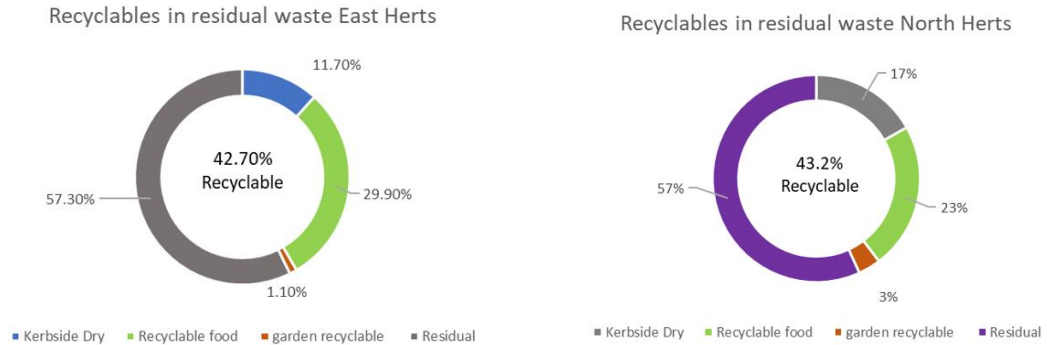


Detail from North Herts Cabinet Report 25th October 2022

Weekly food waste collection and 3 weekly Residual waste collection

8.11. A waste compositional analysis undertaken in late 2020 provided an insight into the composition of the residual waste bins at each authority. The graphs below show details of the recyclable proportions of the residual waste bin



8.12. The proportion of food waste in EHC residual waste bins is significant at 29.9%. Food production, according to an article in the professional magazine 'New Scientist' contributes 37% of global greenhouse gases and a report by the UN's Environment Programme estimates that between 8% to 10% of greenhouse gas emissions are from food which is wasted. Campaign work to encourage behaviour change in EHC and NHC over recent years and ongoing is only part of the solution to managing food waste.

8.13. According to a report by WRAP, (The impact of food waste collections on household food waste arisings); separate food waste collection schemes are significantly associated with lower total food waste arisings amongst householders.

8.14. In our public consultation 69% of respondents in EHC said that they were likely or quite likely to use a weekly food waste service.

8.15. This coupled with a government mandate for the weekly collection of separated food waste for 2025 leads to the recommendation that they be included for EHC in the new waste collection specification for implementation in 2025, despite confirmation of the mandated start date not being clear from central government.

8.16. The implementation costs for the food waste service change for East Herts are anticipated to be in the region of circa £150k for one-off revenue implementation costs. Circa £400k for initial capital costs and circa £1.5m ongoing revenue costs associated with the collection. As with the mid-contract change for the introduction of chargeable garden waste services in East Herts it is anticipated that the introduction of a separate weekly food collection service later than the start of the contract (should the Government push back the date further) will significantly increase the price of the service putting further pressure on the EHC Medium Term Financial Plan (MTFP). From the experience of the garden waste service this has resulted in costs which are over 54% higher for East Herts than the original tender price. It is therefore recommended to provide a separate weekly food collection service early in the contract alongside a three-weekly residual bin collection service.

