

ABERDEEN CITY COUNCIL

COMMITTEE	Operational Delivery Committee
DATE	18th November 2021
EXEMPT	No
CONFIDENTIAL	No
REPORT TITLE	“Podback” Coffee Pod recycling Scheme
REPORT NUMBER	OPE/21/163
DIRECTOR	Rob Polkinghorne
CHIEF OFFICER	Mark Reilly
REPORT AUTHOR	Hannah Lynch
TERMS OF REFERENCE	1.1.5

1 PURPOSE OF REPORT

To consider a member’s proposal for Aberdeen City Council to become the first local authority in Scotland to introduce a kerbside collection for recycling used coffee pods.

2 RECOMMENDATION(S)

That the Committee:-

- 2.1.1 instructs the Chief Officer – Operations and Protective Services to assess the viability of installing collection points at Household Waste Recycling Centres (HWRC’s), and if appropriate instruct the installation of collection points;
- 2.1.2 approves the promotion of the “Podback” Coffee Pod recycling scheme to inform householders and the general public about the scheme and provide further information about coffee pod recycling; and
- 2.1.3 agree that, at this time, adding coffee pods collection to the kerbside recycling collections is not considered viable due to logistical limitations, operational impacts and environmental sustainability considerations.

3 BACKGROUND

Coffee pods are small self-contained pods used in purpose-built coffee machines, which have become increasingly popular recently, with approximately 30% of households believed to own a machine. The pods are either made of plastic or aluminium with a foil or plastic lid that contain coffee grinds or milk substitute products.

It is estimated that 1.8 billion non-biodegradable coffee and hot beverage machine pods are consumed in the UK with much going to disposal, resulting in the non-biodegradable coffee pods taking up to 500 years to decompose in landfill or being treated in energy from waste (EfW) facilities.

Major coffee pod manufacturers have collaborated to create a new national scheme called “Podback” to deal with this hard to recycle, single-use waste stream. This scheme is set up, and already in operation, enabling users to recycle coffee pods by dropping them off in a pre-ordered bag at local collection points free of charge.

Podback also provides funding to local authorities wishing to collect coffee pods through setting up kerbside collection schemes.

Used coffee pods are collected and sent to a specialist reprocessing plant near Manchester to separate the packaging from the used coffee grounds. The aluminium and plastic are then sent for recycling while the coffee grounds are treated by anaerobic digestion and used as a soil improver. The plastic and aluminium is transformed into new products such as drinks cans or plastic garden furniture. The plastic recycling bags are recovered and sent to Energy from Waste facilities to create energy.

Currently, no local authority in Scotland collects pods at the kerbside. In England, Cheltenham Borough Council started collections in May 2021, collecting pods on a weekly basis with 1,582 households signing up in the first 7 weeks.

Current Process

Within Aberdeen, the Materials Recycling Facility (MRF) does not have the technology to separate and process this material from the mixed recycling stream. Presently, where the customer does not participate in the existing take-back scheme, the coffee pods are collected with the general waste then processed to produce refuse derived fuel (RDF) which is subsequently sent to EfW. Our contractor has confirmed it would be impossible for the materials recovery facility (MRF) at Altens to separate the plastic, aluminium, and coffee grounds within the pods due to the composite nature of the pods and their small size.

Aberdeen's RDF is currently processed through EfW facilities in Europe although this will transition to the NESS EfW in Aberdeen when it opens in 2022. Here, any plastic and coffee grounds will be turned into heat and electricity, the aluminium will go through the facility and be recovered through the bottom ash at the end. With each of these processes, value is generated for the authority.

Tonnage Data/Potential Yield

The consultancy, Eunomia, estimates in their research that approximately 30% of households have a pod-based coffee machine, with households using approximately 2.4 pods a day. They project a 42% participation rate of pod users would equate to 12.6% of total households.

Cheltenham Council has been operating a kerbside collection since May 2021 and 7% of their households participate. Their initial figures indicated that participating households use 0.18kg pods per week however, their total tonnages to date indicate that that this yield has been overestimated and could be less than half that.

Potential tonnages have been projected for Aberdeen, using Eunomia's estimates and Cheltenham's feedback. Please see table 1 below.

It should be noted that the projected tonnages below will include material that is already diverted through Podback's existing drop-off scheme. Also, the projections in the table below assume that a collection can be provided to all households in Aberdeen. However in reality this would not be case as there is no obvious kerbside collection solution for those households using communal bins (approximately one-third of households).

Table 1 potential tonnages.

