

Report to: Policy & Performance Improvement Committee Meeting 17.10.22

Director Lead: Matthew Finch, Director of Communities and Environment

Lead Officer: Andrew Kirk, Environmental Services Business Manager

Report Summary	
Report Title	<i>Kerbside Glass Collection: Options Appraisal</i>
Purpose of Report	<i>To present PPIC with the different options for, and implications of, implementing a kerbside glass collection, and for PPIC to consider and endorse the officer recommendations.</i>
Recommendations	<p><i>The Policy, Performance and Improvement Committee recommend to Cabinet that if a kerbside glass collection service is to be introduced that:</i></p> <ul style="list-style-type: none"> <i>a) an eight weekly collection frequency is adopted;</i> <i>b) a 140 litre bin is used in the collection methodology;</i> <i>c) The Council does not provide the service in the ROB area as it may have a detrimental impact upon the objects of a long-established charity, but;</i> <i>d) The Council works alongside ROB to try to improve knowledge of the ROB service, its take up in the communities it serves and the furtherance of its charitable objects;</i> <i>e) Revenue and capital costs identified with the proposed methodology are recommended to Cabinet for inclusion the budget for 23/24, however;</i> <i>f) Before a final decision is undertaken, may members of PPIC wish to recommend to the Cabinet that consideration is given to a period of public consultation on the recommended service option given the significant capital and revenue costs involved and the need to effectively interface with ROB and the communities it serves, and;</i> <i>g) Furthermore, that a market research company is commissioned to undertake a consultation exercise at a maximum cost of £15,000 funded from existing budgets.</i>

<p>Reason for Recommendation</p>	<p><i>An 8 weekly collection cycle is more cost effective and can be scaled up if required. Therefore, the officer recommendation is a 140L bin on an 8 weekly collection.</i></p> <p><i>This would mean significant operational changes for NSDC and thus costs. However, it is a resident priority as demonstrated by recent resident surveys, and, based on the National Waste Strategy we can expect that the introduction of kerbside glass will become a statutory requirement in the future. If we already have a service, this can be shaped to be compliant to the nuances of any legislation.</i></p>
---	---

1.0 Background

- 1.1** Residents have repeatedly expressed their frustration at the lack of kerbside glass collection in Newark and Sherwood. The results of the Council’s Residents’ Survey, both in 2018 and 2022, show that waste and recycling collections are cited as one of the most important services to residents in the district. In 2018 there were over 820 comments that stressed the importance of kerbside collections, a significant amount of which expressed a desire for a kerbside glass collection. Similarly, the 2022 findings show that recycling continues to be an issue of high importance for residents, and that it is important or very important to 83% of residents to live in a sustainable and environmentally aware way, and again 270 respondents commented to specifically request the introduction of kerbside glass recycling.
- 1.2** Residents also referenced recycling of food and garden waste however glass was the most requested kerbside service. This is likely because it is collected and recycled in at least half of the district’s households, but also because of its potential in reducing the district’s carbon footprint. As glass is one of the few materials which is 100% recyclable with no loss in quality during the recycling process, every tonne of recycled glass that is melted saves approximately 670kg of carbon dioxide.
- 1.3** On 26th September 2022, the Policy and Performance Improvement Committee received a presentation that highlighted the results of the Residents’ Survey. Following that, and having listened to the feedback of our residents, officers were tasked with investigating the options that are available to the council to be able to deliver a kerbside glass recycling service. With that in mind, this report has been developed to outline options for implementation of a kerbside glass service with the aim of establishing which is the most effective and cost-efficient option.
- 1.4** Given the scale of the costs involved in launching a kerbside glass collection and the nature of the proposed offer, further consultation may need to take place with residents and partners to confirm that the method of delivery is acceptable to the public. Additionally given the volatile economic climate we are currently

experiencing, additional work will need to be done to finalise costs before the launch of the project as well as develop an implementation timeline.