- 8.17. There is an inevitable negative carbon impact for EHC from the introduction of food waste recycling in terms of the EHC fleet emissions. The current North Herts service produces approximately 94 tonnes of CO₂ per year. At this stage we are not clear on the methodology a new contractor would use for the collection of food waste and this would impact on the carbon emissions. However, based on the NHC service and extrapolating for higher property numbers it is likely additional fleet will be required. The carbon impact could therefore be in the region of 130 tonnes of additional CO₂ per year.
- 8.18. Removing food waste from the residual waste stream will however have a positive carbon impact. It is estimated using the governments conversion factors that treatment by EfW (Energy from Waste) results in 21.3kg CO₂e per tonne or 626.9kg CO₂e when landfilled. Whereas treatment by anaerobic digestion or composting produces 8.9 kg CO₂e and therefore can result in a minimum net saving of 12.3kg CO₂e per tonne. Based on 79 kg per household (based on capture rates from 21/22 NHC data) this could see a district wide carbon saving linked to disposal of approximately 65 tonnes of CO₂e. Mitigating in part the negative fleet impact.
- 8.19. The waste hierarchy requires a consideration of waste minimisation before recycling however it is clear that residents still have a significant proportion (around 43% of the residual waste bin) of recycling which could be recycling at the kerbside.
- 8.20. In addition the waste compositional analysis showed a significant proportion of food waste in the residual waste bin nearly 30% in EHC and 23% in NHC despite the provision of a weekly separate food waste collection service in a 23L caddy.
- 8.21. In our public consultation. 45% of residents in EHC and 49% of NHC residents in said their residual waste bin was ½ full or less at the time of the fortnightly collection.
- 8.22. In order to reduce the amount of residual waste collected by both authorities it is proposed to extend the emptying cycle from fortnightly to three weekly for houses. This change has already been implemented by a number of authorities across the United Kingdom. A summary of local authorities known to have undertaken a change to a three weekly collection cycle are shown in Appendix 6.
- 8.23. The demographics of both the EHC and NHC districts mean that with the proposed change and a reinvigorated communications campaign that an increase in recycling rate could be seen. However, based on the results of the public consultation where a high proportion residents stated that their residual waste bin was ½ full or less. It is also possible that a significant proportion of residents will cope with the residual waste change without a need to change either their buying or recycling behaviour.
- 8.24. In addition we asked a number of questions around extending the frequency of collections and the ability for resident to cope with an extended frequency. 75% of resident did not think that reducing the frequency of collections would reduce waste. However, when

Daventry District Council adopted a three-weekly residual waste service in 2018 they had the highest fall in residual waste of any local authority in the country at a drop of 13%.

8.25. The table below shows an example of three Welsh Councils performance over a number of years following extended frequency collections and a change to three-weekly residual waste collections. These are not direct comparator Councils as they offer slightly different services and have a different demographic however demonstrate that total waste arisings are likely to fall as a result of a change to three weekly residual waste collections.

Residual Waste Service Frequency	Authority	Year	Recycling rate (%)	Waste Arisings per person (kgs)	Percentage Drop in Per Person Waste Arisings (kgs)	Residual Waste Per Person (kgs)	% decrease Residual Waste
4 weekly	Conway	20/21	70	452	18.12%	135	43.98%
3 weekly in 2016 and 4 weekly in Jan 18		13/14	56	552		241	
3 weekly	Gwynedd	20/21	65	494	21.71%	117	59.65%
		13/14	54	631		290	
3 weekly	Pembrokeshire	20/21	73	455	17.12%	112	48.62%
		13/14	60	549		218	

8.26. When asked whether residents agreed or disagreed with the statement; 'I would be able to manage my waste effectively with three weekly residual waste (refuse) collections by recycling more and squashing items.' The majority of residents disagreed. However, 24% agreed or strongly agreed.

8.27. Of those residents who either disagreed or strongly disagreed, 26.5% had previously answered that their residual waste bin was $\frac{1}{2}$ full or less. With 54% previously stating that their residual waste bin was $\frac{3}{4}$ full or less. Demonstrating that of those that indicated they could not manage three-weekly collections a significant proportion of previous answers suggest this would be possible and that fear of change is an influencing factor in consultation answers.

8.28. Data from other local authorities is mixed but data does indicate that some level of recycling rate improvement can be expected. In particular in EHC where there would be the

addition of food waste recycling options to support a positive behaviour change in recycling habits.

