

Potential Cost-of-Living Effects of a Container Deposit Return Scheme in Aotearoa New Zealand

Report for Zero Waste Aotearoa

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Contents

Executive Summary 3
Introduction and Approach 6
Background – How Did We Get Here? 6
Key Features of the Proposed Scheme were Confirmed 7
Some Questions Remain 8
Current Status – Where Are We Now? 9
What The Numbers Say 9
Initial Modelling Showed Positive Outcomes 9
The Cost-of-Living Pause 11
International Evidence Paints a Different Picture 12
Recent New Zealand Research Provides an Interesting Perspective 13
Infrastructure Costs 13
Inflation 13
Benefits and Costs for Councils 14
The Will of the People 15
The New Zealand Public Still Wants a Container Return Scheme 15
What the Neighbours Say 17
Victoria 17
Queensland 17
Running the Numbers 19
What Might the Real-World Impacts Be? 19
More Real-World Effects for Families 20
Changing Behaviour – Incentives to Redeem or Donate 21
Conclusions and Recommendations 22

Key Takeaways from this Report

- The economic, social and environmental case for the introduction of a Container Return Scheme (CRS) in New Zealand still holds, despite the current cost-of-living pressures faced by households.
- Public support for a Container Return Scheme remains high – according to an IPSOS Survey conducted in August 2025, 76% of respondents support the introduction of a Scheme.
- The highest levels of support were recorded amongst lower-income groups (up to $50,000 in annual household income).
- Even at a relatively conservative Benefit-Cost Ratio (BCR), the direct benefits to households are likely to exceed the cost of household participation.
- International research finds no empirical evidence to support claims that a Container Return Scheme will increase beverage prices and/or reduce beverage sales.
- In the current economic climate, price increases of beverage products are likely to be driven primarily by price / cost increases in the contents of containers, rather than by any increases in the costs of the containers themselves.
- The ability to easily and conveniently claim deposits is a critical factor in avoiding cost-of-living impacts arising from the implementation of the Scheme.

Executive Summary

This report was prepared by Aotearoa Development for Zero Waste Aotearoa, to investigate the potential cost-of-living implications arising from the introduction of a Container Deposit Return Scheme (hereafter the Container Return Scheme or the Scheme), for beverage containers sold in New Zealand. The report seeks to investigate potential real-world cost-of-living effects of the Scheme on New Zealand households, particularly those in lower-income categories.

The New Zealand Container Return Scheme was developed by the New Zealand Ministry for the Environment (MfE) between 2019 and 2022. In March 2023, however, in the lead-up to that year's General Election, then-Prime Minister Chris Hipkins announced that the implementation of the Scheme would be deferred, as part of the Government's focus on addressing cost-of-living pressures being experienced by the New Zealand public.

The Container Return Scheme was aimed at reducing littering and disposal to landfill of eligible beverage containers, increasing the rates of recycling of these containers, and reducing the consumption of virgin material in the manufacturing of containers. The Scheme was to cover all single-use beverage containers, including aluminium and steel cans, polyethylene terephthalate (PET) and high-density polyethylene (HDPE) plastic bottles, glass bottles, and liquid paperboard (LPB) cartons with a capacity of up to three litres. Fresh milk containers were to be excluded.

The Container Return Scheme was proposed to comprise two cost elements – a refundable deposit amount (recommended by stakeholders and supported by the majority of public submissions to be 20 cents), and a non-refundable scheme fee (estimated at 3–5 cents) per eligible container, including GST. Management of the Scheme would be undertaken by a producer-led, not-for-profit Product Stewardship Organisation (PSO). The Scheme was directed to attain recovery targets of 85% by the end of year three of its operation, and 90% by year five.

As of December 2025, it appears that a Container Return Scheme remains under consideration as a potential policy instrument to reform waste management in New Zealand. Legislation in this regard is however unlikely to be introduced before the 2026 General Election.

In 2021 and 2022, a Cost-Benefit Analysis of the proposed Scheme was conducted by expert services firm Sapere. This analysis concluded that a national Container Return Scheme would ypoprovide significant benefit to New Zealand, as compared to a business-as-usual approach. The final report, released in December 2022, showed a potential net benefit of $1.135 billion (in present value terms in 2022) over 30 years, with a benefit–cost ratio (BCR) of 1.47.

With regard to the primary rationale for deferring the implementation of the Scheme, namely its potential to contribute to cost-of-living increases, a report published in July 2023 by Reloop and the Container Recycling Institute (CRI), found that no empirical basis exists for claims that Deposit Return Schemes increase beverage prices and/or reduce beverage sales. Furthermore, a report published in June 2024 by Te Waihanga, the New Zealand Infrastructure Commission,

indicated that costs associated with what the Commission refers to as “network infrastructure” including waste management infrastructure, when funded through variable “user-pays” charges (such as those included in a Container Return Scheme), provide households with greater control over their spending on such network infrastructure, than is the case for costs funded through fixed charges (such as fixed waste management fees charged through Council rates).

From a local government perspective, a significant benefit arising from the introduction of a Container Return Scheme is a reduction in the scale of future waste management costs levied by local councils. Initial research published by MfE in November 2022 estimated the direct financial benefits of such a Scheme to local government at $50 million in the first year.

Public sentiment regarding the Scheme remains positive. According to an IPSOS Survey conducted in August 2025, overall support for the Scheme was at 76%, and remained consistent across factors such as gender and political affiliation. Significantly, in terms of household income, the highest levels of support for the Scheme were recorded amongst lower-income groups (up to $50,000 in annual household income), which appears to somewhat contradict the rationale for the deferral of the Scheme in 2023 on the basis of cost-of-living considerations.

The report models some potential real-world impacts for New Zealand households, of participation in the Scheme at different levels of beverage consumption. This modelling found that even at the relatively conservative Benefit-Cost Ratio (BCR) of 1.47 modelled in the Sapere study, the direct benefits to households are likely to exceed the cost of household participation of $56 per year (in 2025/26) estimated by MfE in its analysis documentation published in 2022. This illustrates the potential that exists for households to benefit substantially from high levels of participation in the Scheme.

Overall, it appears that the economic, social and environmental case for the introduction of a Container Return Scheme in New Zealand still holds, despite the headwinds experienced by the national economy since early 2023, and the cost-of-living pressures faced by households.

It is equally clear that the choices made regarding the design and implementation of the Scheme will play a critical role in determining its effectiveness. The ability to easily and conveniently claim deposits is a crucial factor in avoiding cost-of-living impacts arising from the Scheme.

