



COMMITTEE: CABINET

DATE: 9TH NOVEMBER 2021

TITLE OF REPORT: NORTHUMBERLAND WASTE MANAGEMENT
STRATEGY – OUTCOME OF KERBSIDE GLASS RECYCLING COLLECTION
TRIAL

Report of Rob Murfin Interim Executive Director of Planning and Local Services

Cabinet Member: Councillor John Riddle, Cabinet Member for Local Services

Purpose of report

To report the key outcomes of the kerbside glass recycling pilot scheme which has been in operation since November 2020 and to recommend the next steps for this scheme and the estimated costs for rolling-out a kerbside glass collection service across the county.

The report will also highlight how the timing for the roll-out for this enhanced glass recycling service will be dependent upon the outcome of the latest consultation exercises undertaken as part of the Government's new Resources and Waste Strategy and provision of new burdens funding by the Government.

Recommendations

It is recommended that Cabinet:-

- A) Notes the content of the report including the success of the trial, reflecting high customer satisfaction levels, high yields of glass collected per household and what the estimated performance benefit and financial costs would be associated with the future roll-out of this service and;
- B) Agrees to the continuation of the kerbside glass collection trial through to March 2023 and to include an additional 800 properties in the four trial areas to gather further information about the future operating costs and collection efficiency, in order to evidence the County's requirements to roll out the service permanently when anticipated announcements on the Resources and Waste Strategy and provision of new burdens funding are published in early 2022.
- C) Approves additional revenue expenditure from the Council's Transformation Fund Reserve of £31,000 during 2021/22 to meet the cost of extending the glass collection trial for the remainder of the current financial year (£18,000) and to fund the cost of purchasing an additional 800 no. 140-litre wheeled bins required for the expansion of the trial area (£13,000).
- D) Notes that the revenue cost of £43,000 for operating the trial throughout 2022/23 will be identified as a non-recurrent revenue growth bid for consideration as part of the Council's 2022/23 to 2024/25 Medium Term Financial Plan budget setting process, which will be determined by the County Council in February 2022. It is envisaged that Government new burdens funding will be available to meet the cost of providing a new kerbside glass collection service from 2023/24 onwards.

Link to Corporate Plan 2018-2021

'Thriving' - We want to attract more and better jobs

'Connecting' - We want you to have access to the things you need

'Enjoying' - We want you to love where you live

This report is also relevant to the recently published Climate Change Action Plan 2021-2023 – Priority Action Area 7 - Reducing Waste

Key issues

The kerbside glass recycling pilot scheme has been running since November 2020 providing a once monthly collection of glass from around 4,000 households. Data from the period November 2020 to September 2021 shows that the trial scheme has been well received by participants with high satisfaction levels, requests for retention of the service and high yields of glass per household.

The costs of implementing the pilot scheme are as planned, with capital costs for purchase of bins being £63,000 and revenue costs for undertaking the collections and delivering on-going communications activity at £43,000 per annum.

The impact of Covid-19 restrictions has had a significant impact on people's lifestyles, consumption habits and recycling behaviours, with more people consuming alcohol at home, which has led to a 22% increase in the amount of glass being collected for recycling in the county through its network of bring recycling sites. During the period of the trial, it has not been possible to determine the precise impact the kerbside glass recycling trial has had on overall glass recycling activity in the county due to these Covid impacts.

The Government has undertaken further consultations on its Resources and Waste Strategy and, pending the outcome of the latest consultation exercises and the passage of the Environment Bill in the coming months, it is envisaged that local authorities will be required to provide kerbside recycling collection services for a much wider range of materials, including glass, from as early as 2023/24. The Government has stated its intention that funding support for local authorities to meet the cost of these new recycling obligations will be met through 'new burdens' provisions within local authority funding settlements and from taxation in the form of extended producer responsibility obligations for manufacturers and retailers of packaging materials.