- 8.29. Based on data shown in the graphs in 8.11 and 21/22 residual waste tonnage, it is estimated that potentially a further 16,500 tonnes of recycling could be captured by diverting it from the residual waste stream. Although fully capturing this tonnage is unlikely even capturing an additional 20% would have a significant impact on the recycling rate for both authorities.
- 8.30. Reducing the emptying cycle as well as encouraging residents to recycle more and participate fully in services such as weekly food waste collections, will also help to mitigate the costs of service provision during the next 8 years of the contract. It is anticipated that a three weekly cycle would enable a reduction of approximately three vehicles from the fleet across both EHC and NHC. The estimated direct cost of this is anticipated to mitigate whole contract cost increases by circa £550k annually.
- 8.31. The associated reduction in fuel consumption (based on current housing densities) is anticipated to be circa 40k litres which has a direct positive carbon saving of approximately 122 tonnes carbon annually based on our current whole contract diesel fleet.
- 8.32. There are alternative ways the councils could consider reducing their carbon footprint through this contract procurement, such as the use of HVO (hydrotreated vegetable oil) as fuel, however the current cost is approximately 20p per litre more than diesel and consequently could see annual contract cost rises in the region of circa £130k based on 2021 fuel usage data.
- 8.33. In the public consultation 82% of respondents described themselves as either a proactive environmentalist or caring about the environment and doing their bit. With a further 16% describing themselves as residents who recycle and don't drop litter but not much else in support of the environment. 84% of respondents also said that the Council should do more to make people recycle more and reduce waste, with 74% of people agreeing the council should invest or change services to reduce their carbon footprint. These outcomes all support the proposals in this report.
- 8.34. Comparison with other local authorities introducing three weekly residual waste collections is difficult as many will have introduced other changes at the same time. For example changes to what can be recycled at the kerbside or moves from box collections to bin collections. Many Councils undertaking this change are also lower performing Councils at the point of change and so behaviour change is more prominent.
- 8.35. Gwynedd Council predicted that its recycling rate would increase by 5.2 percentage points. In 2013/14, Gwynedd's recycling rate (calculated in line with Welsh Government targets) was 54.0%. By 2015/16, when the switch to three weekly collections had been fully rolled out, the reported recycling rate had risen to 58.7%, and in 2016/17 it increased further to 61.1%. The total increase has therefore been 7.1 percentage points, significantly more than expected.

- 8.36. Bracknell Forest's recycling rate has increased by 13% to 56%. This is a monumental achievement, in comparison, in 2020 to 2021 the largest increase recorded by a local authority in England was 5.2% however this was coupled with other changes like the introduction of food waste and chargeable garden waste collections.
- 8.37. Rochdale, predicted the increase in recycling that was anticipated from going three-weekly (39% in 2015/16, 45% in 2016/17), but did not set out the underlying waste flows. In practice, they achieved 42% in 2015/16 and 47% in 2016/17, exceeding expectations. With a further increase to 53.7% in 2017/18.
- 8.38. Based on the information we have been able to find from other Councils improvements in performance are both a step change and improvements over an extended period. The step change occurs with an immediate behaviour change, e.g. residents recycling more with new recycling services. The extended improvement in recycling rates could be attributed to more lasting changes in behaviour such as buying habits with services having a greater focus on recycling than residual waste services. Residents learn over time that the vast majority of waste is recyclable so use these services rather than continuing to use the residual waste bin because items still fit in it.
- 8.39. Our Contract Officers (including the mobilisation Contract Officers) and proposed Waste Awareness Officer will have a suite of tools to guide and support residents and help them identify items which they perhaps did not realise were not recyclable to help prevent any increases in contamination of recycling. Officers will also be able to support residents in understanding items which can be recycled at the kerbside but are sometimes forgotten.
- 8.40. It is likely that at the start of the service change we will see a slight uplift in the number of fly tips. However, this is expected not to be significant as those residents who would consider fly tipping are a very small minority. We will work with the enforcement teams at both authorities to ensure we have a planned approach to the management of fly tipping of household waste expected to be as a result of the service change.
- 8.41. Following the NHC transition to 180L wheeled bins there was no attributable long-term impact on fly tipping. Fly tipping numbers in the first year of the service actually reduced when compared with the previous year and longer term trends are consistent with the wider Hertfordshire districts. Therefore, a significant uplift in instances of fly tipping is not expected. Those residents who may initially struggle with a change to a three weekly collection cycle will be supported with advice on how to manage their waste and where appropriate will be supported by other policies. For example, the provision of extra capacity for larger households or households with two or more children in nappies and households producing healthcare waste such as incontinence wear. The proposal being for these households to continue to receive fortnightly collection services.
- 8.42. At the Members workshops an option for four-weekly residual waste collections was considered. There are a handful of Councils in the UK who have adopted this model, but Members felt this was too large a service change at the current time. Members were keen to ensure that a transitional option to four-weekly residual waste collections be drafted for the contract.