In the current economic climate, price increases experienced by consumers for beverage products are likely to be driven primarily by price / cost increases in the contents of containers, rather than by any increases in the costs of the containers themselves, that might be brought about by the implementation of a Container Return Scheme. This is particularly the case with food inflation hovering between 4 and 5% annually in the period July to October 2025.

At the same time, given the current high cost-of-living environment, the risks of unequal distribution impacts arising from such a Scheme will need to be effectively managed and mitigated, to ensure political and public support for the Scheme remains at current levels.

Introduction

Aotearoa Development Insights is pleased to provide this report to Zero Waste Aotearoa, on the subject of potential cost-of-living implications arising from the introduction of a Container Return Scheme, for beverage containers sold in New Zealand.

Approach

This study has been undertaken as a desktop research exercise, involving a review of certain aspects of existing economic research relating to the potential introduction of a Container Return Scheme in New Zealand, as well as an analysis of recently published relevant research, both internationally and in New Zealand.

The study seeks to investigate potential real-world cost-of-living effects of such a Scheme on New Zealand households, particularly those in lower-income categories, by applying a mix of qualitative and quantitative analysis techniques.

The study does not undertake any detailed economic or econometric analysis of the potential effects of a Container Return Scheme on the New Zealand economy as a whole, as this lies beyond the scope of both this assignment and the economic data and modelling resources available to the author. Instead, the study relies on publicly available research material, supplemented as necessary by engagement with relevant stakeholders and experts in the fields of recycling, waste management and container deposit return schemes.

Background – How Did We Get Here?

The majority of development activity for a New Zealand Container Return Scheme took place between 2019 and 2022. Primary responsibility for developing the Scheme lay with the New Zealand Ministry for the Environment (MfE), which undertook and/or commissioned a considerable volume of research on the subject, including studies by PwC[1] and Sapere[2].

Between March and May 2022, the Ministry undertook a public consultation process on the Container Return Scheme,[3] as part of its Transforming Recycling package. This consultation process received more than 1,600 individual responses, of which 91% supported the implementation of such a Scheme, and 88% supported a deposit of 20c.[4]

[1] https://environment.govt.nz/assets/publications/Container-return-scheme-Financial-modelling-report.pdf
[2] https://environment.govt.nz/assets/publications/A-container-return-system-for-New-Zealand-cost-benefit-analysis-update.pdf and https://environment.govt.nz/assets/updated-crs-cost-benefit-analysis.pdf
[3] https://environment.govt.nz/assets/publications/Transforming-recycling-consultation-document.pdf and https://environment.govt.nz/assets/publications/Transforming-recycling-consultation-document.pdf
[4] https://environment.govt.nz/assets/publications/Waste/Transforming-recycling-Summary-of-submissions.pdf

In November 2022, the Ministry issued a Cabinet Briefing,[5] recommending the implementation of a Container Return Scheme, with a target date for its launch of July 2026. This proposed timeframe would allow for the development of the necessary legislation and accompanying regulations during 2023 and 2024, so as to have the legislation passed in the first quarter of 2025.

This Cabinet Briefing was supported by a Regulatory Impact Statement (RIS)[6] developed by MfE officials, which detailed the research and analysis process that was undertaken by officials, to validate the recommendations made in the Briefing.

Also in November 2022, Cabinet issued a Minute of Decision, agreeing to implement a Container Return Scheme in line with the recommendations made by MfE.[7]

In March 2023, however, in the lead-up to the 2023 General Election, then-Prime Minister Chris Hipkins announced that the implementation of the Scheme would be deferred, as part of the Government's focus on addressing cost-of-living pressures being experienced by the New Zealand public.[8]

Key Features of the Proposed Scheme were Confirmed

The Container Return Scheme was aimed at reducing the incidence of littering and disposal to landfill of eligible beverage containers, and at increasing the rates of recycling (and potentially in the future, reuse) of these containers. In the longer term, the Scheme was also intended to reduce the consumption of virgin material in the manufacturing of beverage containers, as well as other products, and encourage the development of circular manufacturing models, through the provision of a stream of high-quality recycled input materials.

According to the Cabinet Minute, the Scheme was to include all single-use beverage containers, including aluminium and steel cans, polyethylene terephthalate (PET) and high-density polyethylene (HDPE) plastic bottles, glass bottles, and liquid paperboard (LPB) cartons with a capacity of up to three litres. Fresh milk containers were to be excluded.

The Scheme was also proposed to comprise two cost elements:

- a refundable deposit amount (recommended by various stakeholders and supported by the majority of public submissions to be 20 cents, inclusive of GST) added to the purchase price of each eligible beverage container by the producer, with this deposit amount flowing through the distribution chain of products to the final consumers, and refundable on return at designated return points. These return points were proposed to include retailers (specifically supermarkets), return depots and "over the counter" return points.; and

[5] https://environment.govt.nz/assets/publications/redacted-cab-paper-agreement-to-implement-a-nz-crs-v2.pdf
[6] https://environment.govt.nz/assets/redacted-interim-RIS-crs-for-aotearoa-new-zealand.pdf
[7] https://environment.govt.nz/assets/publications/redacted-cab-22-min-0539-v2.01.pdf
[8] https://www.beehive.govt.nz/release/freeing-more-government-bandwidth-and-money-focus-cost-living

- a non-refundable scheme fee (estimated at approximately 3–5 cents per eligible container in year one of the Scheme's operation, and increasing to approximately 6–7c in year five, inclusive of GST), intended to fund the operations of a scheme operator, the rollout of collection infrastructure, and other costs of operating the Scheme.

The management of the Scheme would be undertaken by a producer-led, not-for-profit scheme coordinator or Product Stewardship Organisation (PSO) operating under product-stewardship regulation, and funded by a combination of the scheme fee, unredeemed deposits and revenue from the sale of recovered material.

The Scheme was directed to attain recovery targets of 85% by the end of year three of its operation, and 90% by year five.

A number of key elements were included in the Scheme design, including the fact that the scheme would operate on the basis of a "deposit" model, whereby every container placed onto the market would be subject to the deposit amount. Based on international experience, this model is generally considered to provide a more effective funding mechanism for the operation of such schemes, than is the case for an alternative "refund" model, whereby the deposit amount is paid by beverage producers to the PSO following the return of a container.

The Cabinet Minute mandated a "mixed return model", including take-back obligations for retailers (primarily through the installation of reverse vending machines at supermarkets), along with a procurement element that would support the establishment of return depots, as well as other retail-based return mechanisms, such as over-the-counter return systems.