Assumed 120,000 households and 0.18kg per participating household per week	Based on Eunomia estimates	Based on Cheltenham actual data	Comments
% total HH participating	12.6%	7%	
Number participating HH	15,120	8,400	
Tonnages	141.5	78.6	The Cheltenham data indicate that the 0.18kg per participating yield may be overestimated and ACC's annual tonnage could be as low as 33.3T

4 COST BENEFIT ANALYSIS

4.1 COSTS

Tonnage

The predicted tonnage is minimal compared to Aberdeen's overall waste arisings. For scale, in 2020, the total tonnage of material collected in the kerbside recycling scheme was around 21,000 tonnes. Using the predicted tonnage data, collected pods would only account for 0.6% of Aberdeen City's kerbside recycling tonnage. This figure is calculated using Eunomia's research estimate that approximately 30% of households own a pod machine.

It should be noted that this number is based on sales figures from the brands and as this is confidential, the data cannot be verified. Podback's tonnage projections are also based on the assumption that the 30% of households who own a pod machine, use their pod machine regularly, which may not always be the case.

Existing alternatives

There are other types of coffee machines that do not use pods but instead use coffee beans or ground coffee. This aligns better with the waste hierarchy by avoiding single use packaging.

For those that do use pods, options to recycle already exist, for example:

- The Podback drop off scheme to participating Collect+ Drop stores. This is a free of charge service where pod users request a recycling bag from Podback for either metal or plastic pods. There are 25 collection points for coffee pods in Aberdeen.

- Drop off to Nespresso Boutique Stores for Nespresso pod users. The nearest one is currently located at Union Square.
- Nespresso also offer a doorstep pick up.

Sustainability

The environmental sustainability of the Podback scheme's logistics must be considered. The pods are transported to a facility south of Manchester, around 370 miles from Aberdeen. Haulage would most likely be via diesel trucks.

Currently, Podback do not offset their carbon emissions. A spokesperson from Eunomia clarified that preliminary environmental modelling undertaken for Podback has demonstrated a carbon benefit for recycling, even taking haulage into account, however this has not been verified.

The pods themselves are a single use material, which is contributing to Scotland's throwaway culture. In Scotland, the law is changing on single use products (SUP), with the draft regulations for the single-use plastics ban now published. It is intended that items such as plastic straws and single use plastic cutlery will no longer be available from 2022. Coffee pods are an example of an SUP product that may be restricted in the future. The emphasis is on restricting the SUP product at the manufacturing stage and not dealing with it as an end waste product after use e.g. recycling.

In terms of the waste hierarchy, the first aim is waste prevention, followed by preparing for reuse then recycling.

Furthermore, the pods must be placed in a pre-ordered plastic bag. The production and delivery of these bags creates the need for another SUP to enable this material to be recycled, thus offsetting the benefits of the recycling process. These bags cannot be reused or recycled in the process resulting in them being sent to EfW.

Also, the proposal does not align with LOIP stretch outcome 13: "to reduce the generation of waste in Aberdeen by 8% by 2023" as it encourages the use of non-essential single-use materials (bags and pods), thus increasing waste arisings. Additionally, it does not align with the Council's Waste Strategy goal to "Minimise waste production; objective: Reduce the amount of waste produced per person in the city".

Costs

Podback state that local authorities should incur no additional costs. This includes vehicle modifications, additional time for collection crews, storage cages at depots, pod processing, haulage and a communications campaign for promoting the scheme to householders

However, there will always be hidden costs to the local authority, whether this be from maintenance and replacement of collection equipment; staff training; administration of the logistics chain or time/resource required to communicate the scheme to households and respond to queries. These hidden costs are currently not quantifiable but do represent a risk, given that the benefits to the Council do not appear significant.

Technical and Operational Considerations

The pods are collected in plastic bags supplied by Podback and collected as part of the kerbside collection. However, while the bags of used pods can be collected on the usual recycling day, they must be collected and stored separately to the mixed recycling. The bags cannot be placed in the bin with the recyclables as they cannot be processed with this material and would pose a contamination risk.

The bags of used coffee pods must therefore be left on top of the wheeled bin and deposited in a specially made container located separately from the main body of the vehicle. This limits the collection service to those with individual bins as there is no obvious collection system for households using communal bins. This also means a space must be found to fit a container on the collection vehicle. Note that it is intended that the collection vehicles are retrofitted with hydrogen tanks as part of the fleet hydrogen programme and space for this must be protected.

Also, although minimal, uplifting the bags will add additional time to the collection routes. The pods will also require additional administration time to organise, as part of the kerbside collection.

As well as budget and resource issues, there are also operational considerations to be made. Coffee pods are very light therefore there is a risk from littering on windy days. These non-biodegradable materials persist in the environment.

Provision and associated cost of securely storing the bags of pods would be required before being collected by Podback on an infrequent basis.

4.2 BENEFITS

Public Perception

Residents generally want to do the right thing for the environment and recycle as much as possible, and this scheme would provide a further convenient recycling opportunity.