2.0 The Current Service

- 2.1** There are currently ‘bottle banks’ at 49 bring sites in the district and it is estimated that they capture over 50% of the glass waste produced by residents in the district. Currently, approximately 2,175 tonnes of glass are collected from within the district per annum. 1,666 tonnes come from bring banks and 510 tonnes are collected by R.O.B.
- 2.2** R.O.B (Recycling Ollerton and Boughton) provide a service covering from approximately 10,000 properties in the district, however they have no interest in expanding their services district wide. R.O.B is a charity which provides work-based training placements to adults with learning difficulties. Providing the collection is one of their placement experiences and they mitigate some of the costs associated with their charity with the glass recycling income. Should the council choose to implement a glass collection, it will need to consider whether to operate in this area.
- 2.3** Officers have met with ROB management about the introduction of a kerbside glass collection service. There is no doubt that should the Council choose to enter the Communities serviced by ROB, then the future of the charity would become uncertain as one-third of their annual income is as a result of selling on the glass which is collected. However, whilst ROB covers around 10,000 properties, the current penetration rate is about 40% and the Council should be mindful of providing a service which isn’t equitable across the district – no matter how valid the rationale. ROB would be keen to work with the Council to improve that penetration rate to closer to 80%, which is similar to the rates achieved by Councils locally. Over time, there has been churn in residents moving in and out of properties so there is perhaps not the awareness of the service that there should be. This is something the Council could help ROB with. Additionally, ROB would also look to concentrate its offer on the communities it currently covers, move some collections from half day to full day and consider mixed collection of glass, rather than single sort. This would be offset by the additional income and recycling credits the increased volume of glass would generate. ROB would not wish to move away from recycling as a means of providing work-based opportunities for the young adults they support as, they say, there are benefits to the visibility of the service in the community.

3.0 Wider Considerations

- 3.1** Newark and Sherwood District Council (NSDC) acts as the Waste Collection Authority (WCA) for the District. Nottinghamshire County Council is the Waste Disposal Authority (WDA) and have a contract with Veolia that determines what can and cannot be collected in the district’s domestic recycling (silver bin). Glass is not currently listed as an accepted material under this contract. This means

we cannot recycle glass via Veolia by adding it to the silver bin. As it stands the WDA (NCC) pay NSDC 'recycling credits' for providing bring sites that accept glass. Therefore, in order to implement a kerbside glass service, the Council would need to have a separate collection method.

3.2 The National Waste Strategy (NWS) was released by Central Government in 2018 with the aim of standardising kerbside waste collections across England, however the details of these proposals are still being awaited. There is a possibility that this strategy will dictate how waste streams are collected and, if this is done, there is also the potential that central government might fund Council's moving to the agreed collection methodologies. Funding would be provided via 'Extended Producer Responsibility'. In theory this scheme will result in packaging producers paying for the collection and disposal of their products, with this money then being diverted to local authorities. Producers who place non-recyclable packaging on the market will face higher charges.

3.3 Another element to consider is that the introduction of a kerbside glass service could positively impact our other services. Firstly, it is estimated that glass accounts for up to 8% of the entire waste stream. At the moment, some residents are putting glass in their residual bins. The introduction of this service would likely reduce this meaning less waste going to incineration. Secondly, the council currently achieve a recycling rate of 36%. If a kerbside glass collection was implemented the recycling rate would likely show a small increase (unlikely to be more than 2-3%). This is based on the assumption that glass currently put in the general waste stream and glass currently taken to bring sites would be captured by the kerbside collection diverting glass from the residual stream.

4.0 Options Considered – type of collection

4.1 Type of Collection: Option 1 Single 140L wheeled bin

Benefits

- Standard Refuse freighters (with slight modifications) can be used. These vehicles are far cheaper to purchase and enable rounds to be completed in a shorter timescale.
- There would not be any additional manual handling issues for collection operatives.
- An additional bin presents options for the future should the waste strategy be implemented in full as the bin could still be used for separate glass collection, or switched to another function, for example a glass and plastic mix.
- A bin means that customers have a higher capacity.

Challenges

- Collection in this manner can be noisy which presents additional health and safety concerns and may result in an increase in complaints from residents on collection days.
- Residents will need to have storage capacity for the additional bin. Furthermore, it will need be judged whether households are automatically enrolled in the scheme, and have to opt out if they do not wish to have an additional bin or cannot store the bin (e.g. a town centre flat).
- If the resident cannot have a bin, consideration needs to be given to an alternative method e.g. keeping some bring sites.
- It should also be noted that implementing a glass collection will increase running costs as the collection hopper of the freighters will need to be refurbished more frequently.

Financial Impact

There are 45,150 households in the district (excluding the ROB area) with domestic bins. These figures are assuming every one of those households would need a bin and includes containers for housing of multiple occupation (flats) and bring banks.