Furthermore, the Scheme was to include return mechanisms that facilitated the voluntary donation of deposit amounts to community organisations, sports clubs and registered charities.

Some Questions Remain

Given the point in the legislative and regulatory development process at which the Container Return Scheme was paused – namely soon after the publication of the Cabinet Minute of Decision – there remain a number of unresolved questions relating to its finer details.

This level of detail would be expected to be developed during the process of drafting the enabling legislation and accompanying regulations for the Scheme, and the subsequent processes of public consultation and consideration by a Parliamentary Select Committee.

This makes the task of analysing the potential impacts of the Scheme somewhat more complicated than would be the case for a more developed policy proposal, as many of the currently unanswered questions might be clarified during the process of drafting a Bill for introduction into Parliament.

As a result, any analysis of potential impacts arising from the introduction of a Container Return Scheme is by necessity undertaken primarily on the basis of the proposed structure described in

the Cabinet Briefing paper developed by MfE, and the Cabinet Minute of Decision, both published in November 2022.

Current Status – Where Are We Now?

In December 2025, MfE provided stakeholders with an update regarding its activities related to waste management, and its intended activities in this field in 2026. According to this update, Cabinet has agreed to develop new, fit-for-purpose waste legislation.[9]

Encouragingly, the Cabinet Paper released on 7 October 2025 includes a reference to the Container Return Scheme as an example of Extended Producer Responsibility programmes (footnote 13, page 5).

At the same time, however, the Cabinet Paper notes in Paragraph 35 that the approved changes to waste management practices in New Zealand will be implemented through amendments to the Waste Minimisation Act (WMA) of 2008, and that the Bill to enact these amendments is classified in the Government's 2025 Legislation Programme[10] as a Priority Category 6 activity. This Category refers to legislation for which drafting instructions will be issued to the Parliamentary Council Office during the 2026 calendar year, but which is not expected to be introduced to Parliament ahead of the 2026 General Election.

This implies that the required changes to the WMA are likely to be enacted in 2027, following which accompanying regulation, including for the implementation of a Container Return Scheme, can be developed.

What The Numbers Say

Initial Modelling Showed Positive Outcomes

In 2021, a comprehensive Cost-Benefit Analysis was conducted on the proposed Container Return Scheme by expert services firm Sapere, with this analysis updated in February 2022 and again in December 2022.[11] The analysis concluded that a national-level Container Return Scheme would provide significant benefit to New Zealand, as compared to continuing under a business-as-usual approach.

The final report, released in December 2022, showed a potential net benefits of $1.135 billion (in present value terms in 2022) over 30 years, with a benefit–cost ratio (BCR) of 1.47.

[9] https://environment.govt.nz/assets/publications/Cabinet-papers-briefings-and-minutes/Proactive-release-of-Cabinet-paper-for-waste-legislation-amendments.pdf
[10] https://www.dpmc.govt.nz/publications/about-legislation-programme
[11] https://environment.govt.nz/assets/publications/A-container-return-system-for-New-Zealand-cost-benefit-analysis-update.pdf and https://environment.govt.nz/assets/updated-crs-cost-benefit-analysis.pdf

Within this analysis, total benefits were estimated at $3.524 billion over the 30-year analysis period, compared to total costs at $2.389 billion. The largest benefit categories were welfare gains from increased recycling (estimated at $1.91b), welfare gains from reduced litter ($1.042b), and additional value from materials recovered and recycled ($216m). Other benefits included reduced emissions ($137m), savings from reduced kerbside collection costs ($91m), reduced litter clean-up costs ($57m), and avoided landfill costs ($38m).

In the study, welfare gains to households were proxied by the willingness of households to pay for activities that reduce the incidence of litter and increase levels of recycling.

The principal elements of the costs associated with a Container Return Scheme were the operating costs of the Scheme, estimated at $1.477b, and participation costs on the part of the New Zealand public, estimated at $847m over the 30-year analysis period.

Within the operating cost component, the major cost identified was that of Return Facilities ($571m), including reverse vending machines (RVMs), return depots, and "over-the-counter" return facilities. Other major elements of the Scheme's operating costs were Materials Consolidation Facilities ($546m) and the operation of the PSO ($360m). In addition, the report estimated a further $23m of capital costs for these Materials Consolidation Facilities.

In terms of participation costs, the analysis estimated the time cost of households at $422m, and transportation cost at $304m. Thes figures were calculated making use of time cost factors drawn from the New Zealand Transport Agency (NZTA) Economic Evaluation Manual (EEM).[12]

At the same time, however, the Sapere study acknowledged that "in effect, the opportunity cost of households' time is minimal, as sorting would occur at home and the redemption trip is, by and large, already being undertaken and hence does not crowd-out otherwise valuable time."

This suggests that in real terms, the cost to households of participation in a Container Return Scheme might be considerably overstated in Sapere's analysis, and that consequently, the BCR associated with the Scheme might in fact have been higher than the figure of 1.47 calculated at the time.

As an example, discounting the estimated participation costs on the part of households by 50%, to $211m for time costs and $152m for transportation costs, would result in an increase in the BCR to 1.74. Furter discounting these household participation costs by 75%, thereby reducing the time costs to $106m and the transportation costs to 76m, would result in a BCR of 1.91. These adjustments would appear to considerably strengthen the case for the implementation of a Container Return Scheme.

[12] The NZTA Economic Evaluation Manual (EEM) has been replaced by the Monetised Benefits and Costs Manual (MBCM), which represents the current industry standard for conducting economic evaluations of land transport activities in New Zealand – https://www.nzta.govt.nz/resources/monetised-benefits-and-costs-manual.

The Sapere CBA analysis modelled a return-to-retail system incorporating:

- The exclusion of fresh milk containers (removing most high-density polyethylene, or HDPE, beverage container from the Scheme);
- A mix of RVMs, over-the-counter (OTC) facilities, and automated depots;
- Household participation growing to 83.9% by year four; and
- The diversion of large material volumes from kerbside systems into the Scheme's recovery streams

Of interest in this regard is the fact that the Sapere report does not include any estimation or modelling of the likelihood for the Scheme to achieve the performance targets signalled by the Minister for the Environment and other stakeholders, of 85% of eligible containers diverted from landfill or kerbside recycling in year one of the Scheme's operation, and 90% by year five. Instead, Sapere makes use of an estimation of household participation of 83.9%.