- 8.43. There is a risk that central government will mandate a requirement for fortnightly residual waste collections as a minimum. It is hoped that our need for fortnightly residual waste collections can be mitigated by supporting policies which can effectively manage the additional needs of some residents. This includes additional frequency collections of residual waste for those residents who require additional capacity for waste such as incontinence waste or nappy waste. The practicalities of this policy decision will be discussed as part of pre-market engagement with bidders.
- 8.44. Should the government mandate fortnightly residual waste collections and we are unable to mitigate this requirement with supporting policies for those who need additional waste collection support, we will have no alternative but to defer to our current residual waste collection model and provide collections fortnightly.
- 8.45. The provision of residual waste collections at flats will remain largely unchanged. Capacity provision at flats is based on per person calculations and as a consequence flats already have less capacity over six weeks of collection cycles than houses. Each flat block will be re audited and where flats participation in recycling services has been difficult, with high levels of contamination, advice and guidance will be given in liaison with the managing agents, to ensure that all flat blocks have access to recycling.
- 8.46. All flats will receive a review of residual waste collections alongside this audit, however it is not anticipated that flats will receive three weekly residual waste collections. It is possible that some flats currently receiving weekly collections may be able to receive fortnightly collections, as a result of a refocus on recycling. This is most likely in East Herts where flats will receive weekly food waste collections in wheeled bins alongside the service for houses.

Appendix 6

East Ayrshire Council	3 wk, 240L	Weekly, trolley boxes (plastics & cans)	weekly, caddy 23L?	4 wk, 240L	weekly trolley box	weekly trolley box	53.2		
East Devon District Council	3 wk, 240L? bin or gull sack	Weekly Sack (plastic/metal) and box (paper/glass/bagged WEEE, textiles and batteries)	weekly, caddy	2 wk, 240L	in mixed recycling bin	in mixed recycling bin		60	Ask East Devon Alexa service
East Renfrewshire Council	3 wk, 240L?	3 wk, 240L?	weekly, mixed food/garden (max 1 bin),		3 wk, 240L	in co-mingled	67.8		
Gwynedd County Council	3 wk, 240L	weekly trolley boxes	weekly, 22L caddy	2 wk, 240L?	weekly box	weekly box		65.5	
Isle of Anglesey County Council	3 wk, 240L	weekly, trolley boxes	weekly, 23L food	2 wk, 240L	weekly box (paper & Textiles)	weekly box (glass & cardboard)		65.7	
Mid Devon	3 wk, 180L (new bins)	2 wk boxes	weekly, 23L caddy	2 wk, 240L	2 wk (cards & cartons)	in mixed recycling bin		53.7	Bin-it 123, Oct 22
Moray Council	3 wk, 240L	2 wk, 140L bin	2 wk, 140L		2 wk, 140L bin	2 wk, Box 38L	59		
North Ayrshire Council	3 wk, 240L	3wk, 240L	2 wk (mixed), 240L		3 wk, 240L	in mixed recycling bin	56.3		
North Lanarkshire Council	3 wk, 240L	3 wk, 240L	2 wk (mixed), 240L		3 wk, 240L	in mixed recycling bin	40.3		
Oldham Council	3 wk, bin	3 wk, bin	weekly, bin		3 wk, bin	in mixed recycling bin		36.7	
Pembrokeshire County Council	3 wk, 3 sacks	Weekly, reusable sack for metals and plastics	weekly, 23L caddy	2 wk, 240L	weekly, reusable sack for card, box for paper	weekly, box		73.2	Aug 19, good video. Garden waste stops in winter
Powys County Council	3 wk, 180L	Weekly, 55L Box	weekly, caddy		weekly, 44L Box	weekly, 44L Box		66.1	
Renfrewshire Council	3wk, bin	2 wk, bin	weekly, bin	weekly, caddy	2 wk, bin	in mixed recycling bin	53		
Rochdale Borough Council	3 wk, 240L	3 wk, 240L	weekly, 204L		3 wk, 240L	in mixed recycling bin		48	Family 5+ can have larger bins
Salford City Council	3 wk, 240L (Tues-Fri)	2 wk, 240L bin, box or sack	weekly, mixed garden/food 240L bin and 23L just for food (no garden)		2 wk, 240L bin (may be too big)	in mixed recycling bin		47.2	4 day collections. 4 years, includes farm houses/flats, buy extra capacity via trade contract. Saved £10M. 180-200 houses, 400,00 pop
South Ayrshire Council	3 wk, bin	4 wk, 2 bins allowed	weekly, caddy	4 wk, 2 bins allowed	4 wk, bin	6 wk, 2 bins allowed	57.7		App SAC mybins
Wigan Metropolitan Borough Council	3 wk, 240L standard (140 for smaller properties)	3 wk, 240L standard metals, glass plastics (140L smaller properties)	2 wk, mixed garden/food 240L standard (140L or 23L caddy for smaller properties)		3 wk 240/140L or sackx1	in mixed recycling bin		53.2	Food video. T&Cs for bin charging. Published waste policy "at a glance" summary
Warwick District Council*	3 wk, 180L	2 wk, 240L	weekly, 23L caddy	2 wk, 240L	in mixed recycling bin	in mixed recycling bin		49.5	"123 collection" also batteries WEEE and textiles, Aug 22
Stratford-on-Avon District Council*	3 wk, 240L (replacements will be 180L)	2 wk, 240L	weekly, 23L caddy	2 wk, 240L	in mixed recycling bin	in mixed recycling bin		59.4	"123 collection" also batteries WEEE and textiles, Aug 22