The Resources and Waste Strategy Consultation published in May this year has indicated that recycling collections should include for separately collected commodities including glass rather than being collected co-mingled with other dry recycling at the kerbside, to ensure we maximise quantities and quality of recycling diverted from household waste, unless there are clear technical, environmental or economic reasons evidenced in the form of an environmental assessment, for not doing so. The consultation document has indicated that decisions on recycling collection service design, where assessments are applied, will be open to challenge by DEFRA and the Environment Agency.

There are environmental benefits in the collection of glass for recycling separately rather than co-mingled in terms of CO2 reduction, but the financial costs of delivering this service are high, and far in excess of what the Council could afford to deliver without new burdens funding from Government. It is therefore important that the Council uses the glass recycling trial to gather further detail about the recycling performance improvements post Covid, further operational efficiencies that might be achieved and the CO2 impacts of operating this enhanced recycling

service. This evidence base will allow the Council to make decisions about the future roll out of kerbside glass recycling that will satisfy the Government's anticipated new funding conditions.

1. Background

A Cabinet report titled 'Northumberland Waste Management Strategy – Proposed Trial of Kerbside Glass Collections' was presented to Cabinet on 13th October 2020. The report detailed the preparatory work on assessing waste and recycling collection options in order to allow the County Council to respond to potential future obligations in the Government's Resources and Waste Strategy, which reported the findings of its first public consultation in 2019.

The report outlined how the strategy would require major investment in vehicles, containers, communications activities, staffing resources and waste sorting infrastructure to allow Northumberland to contribute towards national 2035 recycling targets. With support from the Waste and Recycling Action Programme (WRAP) various household waste collection models to deliver the objectives have been developed and these were presented in the Cabinet report. One of the key points in the WRAP report was that the County Council will be required to collect glass at the kerbside in some form in the future, a service not currently provided for operational and financial reasons.

Within the Cabinet report approval was sought to conduct a 12-month kerbside glass recycling trial to gather information on the operational, financial, environmental and resident acceptance aspects of this service. Cabinet agreed the recommendations in the report, with the kerbside glass trial being approved to start in November 2021.

On 7th May 2021 Government published a second consultation on its Resources and Waste Strategy, titled 'Consistency in Household and Business Recycling in England', in which it confirmed its intention that councils will be required to collect glass bottles and jars in kerbside recycling collections, along with other dry recycling, from as early as 2023/24.

It is envisaged that this requirement will be confirmed by Government during early 2022 in the form of the Environment Bill, followed by the publication of statutory guidance.

The Communities and Place Overview and Scrutiny Committee at its meeting on 25th August 2021 were given an interim update report on the performance of the trial pending the presentation of (this) final report to Cabinet, scheduled for 9th November 2021.

2. Kerbside Glass Recycling Trial Results

2.1 Introduction

The four trial areas cover Morpeth, Bedlington, Hexham and Alnwick with Lesbury, with each one comprising approximately 1,000 households. The pilot aimed to gain an understanding of set-out rates, participation rates, glass collection yields, customer acceptance, cost and health & safety implications across a range of different property types. Plans showing the location of the properties participating in the trial, including the proposed locations of the additional 800 homes to be included in the trial from December 2021 (delivery of bins – first collection Jan 2022), are provided in Appendix 1 to this report.

In order to minimise the costs involved in undertaking the trial the council has utilised its existing refuse collection vehicles, with a driver and two loaders at each of the four selected depots serving the trial areas undertaking one day's overtime to deliver the trial collection one Friday per month.

The initial trial duration was proposed for 12 months with a review after ~9 months to inform officers and members of the costs and benefits so that an informed decision can then be made about the scheme's longevity. The data presented in this report provides an update of performance and key findings to date and covers the period November 2020 to September 2021.

2.2 Glass Recycling Performance - Trial Data

A total of 281.3 tonnes of glass have been recycled over 12 collections since the trial began in November 2020. The final collection of the current trial period is scheduled to take place on 15th October 2021. The relative performance of each of the four trial areas is detailed in Table 1 below.