Recycling Rates

Diverting pods from the EfW process may minimally increase Aberdeen City Council's recycling rates, however, any increase would not be significant due to the minimal tonnage collected and lightweight nature of the material, and in any case waste prevention is better environmentally and financially.

5 ALTERNATIVE OPTIONS

An alternative option, to enhance the existing mail back scheme, would be to have drop off point for bags of pods at the Council's four Household Waste Recycling Centres (HWRCs) around the city. This option poses fewer logistical challenges and would be more equitable as it would be available to all households and not restricted to those who have their own bins. Podback have indicated that there may be a secondary option to collect pods this way and can be explored further.

One additional option for Podback to explore is a local partnership between Podback and supermarkets.

6 FINANCIAL IMPLICATIONS

There are no financial implications to consider.

7 LEGAL IMPLICATIONS

The Council has a duty to provide household waste collection services under the Environmental Protection Act 1990 and to take reasonable steps to increase the quantity and quality of recyclable materials under the Waste (Scotland) Regulations 2012.

8 MANAGEMENT OF RISK

Each risk detailed below is associated with including pods as a kerbside collection

Category	Risk	Low (L) Medium (M) High (H)	Mitigation
Strategic Risk	<p>This would conflict with LOIP stretch outcome 13: “to reduce the generation of waste in Aberdeen by 8% by 2023” as it:</p> <ol style="list-style-type: none"> 1. encourages the use of single-use materials, thus increasing waste arisings 2. the recycling scheme requires plastic bag production in return for a very low tonnage of material to be recycled. <p>Additionally, it does not align with the Council’s Waste Strategy goal to “Minimise waste production; objective: Reduce the amount of waste produced per person in the city”.</p>	H	By not proceeding with the proposal, the Council would mitigate this risk
Compliance	This directly contradicts the Circular Economy principles to reduce and reuse products before the need to recycle.	H	By not proceeding with the proposal, the Council would mitigate this risk

Operational	The below operational risks could occur: <ul style="list-style-type: none"> - resources issues - requirement for administration time - littering - coffee pods are lightweight and risk blowing away - Storage issues of bags of pods 	H	By not proceeding with the proposal, the Council would mitigate these risks.
Financial	<ul style="list-style-type: none"> - The Council could incur unforeseen adverse financial implications directly associated with signing up to Podback. - There could also be financial implications if Podback were to suddenly terminate the service. 	M	By not proceeding with the proposal, the Council would mitigate these risks.
Reputational	<ul style="list-style-type: none"> - There is a risk to joining a scheme that is unproven economically and is very new. - It must also be considered a risk that Podback could decide it can no longer afford to collect from Aberdeen, which would present a reputational risk. 	M	By not proceeding with the proposal, the Council would mitigate these risks.
Environment / Climate	There are various sustainability issues such as: <ul style="list-style-type: none"> - The carbon footprint of haulage is substantial and not offset (Podback's claim of carbon benefits cannot be validated). - Pods are a SUP. - Plastic bags used to store pods are not recycled therefore are a SUP. - Directly conflicts with the waste hierarchy aims. 	H	By not proceeding with the proposal, the Council would mitigate these risks.

9 OUTCOMES

<u>COUNCIL DELIVERY PLAN</u>		
Impact of Report		
Aberdeen Outcome Plan	City Local Improvement	

Prosperous Place Stretch Outcomes	<p>The proposal not to proceed with kerbside collections of coffee pods aligns with Stretch outcome 13: Addressing climate change by reducing Aberdeen's carbon emissions by at least 61% by 2026 and adapting to the impacts of our changing climate. Specifically, Improvement project aim: Reduce the generation of waste in Aberdeen by 8% by 2023.</p>
UK and Scottish Legislative and Policy Programmes	<p>The proposal not to proceed with kerbside collections of coffee pods aligns with the Scottish Government's zero waste society and circular economy principles, specifically: "we aim to shift behaviour in Scotland away from single-use materials completely".</p>

10 IMPACT ASSESSMENTS

Assessment	Outcome
Impact Assessment	IIA completed
Data Protection Impact Assessment	not required

11 BACKGROUND PAPERS

<https://www.zerowastescotland.org.uk/single-use-plastics/draft-regulations>
<https://www.gov.scot/publications/draft-environmental-protection-single-use-plastic-products-oxo-degradable-plastic-products-scotland-regulations-2021-discussion-paper/>
<https://www.aberdeencity.gov.uk/sites/default/files/2021-02/2014-2025-Waste-Strategy.pdf>
<https://communityplanningaberdeen.org.uk/wp-content/uploads/2021/07/Final-LOIP-2016-26-Refreshed-July-21.pdf>

12 REPORT AUTHOR CONTACT DETAILS

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