*working in partnership

Detail from North Herts Cabinet Report 12th December 2023

Waste Management

- 8.22. Officers have explored with bidders three alternative service design solutions for waste and recycling collections identified in 8.2 a), b) and c), to determine if more financially sustainable alternatives exist. All three options explored will deliver collection contract cost savings.
- 8.23. The three options identified also impact on material sales and Material Recovery Facility (MRF) contracts. Paper entering the fully commingled stream has significantly less value (sometimes a significant cost) over paper collected separately in the current kerbside boxes. This is due to processing costs which are paid 'per tonne' for material sent to an MRF. The Part 2 Appendix 2 shows recent published domestic mill paper price indices. These are examples and are not based on our current contract prices which traditionally perform well due to high quality materials with low contamination.
- 8.24. The fully commingled option in 8.2 a) is a relatively simple solution for residents, however will mean there are no bin collections on some weeks only food waste caddy collection. It also presents risks around the achievability of savings due to the significant impact on the cost of processing paper through a MRF. It is likely however that paper capture will continue to reduce year on year due to consumer trends and more digital media. This could of course also increase the value of good quality source separated paper.
- 8.25. During the Executive report on 25th October 2022 a service solution in the event of a mandate for separate fibre was explored. Although the governments Simpler Recycling model has not mandated separate fibre officers have explored this model further as a cost saving option.
- 8.26. The service solution identified in 8.2 c) would mean residents would receive a weekly collection of food waste and a three weekly collection of other recycling waste streams alongside the already agreed three weekly collection of residual waste. E.g.
Week 1 – Food, Containers & packaging e.g cans, plastics, glass
Week 2 – Food, Cardboard and Paper
Week 3 – Food, Residual waste
- 8.27. Garden waste would remain fortnightly for those residents who subscribe to the service.
- 8.28. This expanded extended frequency cycle would help to mitigate the costs of an additional bin collection as fewer rounds are required each week as well as reduce the additional carbon impacts of the introduction of the service as a whole. A more detailed summary of this proposal is provided in Appendix 3.
- 8.29. The capture of paper and cardboard could drop if these material streams were only collected via a box service. It would therefore be necessary to consider the roll out of wheeled bins to the majority of the district.
- 8.30. The proposal is therefore to issue a new bin to all non-terraced houses. With maisonettes and terraced properties being offered an 'opt-in' choice whether they wish to have a bin or just utilise their existing box. The primary consideration for this proposal is that many terraced properties have only small frontages or front directly onto the road with no off street storage. There is an estimated Capital cost of £2,290,000 for providing new bins across the two authorities, based on the provision