This would once again suggest that should the Scheme successfully achieve these targets, the BCR might exceed the level of 1.47 estimated in the report.

Furthermore, international evidence, including specific examples cited below, suggests that under a design incorporating various elements of global best practice, the targeted recovery rates for the Scheme are highly achievable.

The Sapere reports emphasised significant data gaps and uncertainties, particularly around factors such as commercial recycling volumes and costs, the accuracy of litter baselines, and estimates of the cost of return facilities in New Zealand. In the December 2022 report in particular, the authors attempted to apply a number of simplifying assumptions, drawn from both international literature and previous financial modelling of the proposed Scheme in New Zealand.

The Sapere studies also specifically excluded any consideration of employment opportunities that might arise from the implementation of such a Scheme, and/or any transfers of employment from other industries into those associated with the proposed Scheme. According to the authors, this appears to be common practice when evaluating the effects of such schemes, as the opportunity cost of labour employed (the going wage rate) is implicitly included in the cost analysis, while any beneficial effect arising from the deployment of labour into the schemes is generally captured in the outputs of these labour processes.

While the authors acknowledged the possibility that the implementation of a Container Return Scheme might contribute to a reduction in the unemployment rate in a particular region, the lack of data availability on the subject meant that such employment effects were not included in their analysis.

Despite these qualifications, however, the Sapere reports provide a strong indication of the fact that the social benefits of a Container Return Scheme are likely to substantially exceed the costs

associated with its implementation. It is therefore considered highly likely that any additional modelling based on the most recently available date, will reach a similar conclusion, particularly if such modelling attempts to resolve some of the gaps and anomalies described above.

The Cost-of-Living Pause

One of the principal reasons provided by then-Prime Minister Hipkins for deferring the Container Return Scheme, was its potential to contribute to cost-of-living increases. The Prime Minister cited potential added costs for households as well as a regulatory burden for business, as potential risks arising from the Scheme.

As might be expected, this decision was widely criticised by waste reduction and environmental advocacy groups, who argued that household impacts were negligible, and that as demonstrated by the economic modelling undertaken in the preceding 2–3 years, the potential benefits considerably outweighed the costs of the Scheme.

The concerns expressed at the time by the Prime Minister also do not appear to be supported by subsequent economic research, conducted both internationally and in New Zealand.

International Evidence Paints a Different Picture

A report published in July 2023 by Reloop and the Container Recycling Institute (CRI),[13] found that no empirical basis exists for claims that deposit return schemes[14] increase beverage prices and/or reduce beverage sales. Using historic, real-world sales data across multiple jurisdictions, the study demonstrated that observed sales fluctuations after the introduction or expansion of such schemes, or after deposit increases, generally fall within the limits of normal market variability, and track broader economic and regional trends.

The study covered a range of international jurisdictions, including Scandinavia, several Baltic states, Germany, Croatia, U.S. states (Oregon, California), Canadian provinces (Alberta), and Australian states. None of these examples demonstrated any evidence of the introduction of a deposit return scheme, or an increase in deposit values, causing a decline in beverage sales.

In general, any declines observed following scheme changes matched similar price and consumption movements in neighbouring regions in which schemes were either not in place, or in which similar changes did not take place, suggesting that broader economic or market factors were primarily responsible for these changes. This supports the conclusion drawn in the report, that any correlation between a deposit return scheme introduction or change on one hand, and sales movement on the other, cannot be interpreted as causation.

[13] https://www.reloopplatform.org/wp-content/uploads/2023/08/Reloop-Impact-of-DRS-Report.pdf
[14] For clarification, the term **deposit return scheme** is commonly used internationally to describe various versions of what the New Zealand Government and local stakeholders refer to as the **Container Return Scheme**.

Industry-funded studies consistently assert that deposit return schemes raise beverage prices and depress sales.[15] The Reloop / CRI study however found that these studies often rely on a range of incorrect or unrealistic assumptions, including:

- treating fully refundable deposits as permanent price increases;
- ignoring material revenues and unredeemed deposits that offset system costs;
- assuming large-scale cross-border shopping; and
- omitting wider price drivers such as commodity costs, marketing or promotions.

By contrast, the Reloop / CRI analysis made use of actual sales data, generated over more than two decades, from 2000 to 2021.

Significantly, in the case of Australia, the report found that despite not having implemented a Container Return Scheme, New Zealand's per-capita consumption of both alcoholic and non-alcoholic beverages consistently remains approximately 24-25% lower than that of Australia. Following the introduction of DRS schemes in several Australian states in 2017 and 2018, this gap narrowed marginally to 23% in 2019, but by 2020, it had increased back to 25%, the same level as prior to the introduction of these schemes.

Furthermore, the study found that the sales decline in Australia during 2017-18 was far smaller than the decline that occurred in 2020, as a result of the COVID-19 pandemic, showing once again that changes to consumption patterns can occur for a wide variety of reasons.

Should a reduction in consumption however occur in New Zealand following the introduction of a Container Return Scheme, it would appear likely that apart from benefits associated with the reduced incidence of litter and increased levels of recycling, potential long-term social and economic benefits might occur, due to improved public health benefits associated with reduced consumption of alcoholic and non-alcoholic beverages. The scale and extent of these benefits are however impossible to estimate, and any attempts to model them lie outside the parameters of this study.

Recent New Zealand Research Provides an Interesting Perspective

Infrastructure Costs

A report published in June 2024 by Te Waihanga, the New Zealand Infrastructure Commission,[16] indicated that costs associated with what the Commission refers to as "network infrastructure", including waste management infrastructure costs, when funded through variable "user-pays" charges (which might include the deposit and scheme fee elements of a Container Return Scheme), provide households with a greater level of control over their spending on such

[15] Woolf, A. November 2010. "The Unintended Consequences of Public Policy Choices: The Connecticut River Valley Economy as a Case Study." https://vtdigger.org/wp-content/uploads/2011/02/20101101_woolfArtUnintended.pdf. Cited in https://www.reloopplatform.org/wp-content/uploads/2023/08/Reloop-Impact-of-DRS-Report.pdf

[16] https://media.umbraco.io/te-waihanga-30-year-strategy/yp2nlv4r/understanding-how-infrastructure-charges-affect-households.pdf

network infrastructure, than is the case for costs funded through fixed charges (such as the fixed waste management fee elements of Council rates).

