






Annex C - Mixed Paper and Card: impact on services

The following table shows a summary of containers provided to residents in a selection of authorities in the south-west region. These authorities all provide kerbside sort collections from a range of reusable sacks and boxes:

Local Authority	Container 1	Container 2	Container 3	Container 4
Cotswold	Black box	White sack	Blue sack	Black box
	Glass	Plastics, cans	Card	Paper
Cheltenham	Green box	Green box	Blue sack	Green box
	Glass	Plastics, cans	Card	Paper
Gloucester City	Green box	Green box	Blue sack	
	Glass	Plastics, cans	Paper, card	
Forest of Dean	Green box	Green box	Blue sack	
	Glass	Plastics, cans	Paper, card	
Bristol	Black box	Green box	Blue sack	
	Glass, paper	Plastics, cans	Card, cartons	
North Somerset	Green box	Red bag	Green box	
	Glass, soft plastics	Plastics, cans	Paper, card	
South Glos	Green box	White sack	Green box	Blue - single use
	Glass	Plastics, cans	Paper, card	Soft plastics
OUTLIERS	glass bottles and jars	mixed plastics and cans	paper and card	

 <p>mixed glass bottles & jars</p>	 <p>household plastic packaging</p>	 <p>food tins & drink cans</p>	 <p>cardboard</p>	 <p>paper</p>
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This shows:

- Most have a box for glass only
- All have a container (box or sack) for mixed plastics and cans
- Most mix card and paper (4 out of 7)

One outlier, Bristol, is currently planning to mix paper and card. This change is being planned concurrently with a fleet replacement programme.

Why This Matters

- Recycling performance is linked to ease of use for residents. Mixing paper and card is easier (less decisions/ less separation)
- Residents should be provided with appropriate containment (volume to aid recycling capture, reduction in windblow litter)
- More mixed materials is a mitigation for multi-compartment vehicles. Less material types = less compartments and less risk of many compartments filling up at different rates.
- Less sorting = faster collection operations. Not necessarily cost saving, but mitigates future cost increases
- Aligns more with Simpler Recycling. Simpler Recycling indicates that four containers are required but local authorities have the freedom to make local exceptions to this:

MATERIALS	SIMPLER RECYCLING	CURRENT CDC	PROPOSED CDC
General Waste	1	1	1
Food Waste	1	1	1
Paper and card	1	2	1
Other dry recyclables	1	2	2

Impact on Recycling Revenue

Mixing paper and card would lead to a reduction in recycling revenue. The following projection uses the annual tonnage from 2024/25 and the rates for April 2026 (cost of handling and revenue per tonne)

2024/25	Paper	Card (hard mixed paper)	Mixed Card (soft mixed paper)
Annual Tonnage	429	2,669	3,098
Handling cost per tonne	-£12.00	-£12.50	-£12.50
Revenue per tonne	£82.50	£40.00	£40.00
Recycling credits per tonne	£73.00	£73.00	£73.00
Net Revenue	£61,561.50	£268,234.50	£311,349

Based on these assumptions:

- Net revenue for separate paper and card is £329,796
- Net revenue for mixed paper and card is £311,349
- Mixed paper and card results in less revenue **-£18,447**

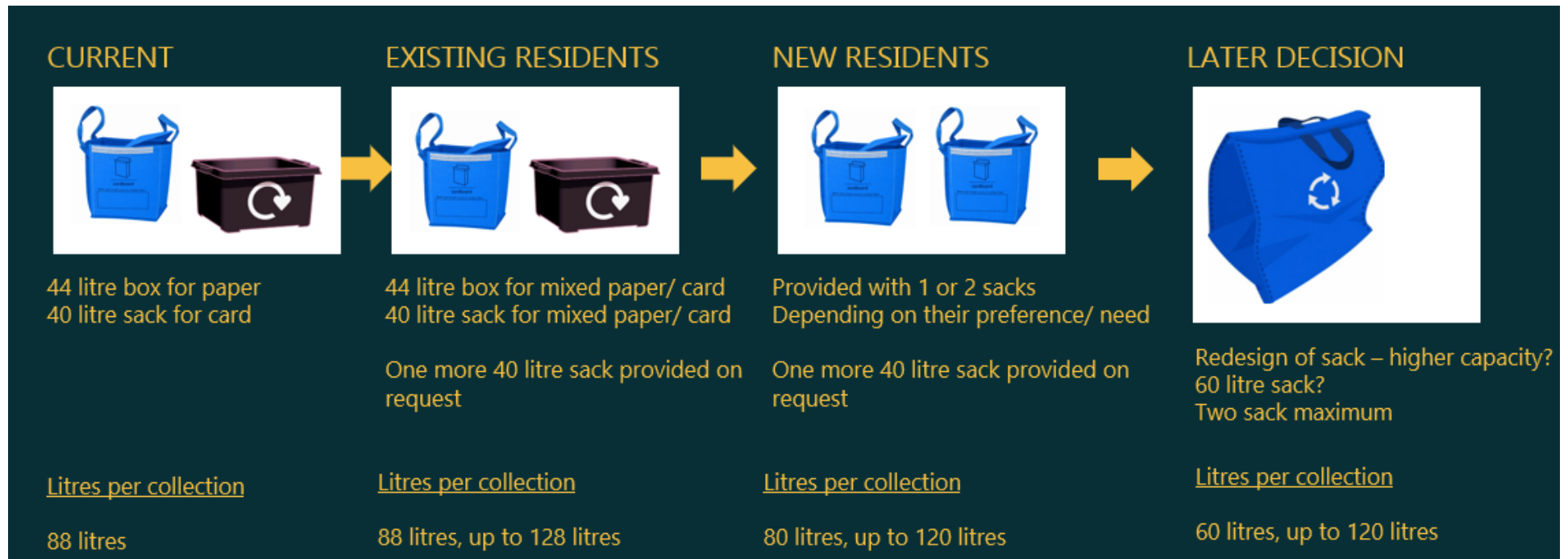
Container Provision

- Initially no change to containerisation is proposed, Residents could use both existing containers (sack and box) to present mixed paper and card,
- New residents would be provided with one of two sacks depending on need.
- Residents can request up to one additional sack.