Cost for Bin Purchase and Delivery (based on 45,150 homes)		
	Cost per container inc delivery	Total Cost
Bin Cost 140L	£23.65	£1,170,800
Bin Cost 240L	£28.50	£1,392,800

Prices quoted are current market prices and represent worst case scenario. Figures include trade type bins for House in Multiple Occupation (HMO) and flats.

If a kerbside glass collection is chosen to be implemented, then operationally a 140L bin would be the preferred container. The green and silver bins currently in use throughout the district are 240L containers. It is not expected that residents will be able to fill a container this size regularly before their next collection. A 140L bin will be easier for residents to store, cheaper for the council to supply and is less likely to be rejected by the vehicle lift due to weight than a 240L bin.

4.2 Type of Collection: 40L box container

Use of a 40L box has been considered, but has been deemed unsuitable for the following reasons:

- Boxes require bespoke vehicles to carry out the collection.
- Additional vehicles and crews would be required due to the slower method of collection.

- When compared to the bin there is less capacity meaning that collections are likely to be required more frequently.
- Boxes pose a **significant manual handling risk** to staff as they are heavy and will have to be lifted off the floor.
- Boxes are easily lost or stolen and can blow away in high winds or fill with rainwater.

Financial Impact

This is based on 45,150 households and includes an amount for containers for housing of multiple occupation (flats) and bring banks.

Cost for Box Purchase and Delivery (based on 45,150 homes)		
	Cost per box inc delivery	Total Cost
40L Boxes	£7	£411,050

Prices quoted are current market prices and represent worst case scenario. Figures include trade type bins for HMOs and Flats.

5.0 Options Considered – frequency of collection

5.1 The other element to considering these options is the frequency of collections. Please note that all the calculations below have been made with the assumption that collections will run at their current speed. But please note that if a collection is implemented using a box, then it is likely that the below costs would increase as the working time is longer.

5.2 4 Weekly Collection

If a four weekly collection was to be delivered, the district council would require 3 additional vehicles (2 main and a spare) and additional crew to cover absences.

The costs of implementing a four weekly collection (including estimated income) would be:

Frequency	Yr 1 Capital Costs (Vehicles, bins, transfer station)	Revenue Yr 1	Revenue Yr 2	Capital Yr 3 (Vehicle part replacement)	Revenue Yr 3	Revenue Yr 4	Capital Yr 5 (Vehicle Replacement & Transfer Station)
4 weekly (exc ROB area)	£1,955,500	£324,100	£478,700	£73,000	£485,900	£503,600	£873,200
4 weekly (inc ROB area)	£2,423,900	£437,200	£640,200	£109,500	£650,100	£675,900	£1,147,900

Staffing costs include the current assumed the latest forecast for 2022/23 pay award

5.3 8 Weekly Collection (Preferred Option)

If an eight weekly collection was to be delivered, the district council would require 2 additional vehicles (1 main and a spare) and additional crew to cover absences.

The costs of implementing an eight weekly collection (including estimated income) would be:

Frequency	Yr 1 Capital Costs (Vehicles, bins, transfer station)	Revenue Yr 1	Revenue Yr 2	Capital Yr 3 (Vehicle part replacement)	Revenue Yr 3	Revenue Yr 4	Capital Yr 5 (Vehicle Replacement & Transfer Station)
8 weekly (exc ROB area)	£1,740,200	£140,700	£247,100	£36,500	£251,300	£260,800	£598,400
8 weekly (inc ROB area)	£2,138,109	£257,800	£412,400	£73,000	£419,400	£437,100	£873,200

Staffing costs include the current assumed the latest forecast for 2022/23 pay award

An eight weekly collection model would be the preferred choice operationally. It has the lowest running costs of all the options presented and if a 140L bin is chosen as the preferred container then this should mean that customers have sufficient capacity to have less frequent collections. Several other local authorities including Mansfield DC have recently implemented a kerbside glass collection and have chosen this approach.

An 8 weekly collection could also serve as a pilot, ready to respond to changes resulting from the waste strategy and being relatively easy to scale to more frequent collections if there is a demand to do so. This may allow us to claim additional expenditure back from central government if the option arises.

6.0 Options for Recycling the Glass

As glass recycling is not part of the contract with Veolia, the Council has some flexibility over how the glass is brought together and then sold for recycling. Due to space constraints at the depot the option for collecting and storing the waste by expanding existing waste bays is not feasible. However, there are a number of potential routes to recycling the glass;

- a) A transfer point could be created at the rear of the Council's lorry park. This would involve initial set up and running costs. This would also result in the loss of several parking spaces. However, its location means it is less likely to generate noise issues. Thought needs to be given to any recharge from the corporate property team to cover this.