of 100,000 bins. Property numbers across the authorities are significantly higher than this but we estimate that there are approximately 26,000 flatted properties and 38,000 terraced properties and therefore this number is considered sufficient. Full details of the preferred solution from bidders is still to be discussed at dialogue and therefore there is opportunity for officers to refine the position on the provision of bins. There will also be an ongoing cost for replacement/repairs and new build properties for the provision of a new bin.

- 8.31. In order to maximise the opportunity from issuing new bins it is proposed that in East Herts a new purple lidded 180L bin be issued which would become the new residual waste bin, with the existing residual waste bin becoming the commingled 'containers and packaging' bin and the existing commingled bin becoming the 'paper and cardboard' bin. (A similar change to that done in North Herts in 2013)
- 8.32. In North Herts a new blue lidded 240L bin would be issued which would become the new 'paper and cardboard' bin, replacing the box.
- 8.33. During the public consultation held during 2022 on waste services we asked questions regarding bin capacity 48.5% of North Herts residents and 85% of East Herts residents felt their recycling bin was full or overflowing, with 27% feeling they did not have enough recycling capacity. Under the existing system and existing proposed service solution for 2025 residents have a 240L bin and 55L box giving a recycling capacity of 885L over 6 weeks. Under the system proposed in 8.2 c) the capacity over 6 weeks would rise to 960L, providing additional capacity for plastic film.
- 8.34. These changes would be supported by the previously agreed, at the 25th October 22 Executive/Cabinet, 'waste communications officer' post. It is however proposed to incorporate another temporary post into the service change directly responsible for fixing issues which arise with containers. This staff member would be issued with a van and would assist with container swaps, delivery of ad hoc missing containers, stickering containers and resident run throughs to help residents adjusting to the change. Ad hoc deliveries/swaps can be expensive at the start of service changes when operating under a contract and therefore this is likely to be more cost effective than utilising the contract and allows the contractor to focus on business as usual. It is proposed therefore to include for an additional post across the two authorities for up to 6 months.
- 8.35. In addition officers will consider the benefits of utilising a phone app for service related reminders including bin collection days, sufficient details are not available for consideration in this report and therefore if proposed will be brought forward as part of the budget setting proposals in 2024.

Extract from Appendix 2

Paper Price indicators											
Waste paper prices – 'recovered paper' or 'paper for recycling' prices – are shown as indicators of prices that may be achieved for material, ex works usually baled or supplied to a paper mill specification. Merchant prices are for delivered in, often loose and smaller volumes. Prices can vary regionally. Contractual arrangements may differ. Alternative markets may exist for some grades but the prices are for recovered paper used within the paper industry. Price indicator guides are compiled by letsrecycle.com and are not guaranteed. letsrecycle.com started publishing export prices in 2004.											
2023 £ per tonne ex works Price Indicators											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
The lower of this grade are indicative of MRF prices.	Mixed papers	5 - 45	10 - 50	20 - 55	25 - 60	27 - 50	22 - 45	22 - 45	22 - 47	30 - 50	38 - 58
Used for brown corrugated cardboard in MRF prices	Old KLS (cardboard)	90 - 115	95 - 120	85 - 120	95 - 125	82 - 105	80 - 90	75 - 87	75 - 88	75 - 90	80 - 97
Separate kerbside collected paper prices	News and pams	110 - 120	110 - 115	105 - 110	100 - 110	90 - 100	80 - 90	70 - 80	70 - 80	70 - 85	75 - 90