This would continue up until the point the existing stock is fully used (circa 15k blue sacks are currently held in stock)

New sacks will be designed, in consultation with Councillors, Ubico and selected residents, with the intention to make them larger, easy to handle, and to allow the full bag to seal, protecting the contents from rain, and reducing windblown litter.

This is shown in the following graphic:



Annualised Cost of Containers

Initial containment options are similar in cost (considering replacement rates and delivery costs) Opportunity to optimise costs where current blue sack stock is issued. Replacement sacks could be bigger, limited to 2 per household, and more cost effective.

£ per Unit

Container Costs and Replacement Rates

Container	Unit Cost	Delivery Cost	Typical Life (years)	Cost per Annum
Recycling box and lid	£7.75	£5.13	5	£2.58
Blue sack	£2.61	£5.13	3	£2.58
White sack	£2.77	£5.13	3	£2.63



Assumed at £80k pa
260 working days
60 containers delivered per day

£ per Household

Current Provision	Mixed Paper & Card - Existing Residents	Mixed Paper & Card - New Residents	Mixing Paper and Card - Later Decision
£5.16	£5.16	£5.16	£5.27
box and sack	box and sack	two sacks	two bigger sacks

Cost of Maximum Provision

£7.73
(includes one extra sack)

£7.74
(includes one extra sack)

£5.27
(limited to 2 x larger sacks)

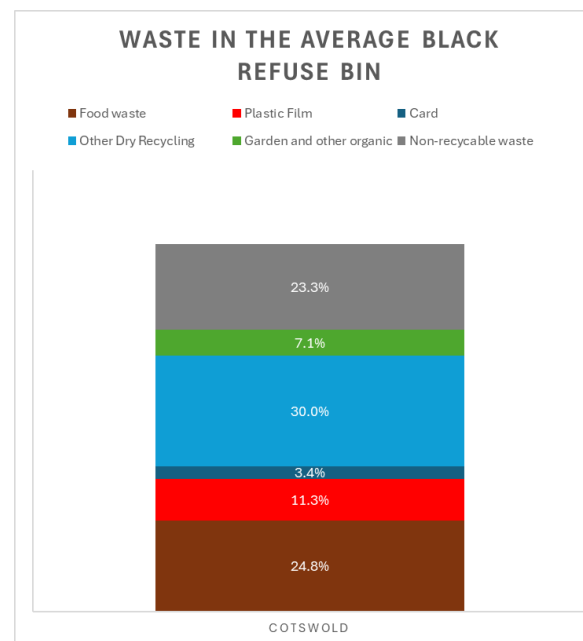
Would Increased Containment Lead to More Card?

The Councils card yield is already high/ paper yield is already low. This may indicate that some mixing is taking place already (and it does on narrow access vehicles as these do not have separate compartments for paper and card).

Local Authority (2023/24)	Kg per HH		Kg per HH per Wk			RANK CARD	RANK TOTAL
	Card (year)	Paper (year)	Card (Week)	Paper (Week)	Total		
North Somerset	73.7	0.1	1.42	0.00	1.42	1	4
Somerset	72	4.9	1.38	0.09	1.48	2	2
South Glos	66.4	7.1	1.28	0.14	1.41	3	5
Cotswold	61.6	13.7	1.18	0.26	1.45	4	3
Forest of Dean	53.5	39.4	1.03	0.76	1.79	5	1
Bristol (2022/23)	53	10	1.02	0.19	1.21	6	10
Torbay	44.9	15.5	0.86	0.30	1.16	7	11
West Devon	44.7	22.6	0.86	0.43	1.29	8	9
Gloucester City	41.4	30.5	0.80	0.59	1.38	9	7
Cornwall	38.9	28.6	0.75	0.55	1.30	10	8
Cheltenham	36.8	36.2	0.71	0.70	1.40	11	6
Calderdale	24.9	18.3	0.48	0.35	0.83	12	12

Residual waste analysis conducted in 2019 indicated that there was limited card remaining in the refuse bin.

From these combined data sources, we may see some additional capture of card i.e. increased diversion from residual waste. However, growth in this waste stream may be more likely to come from changes in waste composition over time e.g. increased home deliveries/ changes in packaging.



Mixing Paper and Card – a Summary

MIXING PAPER AND CARD	POSITIVE	NEGATIVE
Ease for Residents	Reduced need to separate materials (or decide when does paper become card?)	
Container Capacity	Intention to provide more containment to residents that need it	
Street Scene Benefits	Lids are provided for boxes but not always used. Sacks have built in Velcro flaps/ keep material dry and potentially reduce wind-blown litter	The current sacks are small and Velcro seals on one side only. The design of the sacks will be reviewed e.g. to seal more edges of the sack.
Ease for crews/ vehicle utilisation	Crews have less material types to sort/ vehicle utilisation can be optimised (less compartments that may fill at different rates)	
Loss of recycling revenue		Loss in revenue for paper. Estimated at a loss of £20k pa.
Potential for increase in cardboard yield	More card = more revenue/ less residual waste/ higher recycling rate	More card = more pressure on the recycling vehicles (mixing card/ new vehicle design = mitigation to this)
Ongoing Cost of Containers	Initially cost neutral. Opportunity to optimise later.	