Furthermore, the report found that in general, fixed charges take up a greater proportion of the income of lower income households and cannot be avoided, while variable charges allow households to adjust their infrastructure use and accompanying spending to suit their circumstances. This in turn implies that fixed infrastructure charges hold a disproportionately negative impact on lower income households, and that the shift of waste management charges brought about by the proposed Container Return Scheme, from fixed charges (Council rates) to variable ones (scheme fees and refundable deposits), can potentially prove beneficial to these households.

Inflation

A further consideration with regard to the potential cost-of-living impacts associated with the Scheme, arises from the fact that in spite of the reduction in overall levels of inflation in the New Zealand economy, from a high of 7.3% annually in June 2022, to 2.7% annually in June 2025 and 3.0% annually in September 2025,[17] food price inflation remains relatively high, hovering at between 4 and 5% annually in the period July to October 2025.

This suggests that in general terms, the cost-of-living increases faced by New Zealand consumers are far more likely to arise from price / cost increases in the contents of an eligible container, rather than in the non-refundable scheme fee element.

A tangible example in this regard concerns the alcoholic beverage sector, where the increases in excise duties that came into effect in July 2025 ranged from 7 cents per litre (for products containing between 6% and 9% alcohol by volume) to almost $1.70 per litre (for products containing more than 14% of alcohol content),[18] as compared to the 3 to 5 cents per container proposed for the non-refundable scheme fee.

Alongside this, the latest revision of the Consumer Price Index basket, which came into effect in April 2025,[19] appears to exclude a range of beverage categories that will be included in the proposed Container Return Scheme. Notable exclusions include soft drinks and fruit juice in cans, bottled water in containers of a size other than 750ml, and spirits and liqueurs in bottles of 750ml.

This suggests that in several instances, products included in the Scheme will not currently contribute to official inflation statistics published by Stats NZ, which will have the effect of (to some extent) weakening any potential linkage between the Scheme and cost-of-living increases.

[17] https://www.stats.govt.nz/indicators/consumers-price-index-cpi/
[18] https://www.customs.govt.nz/about-us/news/important-notices/update-on-excise-duty-and-levy-rates-for-alcohol-from-1-july-2025
[19] https://www.stats.govt.nz/news/stats-nz-announces-review-of-the-cpi-basket/; https://www.stats.govt.nz/methods/consumers-price-index-review-2024/?utm_medium=chat&utm_campaign=link-shared-in-chat&utm_source=livechat.com&utm_content=www.stats.govt.nz

Furthermore, the widespread practice of ongoing adjustments in beverages prices by retailers, particularly supermarkets, serves to further obscure any potential price increases that might be ascribed to the implementation of the Scheme.

Benefits and Costs for Councils

In line with the benefits arising from a shift in infrastructure costs for households from fixed to variable costs, a significant anticipated benefit arising from the introduction of a Container Return Scheme is a reduction in the scale of future waste management costs levied by local councils on households across New Zealand. This potentially reduces the rising rates burden on those households that cannot or do not participate in municipal waste management or recycling activities, or whose level of usage of these municipal services is relatively low.

The 2022 RIS document estimated the direct financial benefits of a Container Return Scheme to local government at $50 million in the first year, as a result of reduced kerbside collection, landfill and litter costs, and increased value of those beverage containers that remain in kerbside collection systems.

From a council perspective, the implementation of the proposed Scheme would result in a reduction in both operational and capital costs, in the form of providing waste management and recycling services, and in future capital expenditure on the infrastructure necessary to provide these services and manage the material streams that are recovered for recycling.

A (relatively minor) caveat in this regard, lies in the fact that councils might face the possibility of being left with underutilised waste management and recycling assets, as materials streams are diverted into the Scheme. This is however unlikely to be an issue in the short to medium terms, as councils will retain responsibility for managing the disposal of waste to landfill, as well as the recovery of recyclable materials not included in the Scheme.

A further caveat for ratepayers is the fact that any dampening effect arising from the implementation of the Container Return Scheme, on future increases in municipal waste management fees (or more specifically in the waste management elements of Council rates), are likely to be realised over a period of several years. Equally, quantifying the scale and effects of such avoided future increases is likely to be a complex (and somewhat subjective) task.

At the same time, however, future extensions of the Scheme to include other material streams will increase the scale of future benefits arising from avoided future rates increases. This is once again likely to hold relatively higher levels of economic benefit for lower income households.

In terms of the revenue streams that councils currently receive from the sale of recovered materials, according to the Cabinet documentation produced in November 2022, the proposed Scheme would include a provision for eligible containers collected through kerbside recycling collection systems, to be diverted into the Scheme infrastructure, and for councils to receive the unclaimed deposit amounts for these containers.

A further opportunity would appear to exist for the integration of a Container Return Scheme with the rates policies of councils. For example, in instances where the avoided recycling and waste management costs for councils prove to be significant, opportunities might exist for these councils to provide explicit rate offsets or service improvements, so that households experience tangible positive benefits that can be directly linked to the Scheme.

The Will of the People

The New Zealand Public Still Wants a Container Return Scheme

According to a Survey conducted by IPSOS in August 2025, support for a Container Return Scheme remains high. From a Survey population of more than 1,000 individuals, the overall level of support for such a Scheme was at 76%, with only 6% of respondents not in favour of its introduction.

This level of support was consistent across factors such as gender and political affiliation, while some differences were apparent within metrics such as age, ethnicity, household income and location. With regard to age, support was higher amongst respondents over 50 years of age.

In terms of household income, the highest levels of support for a Container Return Scheme were recorded amongst lower-income groups (up to $50,000 in annual household income). This appears to align with international research, which has demonstrated a trend on the part of lower income households to pursue the financial gains that might arise from returning containers and redeeming deposits – see the section below regarding the findings of a study into public perceptions regarding the Queensland Container Deposit Scheme.

Significantly, this finding also appears to somewhat contradict the rationale for the deferral of the scheme in 2023 on the basis of cost-of-living considerations.

With regard to location, survey data was recorded at regional rather than district council level, meaning that no conclusions can be drawn regarding factors such as urban versus rural support for the Scheme. The regions displaying the highest levels of support were the Manawatu / Whanganui, Southland and Greater Auckland regions, while the West Coast region displayed the highest level of negative sentiment.

The Survey also questioned participants regarding the likely outcomes of the Scheme. The highest levels of response were recorded for an increased motivation on the part of consumers to return containers for the deposit (55% of respondents), the opportunity to support fundraising initiatives (50%), a reduction in drink container litter (44%) and reduced recycling and waste management costs for councils (42%). Only 5% of respondents felt that the Scheme would not achieve any of the proposed outcomes.