- b) The glass could be deposited at an external transfer station. This will save on any expansion costs but may add additional travel time and will diminish any potential income from the glass. Furthermore, it could even incorporate a gate fee which would cost the council additional revenue, so therefore all prices associated with this are not obtainable at this time.

Option A would incur both capital and revenue costs. A walled area (alfabloc) will need to be created to store the glass and fencing will have to be erected. The site will also need a tele-handler (a multi-purpose machines that can lift, move and place materials) which can be purchased or hired long term.

The costs involved in creating and running our own transfer station have been included in the cost tables shown in 5.2 and 5.3.

However, it is important to note, that the income received in the different situations is different (less income from outsourcing). The preferred option operationally is to have our own transfer station and further viability would need to be undertaken to establish which suit was best suited.

7.0 Income from Glass Recycling

7.1 *Material Income*

The costs of running a collection service are extensive but some income is achievable from the sale of glass for recycling and recycling credits (at this present time). As mentioned earlier, glass is one of the few materials which is 100% recyclable with no loss in quality during the recycling process and therefore we will be able to sell on any glass collected. The income that we will be able to achieve will be dependent on two factors.

1. How well the scheme is participated in by residents as this will directly impact the volume of glass we are able to collect.
2. The value of the glass, which is determined by market forces.
3. Continuation of recycling credits.

The table below estimates the income from glass collection;

	Total Tonnes per year	Additional Income for sale of glass		
		Income @ £19 per tonne	Income @ £25 per tonne	Income @ £35 per tonne
80% Capture	2,439	£46,340	£61,000	£85,400
66% Capture	2,012	£38,200	£50,300	£70,420

Given uptake at other Local Authorities and the strong appetite from residents for a kerbside glass collection it is reasonable to expect a good uptake of the scheme. Currently the price of glass is averaging between £19 and £25 per

tonne (One other Local Authority has recently signed a contract for £35 per tonne it remains to be seen if we could achieve the same income rate). The market price for glass has been steadily rising over the last 18-24 months with an average return in 2020 being around £8 per tonne (based on figures from letsrecycle.com) but it is worth noting that should the NWS dictate that glass is collected by all local authorities then the supply of glass will increase, and the price of glass will fall. If the price of glass goes below £0 then the council will have to pay for its disposal.

7.2 *Recycling Credits*

Recycling credits are paid to the district by Nottinghamshire County council for any items which are recycled outside of the County's contract. The figure given is calculated annually by passing on the savings made by diverting materials away from residual disposal streams. The service currently receives £110,000 per year, based on £66.13 per tonne set by Government, for the glass captured by our bring sites. Should glass be collected kerbside, we would expect an additional £22,900 to £51,100 depending on 66%/80% capture.

It is important to note that the figures quoted in the tables contained within paragraphs 5.2 and 5.3 are net figures which include both the sales income and recycling credit payments

8.0 **Next Steps**

- 8.1** This report will recommend that should a decision be made to implement a kerbside glass collection then further investigatory work, including detailed finances, should be undertaken as there are price increases on a regular basis in the current climate.
- 8.2** With current supplier lead times it is likely that there could be many months of preparation to implement the service including activities like;
- Recruitment of additional staff,
 - Purchase of vehicle/s, bins and containers, (vehicles are currently at 12 months lead times in some areas),
 - Delivery planning e.g. design routes,
 - Set-up of new processes e.g. missed bin/box form, and
 - Communications to customer including collection calendars.
- 8.3** As mentioned in point 1.4, further consultation should take place with residents and partners to confirm that the method of delivery is acceptable to the public. It would be likely that this will take the form of a specific survey about glass collection as well a potential focus group. An approximate estimate for a market research company to carry this out would be around £15,000.