Table 1 – Summary of Glass Collection Trial Per Trial Area Nov 2020 to Sept 2021

Trial Area	Number Collects	Houses Per Trial Area.	Average Bins Presented	Average Put out Rate	Average Weight / Round (kg)	Avg. Weight Per Bin (kg)	Average Yield (kg/hh)	Total (Tonnes) Collected Per Area
Hexham	12	935	429	45%	4750	11.4	61.0	57.10
Alnwick	12	1009	540	53%	6611	12.6	78.6	79.33
Bedlington	12	1023	615	60%	6138	10.1	72.0	73.66
Morpeth	12	925	550	60%	6146	10.8	77.0	71.21

The relatively low average put out rates for all trial areas reflects the ample capacity provided by the 140 litre bin, meaning that residents do not have to put out their bin on every scheduled collection day to still achieve high yields per household. It also provides scope for using the trial data to consider variations to the recycling collection model to achieve the most efficient service configuration – for example the current put out rates offer the opportunity to increase the numbers of households that can be covered on each round so that they align better with anticipated average numbers of bins (and weight of glass) placed out for each collection.

The Hexham area achieved the lowest average yield of 61 kg/hh and Alnwick and Lesbury areas achieved the highest at 77 kg/hh. Alnwick and Lesbury residents put out their bins less frequently than the average for the trial meaning they maximised bin utilisation with an average bin weight of 12.6 kg per collection, compared with the average of 11.4 kg. Further work to establish if and how higher yields in some areas could be achieved is possible.

The collection tonnages across all four areas have been extremely encouraging with an average yield of 72.2Kg / household / year, which has been achieved consistently over the trial period. This figure would easily achieve top quartile performance for local authorities nationally. This also compares extremely favourably with data from neighbouring authority areas who operate alternative kerbside glass collection schemes making use of smaller kerbside boxes, caddies or collect glass co mingled with dry recycling normally on a fortnightly frequency.

Table 2 – North East Glass Recycling Tonnage Per Household 2020/21

Authority	H/holds	Tonnes Glass	KG/hh/yr .	Type of Container	Collection Frequency
Durham	247265	14282.14	57.76	35- 50 litre box	Fortnightly
Gateshead	94160	5261.74	55.88	Co-mingled In wheel bin	Fortnightly
North Tyneside	99957	**	**	Inner caddy	Fortnightly
Newcastle	125000	5800.26	46.40	Inner caddy	Fortnightly
South Tyneside	72240	3880.19	53.71	Co-mingled In wheel bin	Fortnightly
Sunderland	130540	6304.19	48.29	Co-mingled In wheel bin	Fortnightly
Northumberland (trial number) *	3892	301.30*	72.20	Separate 140 litre wheel bin	Monthly

* Estimated full year tonnage (forecast 20 tonnes in October 2021 added to 281.3 tonnes actual) collected between November 2020 – September 2021.

** Data on glass tonnages and yields per household within North Tyneside was not available at the time of drafting this report, but this service is understood to be performing at a level similar to that operated in Newcastle.

2.3 Contribution to Overall Glass Recycling Performance

It assumed that a significant proportion of the 301.3* tonnes of glass collected under the pilot scheme over a full 12 months has been diverted from the general household waste bin as a result of making glass recycling more convenient and accessible for participant households. There is no evidence to suggest that glass collected through the scheme has simply displaced glass that would otherwise have been deposited at bring recycling banks or HWRC's anyway. However, Covid-19 and the lockdown restrictions have significantly affected people's lifestyles, patterns of consumption and recycling behaviours, making it difficult to distinguish precisely the impact the pilot has had on overall glass recycling levels.

The total amount of glass recycled in the county during April 2020 to March 2021 rose by 22% over the previous 12 months, due to the effects of lockdown and an increase in consumption of beverages at home. Within the overall tonnage collected during this period glass collected at the HWRC's was reduced compared to the previous year as a result of the sites being closed to all waste for several weeks during the initial lockdown and then operating a restricted service for several months due to Covid-19 safety measures. For the period April 2021 to June 2021 the total

amount of glass recycled in the county increased by a further 2% on the significant increases reported for the year ending March 2021, which would suggest that Covid-19 is continuing to influence patterns of consumption and recycling behaviours.