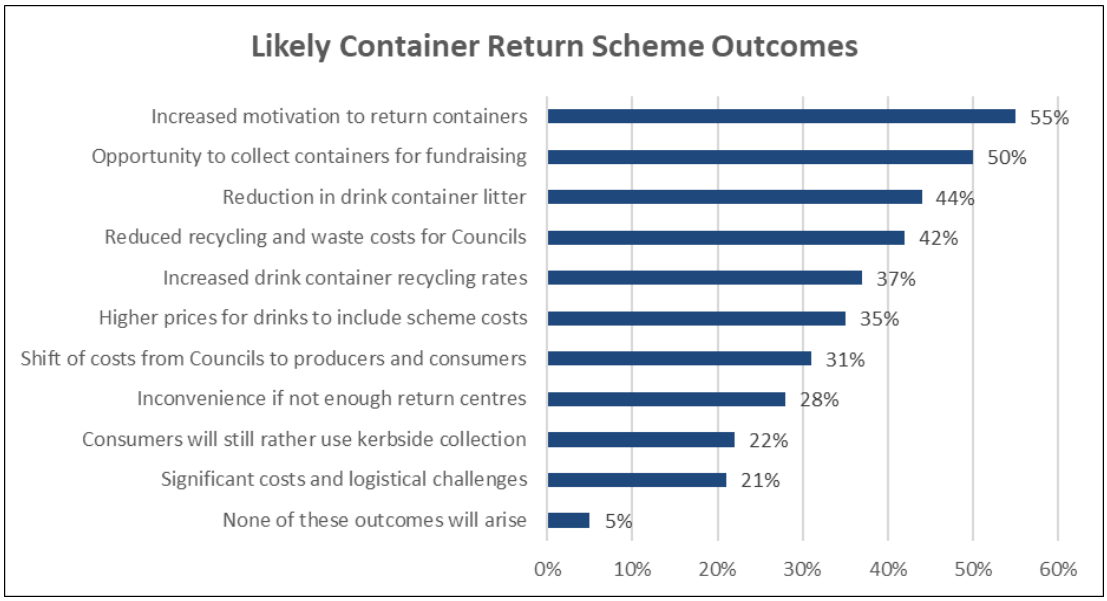


Chart 1: Likely Outcomes of a Container Return Scheme in New Zealand – IPSOS Poll, August 2025

What the Neighbours Say

Several of Australia's state-level deposit return schemes have been in operation for approximately 5-7 years, and an increasing body of research is becoming available regarding the success (or lack thereof) of these schemes.

Victoria

Victoria introduced its Container Deposit Scheme (known as CDS Vic) in November 2023. The timing of the scheme's introduction is noteworthy, as it followed a period of sustained high inflation in the aftermath of the COVID-19, with Australia's annual inflation rate peaking at 7.8% in Q4 2022, before declining to 5.4% in Q3 2023.[20]

The scheme operates with a refundable deposit amount of 10c, while for the period 1 November 2023 to 1 February 2025, the average scheme fee paid by producers was 12.3c per eligible container, including GST.

In 2025, Recycling Victoria engaged the Nous Group to assess the scheme's first-year impact on beverage prices and household consumption.[21] Econometric analysis shows modest price increases attributable to CDS Vic, with an average increase of 3.6c per eligible alcoholic beverage and 9.1c per eligible non-alcoholic beverage. These increases are considerably lower than the scheme's average supplier contribution of 12.3c per container, indicating that suppliers (and/or retailers) absorbed part of the scheme costs. From the perspective of consumers, these

[20] https://tradingeconomics.com/australia/inflation-cpi
[21] https://www.vic.gov.au/sites/default/files/2025-06/RV_Beverage-Price-Monitoring-Report-2025-final.pdf

cost increases also take into account the fully refundable 10c deposit amount, effectively leaving consumers marginally better off, particularly in the case of high return rates.

Furthermore, the price increases resulting from CDS Vic comprised a relatively small component of the overall beverage price increases that occurred in the state, as a result of factors such as high inflation rates. In the period under review, overall average prices of eligible alcoholic beverages increased by 16.0 cents and eligible non-alcoholic beverages by 36.3 cents in Victoria, meaning that price increases attributable to CDS Vic comprised approximately 25–33% of the total price increases for eligible beverages. Once again, these overall price increases can to some extent be offset by consumers returning containers and claiming the 10c deposit amount.

The report found that the introduction of CDS Vic coincided with a small decline of 2.6% on average, in household consumption of non-alcoholic beverages. However, no correlation or causal relationship could be established between this decline and the introduction of the Scheme. This decline was smaller than those experienced by other Australian States, notably Queensland and New South Wales. It also appears to be consistent with an overall decline in consumption of non-alcoholic beverages across various States, irrespective of the type of DRS scheme in place in each State.

Queensland

In March 2025, a report was published by RedBridge Group, an Australian strategic analysis and advisory firm, entitled “Public Opinion on the Queensland Container Deposit Scheme”. This report surveyed a sample group of more than 1,500 Queensland residents, regarding their views of the State’s Scheme.

The survey categorised the sample population according to a range of demographic economic and social factors including age, occupation, location, education, household income level, family structure, level of financial stress, political affiliation, home ownership and family structure.

Overall, the survey found that the Queensland Scheme enjoys a favourability rating of over 90%, and a new favourability rating of 86%, with these support levels remaining consistent across all survey parameters. Furthermore, engagement with the scheme is high, with 47% of respondents using the CDS monthly and 77% doing so at least once annually.

Key motivations for participation in the scheme included financial considerations, environmental benefits, convenience and the ability to provide community support. Barrers to participation included a lack of sufficient containers being collected to make it worthwhile, reliance on kerbside recycling, donation of containers to community causes or other individuals, a lack of sufficient financial incentive, and lack of convenience in terms of local return points.

Overall, the Survey population expressed strong support for an increase in the deposit amount from 10c to 20c, with 86% in favour of this step, and 69% indicating that it would make them

more likely to use the scheme. Furthermore, 65% of respondents indicated a belief that such an increase will help alleviate cost-of-living pressures.

This opinion was more prevalent amongst those segments of the Survey population that exhibited lower income levels, higher levels of financial stress, and were not homeowners.

