure which will allow Ireland to be the leaders within the EU as we already have an unparallel infrastructure with RFID chips in existing buns for over a decade.
The idea of consumers queuing in any facility for any purpose other than food shopping has dramatically declined due to Covid. There is evidence of existing DRS RVM's being removed from shops for this specific reason. This will lead to a reduction in recycling in these regions and a negative cost for the removal of the RVM's. this would not happen with a Smart DRS in parallel with the existing kerbside collection infrastructure.
We feel that the uptake by consumers will not be anywhere as predicted by Eunomia. If this is to be partially true, then a significant amount of money (tens of millions) will have been lost which could have been better utilised by an improved system.
The proposed DRS has the potential to result in another voting machine scandal which the waste industry does not want to be part of.

We hope that this submission is helpful, and we look forward to further positive engagement with the DCCAE on this and other waste policy issues.

Yours faithfully,

Niall Mulleady

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