The modelling undertaken by the Council in 2019 prior to the glass trial assumed that the introduction of a kerbside glass collection service would result in 41 Kg/hh/year of glass being collected. This represented an overall net gain of +26 Kg/hh/year of glass for recycling, taking into account that some households would previously have recycled their glass via the network of bring sites. Based on this modelling and assuming that around 141,400 properties could receive a kerbside glass collection service, it was estimated that a total of 5,798 tonnes of glass would be collected, contributing to an overall +3% increase in household waste recycling performance.

The actual performance of the pilot glass collection trial at 71 Kg/hh/yr if sustained following the roll-out of the service to ~141,400 properties, would be ~10,039 tonnes of glass contributing a +5% increase in overall household waste recycling performance. However, this glass recycling performance significantly exceeds what would normally be expected from a kerbside collection service and it is clear that the validity of the trial data has been compromised by the impacts of Covid-19 lockdowns during the trial period.

As we move out of lock down and people feel more confident returning to hospitality venues, we will hopefully see glass recycling tonnage at bring and HWRC sites stabilise, providing a clearer indication of the potential net growth in tonnage collected due to the introduction of the kerbside collection pilot.

Operating the trial for the period up to 31 March 2023 is therefore considered necessary to provide greater confidence in the data used for long term service planning and investment. There is sufficient time in which to do this, as the Government has previously stated that the requirements to provide new enhanced kerbside recycling collection services will not come into effect before 2023/24 at the earliest. It is envisaged that the Government will publish and consider the outcomes of the National Resources and Waste Strategy consultation exercise by the end of 2022, including confirmation of new burdens funding that will be made available for local authorities and implementation deadlines. Operating the trial over this period will enable the trial to be aligned with the point at which we anticipate Government funding to be available to support countywide roll-out of glass collections.

2.4 Climate Change Implications

Collecting glass separately from other materials facilitates its use in the production of new glass containers via re-melt, which offers the highest climate change benefits due to the lower energy consumption required when recycled glass is used in the glass making process when compared to using all virgin raw materials.

The quality of glass collected in the trial has been good, enabling it to meet the end user specifications for re-melt by glass reprocessors. The 301.3 tonnes of glass expected to be collected during the 12-month trial provides a positive contribution to tackling climate change, even after taking into account the CO₂ emissions from the collection and transportation of the recovered glass, with the trial delivering an overall net saving of 98 tonnes of CO₂e (based on the Waste & Resources Action Programme - Carbon WARM model conversion factors).

To support the Council's Climate Change Action Plan the extension of the trial will allow a more detailed validation of the estimated net additional CO₂ savings that will accrue by rolling out the service countywide, taking into account the collection and glass reprocessing elements.

It should be noted that alternative collection approaches to that used in the trial can be undertaken to recover glass from household waste, including the co-mingled recycling system whereby glass

is simply collected in the same recycling bin as other recyclable materials alongside paper, plastics and metal cans. However, the inclusion of glass in Northumberland's co-mingled collection system has previously been discounted as it would incur high capital and revenue costs in modifying the council's Materials Recycling Facility (MRF) to be able to separate glass out from other materials; create an increased risk of contamination of other recyclable materials and rejection of loads by end users; and would also adversely affect the climate change benefits from the recycling activity as the recovered glass from co-mingled collection arrangements is often only fit for recycling via secondary aggregate production. This is due to the contamination of the glass with other waste materials, including grit, ceramics and non-containers glass products (such as Pyrex), which would not meet the strict feedstock quality specifications required for use of recycled glass in re-melt by glass container manufacturers.

This is an important factor to consider in terms of climate change impact, as confirmed life cycle research in the WRAP Carbon WARM model indicates that glass sent for re melt (known as closed loop recycling) saves around 326 kg of CO₂e/tonne compared with a negative carbon impact of 32.6kg of CO₂e/tonne when glass is used in aggregate production (open loop recycling).