Key learnings from these studies for New Zealand's proposed Scheme can be summarised as follows:

- For the Victoria study:

    1. Price impacts are generally modest, and can be lower than the headline per-container deposit fees;
    2. Suppliers can, and under certain circumstances will, absorb part of the costs associated with a Scheme, thereby limiting retail price increases;
    3. Consumption impacts are often negligible, and no definite causal relationships can be observed between schemes and consumption declines;
    4. Schemes can provide significant environmental benefits without resulting in major cost-of-living increases; and
    5. Container Return Scheme models can be successfully introduced during high-inflation periods, without substantial adverse market effects.

- In the case of the Queensland study:

    1. Schemes can achieve strong public support once implemented;
    2. Financial incentives are the strongest driver of behaviour change;
    3. Higher deposit and refund amounts can both improve participation rates and provide financial benefits to households; and
    4. Public opposition is often negligible, with the principal barriers to participation generally being of a practical rather than an ideological nature.

As was the case for the Sapere study, these studies did not assess the indirect benefits that might have arisen for the economies of the two States from their respective Schemes, for example through the creation of new business ventures, additional employment opportunities, resource efficiencies from increased use of recovered materials and various others.

Despite these omissions, however, these findings offer a relevant international reference point for the current and future New Zealand governments, specifically in considering a resumption of the implementation process for the Container Return Scheme, and more broadly in making use of pricing tools to change behaviour and achieve beneficial or desired social outcomes.

Running the Numbers

What Might the Real-World Impacts Be?

For retail consumers, the prices of convenience-oriented products such as smaller bottles of water, soft drinks or beer, generally provide a less attractive value-for-money proposition than is the case for larger packaging options, with convenience prized above value.

This implies that price elasticity for these convenience products is lower than for larger package sizes, and that consumers of these products are less likely to reduce consumption due to the implementation of a Container Return Scheme.

These containers are also the most likely to be consumed away-from-home, and are therefore the most likely to be littered or disposed of to landfill. The implementation of the proposed Scheme is therefore likely to address this issue and these containers to a relatively higher degree than is the case for larger-volume containers, the contents of which are typically consumed in the home, and directed into municipal kerbside recovery systems.

The possibility does however exist that for certain consumers, particularly those in low-income households, the implementation of the Scheme will provide an incentive for either reducing consumption of certain products, or for changing their consumption patterns to more cost-effective options, such as larger pack sizes.

Any such changes to consumption patterns that occur following the implementation of the Scheme will however only become apparent after the fact. Furthermore, as indicated above, evidence suggests that the implementation of such a Scheme does not imply any causal relationship with changes to consumption patterns.

In terms of the effects of a Container Return Scheme on the retail prices of various types of beverages, it is no surprise to find that the lower the price of beverages or the smaller the quantity per container, the more pronounced will be the effect of the Scheme fees.

The table below contains a series of examples of the effects of the proposed Scheme on the costs of certain products. In order to maintain consistency with the economic modelling and policy development activities undertaken in 2022-23, this analysis assumes a refundable deposit of 20c and an initial scheme fee of 4c per eligible container, both inclusive of GST, with 100% of this scheme fee passed through to consumers by the container producers.

The prices quoted in the table are illustrative in nature, and are drawn primarily from average supermarket retail prices quoted in online advertising. They are not intended to reflect the precise price ranges at which these products are available.

Container type	Illustrative retail price (incl. GST)	Scheme Fee, 4c / container (incl. GST) – **non-refundable**	Deposit, 20c / container (incl. GST) – **refundable**	Total retail price at checkout (incl. GST)	% price increase at checkout	% price increase after deposit refund
24-pack still water, PET, 0.6L each	$10.00	$0.96	$4.80	$15.76	57.6%	9.6%
30-pack carbonated soft drinks, aluminium, 0.33L each	$25.00	$1.20	$6.00	$32.20	28.8%	4.8%
24-pack beer / RTD, glass, 0.33L each	$40.00	$0.96	$4.80	$45.76	14.4%	2.4%
6-pack beer / RTD, aluminium, 0.33L each	$18.00	$0.24	$1.20	$19.44	8.0%	1.3%
6-pack still water, PET, 1.5L each	$6.00	$0.24	$1.20	$7.44	24.0%	4.0%
Individual bottle wine, glass, 0.75L	$12.00	$0.04	$0.20	$12.24	2.0%	0.3%
Individual bottle still water, PET, pop top, 0.75L	$3.00	$0.04	$0.20	$3.24	8.0%	1.3%
Individual bottle carbonated soft drink, PET, 0.6L	$4.00	$0.04	$0.20	$4.24	6.0%	1.0%
Individual bottle still water, PET, screw cap, 1.5L	$1.00	$0.04	$0.20	$1.24	24.0%	4.0%
Individual bottle still water, PET, 5L (not included in Scheme)	$5.00	$0.00	$0.00	$5.00	0.0%	0.0%

Table 1: Illustrative effects of a Container Return Scheme on beverage prices, Q1 2026

These examples relate only to off-premises sale and consumption of these beverage items. In the case of on-premises consumption in the hospitality sector, the pricing structures and higher gross profit margins associated with alcoholic beverages in particular, mean that the cost effects arising from the Scheme are significantly reduced from the indicative levels quoted above.

More Real-World Effects for Families

Assuming a 100% return rate per household, rather than disposal to kerbside collection, and retaining the GST-inclusive rates of a refundable deposit of 20c and a scheme fee at inception of 4c per eligible container, a family consuming the contents of 20 eligible containers per week will pay a total of $4 in refundable deposits per week, and 80c in non-refundable scheme fees. This

figure of 80c per week in non-refundable scheme fees equates to $41.60 in scheme fees per year, while the refundable $4 in deposits is effectively recycled each week. This therefore equates to a total direct cost for these households of $45.60 per year (once again maintaining the assumptions of 100% return rates per household, and 100% of the scheme fees being passed through to consumers).

A family displaying higher consumption levels and using 50 containers per week will pay $10 in deposits and $2 in scheme fees, equating to $104 in scheme fees per year. With the $10 per week in refundable deposits once again being recycled on a weekly basis, this equates to a total direct cost for such households of $114 per year.

Assuming the BCR of 1.47 calculated in the Sapere study is maintained, these families would receive benefits from the Scheme worth $67.03 and $167.58 per year respectively.

Adjusting the BCR upward to 1.55 or 1.72, to account for any potential overstatement of participation costs as discussed above, would lift the value of benefit received by these families as follows:

	Annual Benefit (Based on Container Usage)	
Benefit-Cost Ratio (BCR)	20 containers per week (total cost $45.60 per year)	50 containers per week (total cost $114 per year)
1.47	67.03	167.58
1.74	79.34	198.36
1.91	87.10	217.74

Table 2: Illustrative benefits of a Container Return Scheme at different BCR and consumption levels

Significantly, even at the BCR of 1.47 modelled in the Sapere study, these illustrative direct benefits to households exceed the cost of household participation of $56 per year (in 2025/26) estimated in the 2022 RIS document.