9.0 Implications

Financial Implications (FIN22-23/8815)

Expenditure

- 9.1** The table below summarises the additional costs for implementing the Kerbside Glass Recycling scheme based on the recommended 8 weekly collection.
- 9.2** The estimated costs for Capital expenditure in year 1 are based on today's prices plus an assumed 5%. All capital purchases thereafter also include an annual 5% uplift. The Glass Collection Vehicles have been assumed to last 5 years, with a small part replacement in year 2 (covered by an annual R&R budget) and a large part replacement in year 3 (through the Capital Programme), before a full replacement in year 5.
- 9.3** It has been assumed that the transfer station will initially be installed in the Lorry Park taking up 3 spaces. The loss of income has been based on 3 spaces at £16.25 (the net fee) per space for 209 days due to Monday – Thursday being the busiest days. These assumptions have been agreed with the Parking Services Manager.
- 9.4** Should the Lorry Park be relocated in the future, the glass recycling transfer station could stay in situ for a period until works start on the Lorry Park site. After which it would need to be moved to the preferred site. Year 5 has been estimated for the requirement to move or rebuild the transfer station. Plans are also underway to consider the long-term development of Brunel Drive and Farrar Close given the future need to electrify the fleet and to accommodate the requirements of the NWS.
- 9.5** The used Tele Handler is expected to last 7 years, with a part replacement in year 5 covered with an annual R&R budget included in the running costs with fuel and maintenance.
- 9.6** Glass Collection Vehicle Running Costs include R&R, tyres, fuel and maintenance.
- 9.7** The crew salary estimate is based on the assumed pay award for 2022/23 as per the MTFP.
- 9.8** The Refuse Collection budget currently contains an amount for bin replacement, it has been assumed that this should increase by £30,000 per year to account for the 140l bin replacements that the team will need to arrange on top of current replacements.

Capital Expenditure Financing

- 9.9** It is recommended that the Bin purchase be funded from the Change Management reserve, to reduce the annual impact on the general fund.

9.10 All other capital expenditure will be financed by borrowing and will therefore attract a cost for interest and Minimum Revenue Provision.

Additional Expenditure	Capital Year 1	Revenue Year 1	Revenue Year 2	Capital Year 3	Revenue Year 3	Revenue Year 4	Capital Year 5	Revenue Year 5
Bin Purchase	1,229,300							
x2 Glass Collection Vehicles Purchase	430,500			36,500			549,400	
Transfer Station	38,400						49,000	
Tele Handler	42,000							
x2 Glass Collection Vehicles Running Costs		52,000	53,600		55,200	56,800		58,500
Crew (x2 Drivers x2 Loaders)		121,700	125,500		126,900	133,500		137,500
Transfer Station Site R&R		2,500	2,500		2,500	2,500		2,500
Bin Replacement budget increase		30,000	30,900		31,800	32,800		33,800
Tele Handler Running Costs		7,500	7,500		7,500	7,500		7,500
Loss of Income from Lorry Park		10,200	10,500		10,800	11,100		11,400
Interest on Borrowing		28,900	28,900		28,900	28,900		28,900
Minimum Revenue Provision			99,800		99,800	99,800		99,800
Total	1,740,200	252,800	359,200	36,500	363,400	372,900	598,400	379,900

Income

9.11 The table below summarises the income that could be generated as a result of implementing Kerbside Glass Recycling. This income is not guaranteed and will be unpredictable following the release of the NWS however, this is what is expected based on the information held currently.

9.12 As per paragraph 7.2, the service currently receives recycling credits from Nottinghamshire County Council based on a value set by Government for glass

diverted from landfill. This is expected to increase by £51,100 if 80% of the district (outside the ROB area) participate in the scheme. The table also includes three amounts that could be received from recycling the collected glass.

Additional Income	Revenue Year 1	Revenue Year 2	Revenue Year 3	Revenue Year 4	Revenue Year 5
Additional recycling credits	(51,100)	(51,100)	(51,100)	(51,100)	(51,100)
Income generated from Glass Recycling	(61,000)	(61,000)	(61,000)	(61,000)	(61,000)
Total Income	(112,100)	(112,100)	(112,100)	(112,100)	(112,100)

Net Budget changes

9.13 If the above income is realised, the below shows the net budget requirement for both Capital and Revenue

Net Budget Requirement	Capital Year 1	Revenue Year 1	Revenue Year 2	Capital Year 3	Revenue Year 3	Revenue Year 4	Capital Year 5	Revenue Year 5
Total	1,740,200	140,700	247,100	36,500	251,300	260,800	598,400	267,800

10.0 Equalities Implications

All support provided for other domestic waste and recycling services would apply e.g., assisted collection.

Background Papers and Published Documents

Appendix 1 – glass recycling rates for other councils in Nottinghamshire.

Appendix 2 – recycling figures for other councils in Nottinghamshire.