The Council's Carbon Impact Assessment process has also been followed with the proposal offering an overall score of 1.14, which demonstrates that the proposal offers a positive outcome and aids Northumberland to move towards a net zero position.

2.5 Financial Performance of the Trial

The trial incurred revenue costs of £43,000 including labour, fuel and resident communications.

The capital cost of purchasing the required 140 litre wheel bins was £63,000 which was accounted for in the Council's 2020/21 capital budget.

The revenue costs incurred to date in operating the trial are in line with the allocated budget during the current financial year 2021/22.

The impacts of the increased glass delivered to bring banks by residents during the autumn and winter lockdowns of 2020/21 has distorted the overall countywide glass recycling figures, so ongoing monitoring and evaluation of the financial impacts post May 2021 is required in order to provide a clearer picture of the net increase.

2.6 Operational Matters

There have been no adverse impacts on the Council's Waste PFI Contract arrangements that have been used to provide the storage, transport and sale to end users of the recovered glass. The separately collected glass from the kerbside trial is delivered to the same nominated waste delivery points across the County used for the storage and processing of glass collected from bring sites. This means that the glass collected has all been of sufficient quality to be sent for glass re melt which achieves higher CO₂ savings than aggregate production from lower grade recycled glass, as discussed in 2.4 above.

There have been no waste contamination issues reported within the delivered glass or safety concerns raised at the points of delivery, and no vehicle reliability issues or resident noise complaints resulting from loading or transport activities.

2.7 Health and Safety

The Health and Safety of employees working on the glass collection trial is of paramount importance. Monitoring of the health effects on hearing caused by the noise of glass being loaded into collection vehicles was one of the key activities identified by risk assessment for this type of collection. Additionally, the protection of hands and arms from broken glass and eyes from

airborne glass fragments were significant in identifying the appropriate types of PPE to protect staff.

The Noise at Work Regulations requires the employer to take reasonable care to assess the risk of injury caused by noise in the workplace and put in place suitable measures to monitor and reduce exposure to an acceptable level. Due to the nature of the work activity employees are at risk from continued noise exposure as they progress on their round. Residents are not exposed to noise for more than a very short time as the vehicle and crew pass their homes and empty the contents of their wheeled bins. Placing glass into the bin occasionally during the normal day would not present a noise injury risk to the resident.

The focus of the Health and Safety monitoring in connection with the glass recycling trial has therefore been on the Council employees undertaking the collection rounds. Noise monitoring has been carried out using personal dose meters attached to sample employees on the trial. The results from the monitoring which record daily noise exposure levels over the working day, and peak sound exposure levels (the loudest recorded instant noise) showed that on average exposure levels in both cases were above the Upper Exposure Action Level set by the Noise at Work Regulations.

In the absence of alternative methods to reduce the noise exposure level, a suitable ear defender was sourced to ensure any noise exposure was reduced to an acceptable level, but not increase the risk to the wearer by not being able to hear approaching vehicles, a major factor when working on or near the highway. This electronically operated equipment eliminates noise of certain frequencies (harmful noise) but allows the wearer to hear noise from road vehicles and instructions from colleagues. This noise protection measure has been put into operation from the outset of the trial to safeguard the health of the collection staff.

The fact that the employees are only engaged on this type of work for one day per month provides further assurance that the risk of short term or long-term damage to hearing when wearing the selected hearing protection has been reduced to the lowest level possible in the absence of alternative noise reduction methods. Ongoing assessment to ensure protection from hearing damage and the data collected will help determine the risks to health and future control measures required, should the trial result in the system of collection being adopted permanently.

Trials of various anti-cut gloves that provide adequate protection but allow sufficient dexterity to handle objects safely and impact protection glasses and goggles to protect the eye have been undertaken, with staff being encouraged to feedback on their comfort and practicality.