Naturally, these illustrative costs and benefits are in no way intended to represent the total costs or benefits of a Container Return Scheme for New Zealand consumers. At the same time, however, they illustrate the potential that exists for households to benefit substantially from high levels of participation in the Scheme.

Changing Behaviour – Incentives to Redeem or Donate

In a high cost-of-living or income-constrained environment, the incentive to participate in the Scheme by returning containers and redeeming their deposits is likely to be significantly increased, particularly for low-income households. This effect is also likely to be amplified if the Scheme's return infrastructure is appropriately designed to maximise convenience.

Furthermore, given that the original design of the New Zealand Container Return Scheme incorporated options to donate redeemed deposits to charitable organisations and causes, it is

also likely that in a financially constrained fundraising environment, these organisations or causes might gain substantial benefits from this alternative funding stream. Similarly, these entities can benefit from redeeming deposits from donated or discarded containers.

With regard to the potential distributional effects arising from the Scheme, a number of factors will be critical to ensuring that these remain as neutral as possible.

In the first instance, the design and rollout of the return infrastructure assumes an increased level of importance in a high inflation or increasing cost-of-living environment. Factors such as time and transportation costs, or distance from and access to return facilities, will be critical to maximising return rates and accordingly minimising the overall costs of the Scheme for households. The ability to easily and conveniently claim the 20c deposit is a critical factor in avoiding cost-of-living impacts arising from the implementation of the Scheme.

The RIS published in December 2022 highlighted the fact that time-poor families and rural households were at risk of lower redemption rates. In the current economic climate, while financial pressures might increase the incentive to participate in the Scheme, it is equally possible that any frictions related to the process of redemption might disincentivise participation.

Similarly, it is critical that the options for redemption of container deposits are maximised. While it is unlikely that redemption will take place in cash (in the form of coins and / or banknotes), it will be critical for the Scheme to be designed to provide multiple options for redemption (or for donation to charitable causes, as described above).

Options in this regard might include redemption directly into users' bank accounts via EFTPOS or debit cards, the creation of vouchers for redemption at supermarkets (particularly in the case reverse vending machines located at supermarkets), or credits for commonly incurred costs such as prepaid mobile packages. Such a varied range of redemption options is likely to incentivise participation in the Scheme, particularly amongst low-income households.

Conclusions and Recommendations

Based on the above analysis, it appears that the economic, social and environmental case for the introduction of a Container Return Scheme in New Zealand still holds, despite the headwinds experienced by the national economy since early 2023, and the cost-of-living pressures faced by households.

It further appears that the economic case for the proposed Scheme can be strengthened by re-examining some of the assumptions used in the initial modelling conducted in 2022–23, particularly those related to participation costs on the part of the New Zealand public.

Furthermore, choices made regarding the design and implementation of the proposed Scheme, including the scope of materials covered, deposit amount, scale of the return infrastructure and regulatory regime, will play a critical role in determining its effectiveness.

For example, a clearly mandated and well-enforced return-to-retail system, with well-developed and well-distributed return infrastructure and minimal exemptions, will provide significant support for the achievement of the Scheme's material recovery targets and enable households and businesses to easily claim their deposits. This includes return infrastructure in rural and sparsely populated regions of New Zealand, which might be provided by a combination of supermarket-based reverse vending infrastructure, over-the-counter return facilities, and drop off points at Depots or other Council-provided recycling facilities.

The coverage rate proposed in the initial development process for the Scheme, namely 1 recovery facility per 6,250 individuals, appears to be somewhat lower than the average coverage rates for materials recovery schemes in more densely populated regions such as continental Europe. At the same time, this proposed coverage rate is superior to rates in several geographies including states in Australia and the USA. This element of the New Zealand Scheme will need to be effectively managed, including through clearly defined equity objectives and consideration of factors such as urban versus rural population dynamics, to ensure that ease of access is maximised for all households, irrespective of their location.

In terms of the management of the proposed Scheme, the responsibilities of the PSO and the levels of regulatory oversight that were proposed, it is suggested that various intervention levers and mechanisms be included in the design of the Scheme. For example, it is suggested that in the event of recovery rates falling below a certain level, the deposit amount be automatically increased, rather than being subject to an industry negotiation or regulatory consultation process.[22]

It is equally suggested that the Scheme be managed on the basis of maximum transparency with, for example, information regarding the pass-through of scheme fees to consumers being published at regular intervals.

An area for potential future research concerns the development of alternative end-use markets for material recovered through the Scheme. The Cabinet papers prepared in November 2022 expressed a preference for recovered material to wherever possible be recycled into new beverage or other food grade containers, in order to meet the Scheme's circular economy objectives. This implies that, should the Scheme achieve its mandated recovery targets, it is

[22] A number of international precedents exist for such automatic adjustment mechanisms. In the US state of Oregon, the regulations governing the State's Beverage Container Act (more commonly known as the Bottle Bill), stipulated that should the recovery rate for covered beverage containers fall below 80% for two consecutive years, the refund value from 5c to 10c. This automatic change took place in 2017, and resulted in an increase in the recovery rate to back above the 80% threshold - https://www.oregon.gov/deq/recycling/pages/bottle-bill.aspx and https://www.oregonencyclopedia.org/articles/beverage_container_act_bottle_bill/

likely that the volumes of available material are likely to exceed the market demand in New Zealand, creating a necessity to export surplus material.

While such material exports can provide a valuable revenue stream for New Zealand, it is equally true that the opportunity would appear to exist for the PSO to support recyclers in investigating and developing new products and new end-use markets for recovered material.

In summary, the overall conclusion of this report is that the overall system-efficiency case for a Container Return Scheme still holds in 2026. A further conclusion is that in the current economic climate, price increases experienced by consumers for beverage products are driven to a far greater degree by cost increases in the contents of containers, than by any increases in the costs of the containers themselves, that might be brought about by the implementation of such a Scheme.

At the same time, however, in the current high cost-of-living environment, the risks of unequal distribution impacts arising from such a Scheme are elevated, and these risks will need to be effectively managed and mitigated by all stakeholders during the implementation of the proposed Scheme, to ensure that political and public support remain at current levels.