Appendix 3

Proposal for extended frequency dry recycling collections with separate 'fibre' (paper and cardboard)

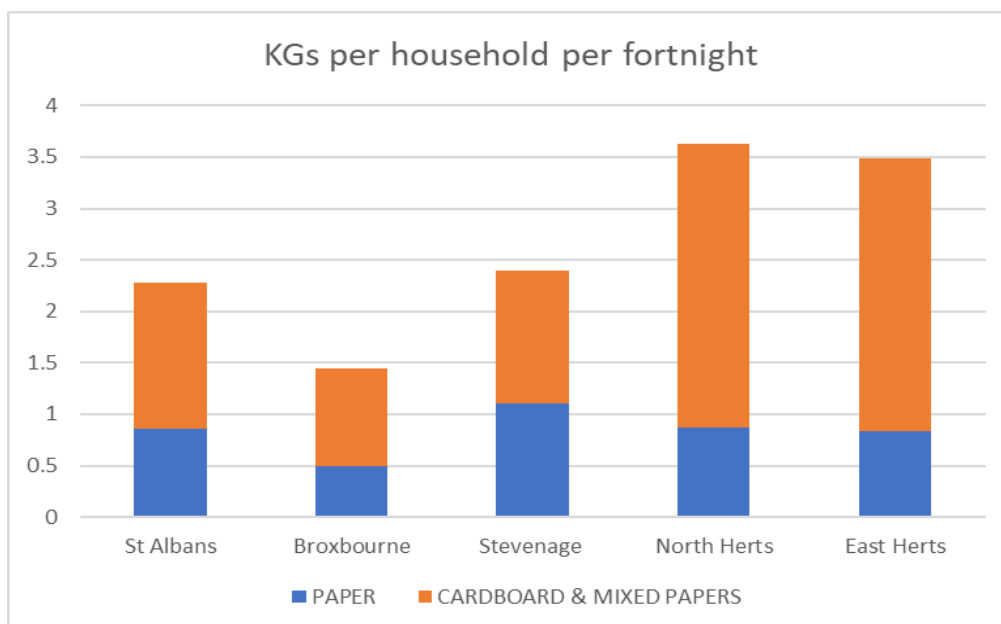
Preferred Proposal

- Introduce weekly food in EH
- Three weekly 180L residual waste
- Three weekly 'Fibre' bin – Paper and Cardboard
- Three weekly 'Containers' bin – plastic bottles pots, tubs, trays, film, aluminium and steel cans, glass
- Total capacity over 6 weeks = 1,458L
- Est. Recycling Rate = 58%-60%+

Capacity for households is reduced slightly from the current provision over a six-weekly cycle in line with waste minimisation principles. However, capacity provision is higher than the primary proposal agreed in the Cabinet/Executive meetings on 25th October 2022 for three weekly residual waste with fortnightly mixed dry recycling and a fortnightly paper box. This is due to the larger 'Fibre' bin size proposed for most households.

Collection costs are anticipated to be lower operating this model, in part due to operating 'standard' body vehicles rather than 'split' body vehicles and collection route optimisation from operating over three weeks rather than two.

Data below taken from the HWP Waste compositional analysis in 2021 shows capture rates for paper and card co-collected in local box services and our current paper only box and bin service (which captures cardboard).



Capture of cardboard/ mixed papers is likely to drop if collected in a box only service. Proposal is therefore for a 240L bin provision for the majority of households.

- **Does it reduce waste?** Yes, from reduced residual bin size and reduced residual emptying cycle. Also food waste reduces when separate food waste collections are introduced.
- **Does it increase recycling?** Yes, greater capacity for recycling in bins. Also food waste captured in EHC.
- **Does it reduce fleet carbon footprint?** Carbon impacts are mitigated, there are reduced fleet movements for a three-weekly cycle and operational efficiencies gained from operating standard body vehicles.
- **Does it reduce collection costs?** Cost are reduced from the service design agreed on 25th October 2022.
- **Are East & North Service aligned?** Yes
- **Is there Capital spend?** Yes, for the provision of new bins to the majority of households.