The Council's Health and Safety team will continue to work with the service to assist with further monitoring and advice in this area.

2.8 Resident Feedback Survey

A customer feedback survey was developed and issued to all 3,892 properties participating in the trial in May 2021. A total of 639 responses were received representing a 16% return rate. Response rates varied by trial area.

Table 3 – Resident Feedback Response by Trial Area

Trial Area	Number of Properties per Trial Area	No of Responses	% Responding	% All Responses
Alnwick	1009	199	20	31%
Bedlington	1023	167	16	26%

Hexham	935	116	12	18%
Morpeth	925	157	17	25%
Totals	3892	639		100%

Overall resident satisfaction with the service was extremely high with 89% of residents that responded being satisfied or very satisfied. 5% stated no preference leaving 4% very dissatisfied or dissatisfied with 2% failing to reply.

90% of respondents replying stated that the wheel bin service was convenient.

A summary of the comments received from the 639 responses is too detailed to be reproduced for this report but the narrative reflects the high levels of support in the questionnaire responses. A large proportion of the respondents requested the service be continued in the general comments section although this was not specifically asked in the questionnaire.

A small number commented on the noise made when filling the bins, and the weight of the wheel bin in certain circumstances when full, which will be investigated further as the trial progresses.

A summary of the survey responses is provided in appendix 2 of this report.

Overall the customer feedback has demonstrated popularity for the service and a strong demand by residents for the trial to continue.

3. Recent Resources and Waste Strategy Consultation Considerations

The second consultation on the National Resources and Waste Strategy – Household and Business Waste Recycling Collection Consistency, was published on 7th May 2021. The outcome is yet to be published and once available will need to be carefully considered in relation to the development of enhanced recycling services for the kerbside collection of glass and other waste in Northumberland. So far, the policy intent of Government has been towards a preference for glass to be collected separately through kerbside recycling arrangements. It will be necessary to determine from the trial whether the kerbside glass collection arrangements used represent the most technically, environmentally and economically practicable solution for glass recycling collections in Northumberland, so that the approach aligns with the future requirements in the Resources and Waste Strategy.

4. Future Cost Implications for Countywide Roll Out of Kerbside Glass Collections

The Council has previously completed financial modelling work in preparation for meeting the anticipated National Resources and Waste Strategy obligations for the full range of household waste recycling including glass, plastic pots, tubs and trays, and weekly food waste collections. This work was discussed in the Cabinet report presented on 20th October 2020 and included theoretical cost modelling of rolling out separate glass collections.

The estimated annual revenue cost of delivering a monthly glass collection service to most households in the county is £1.25m per year, with a £4.2m capital cost required for the provision of new vehicles and bins. These costs are not currently allowed for in the Medium-Term Financial Plan as we expect Government ‘new burdens’ funding to be made available to support the delivery of these enhanced recycling services by 2023/24. Introducing the service prior to this date would

require these significant costs to be borne wholly by the County Council and local Council Tax payers, which is not considered to be appropriate or affordable in the current climate.

This report does not therefore seek approval for funding the county wide roll out of kerbside glass recycling collections at this time. However, if Government new burdens funding is provided to meet the National Resources and Waste Strategy from 2023/24, as indicated in recent consultation documents, carrying out further work now to establish the detailed costs, together with the benefits in recycling performance and resulting carbon dioxide reduction will be extremely valuable in enabling the Council to robustly evidence the level of Government financial support required.

5. Conclusion and Next Steps

It is considered that the trial has been successful so far in securing high yields of glass per household and excellent user satisfaction levels. However, the impact of Covid 19 has served to cloud the usefulness of the waste data collected in terms of the likely long-term contribution to/impact on overall glass recycling levels across the County. Further analysis of the tonnage collected per household, participation and presentation rates during an extended period is needed to help inform service planning and the development of a robust business case for a separate glass collection to be deployed across the county.

Extending the trial will also allow closer evaluation of resident attitudes and behaviours, and the opportunity to gather more information about the potential collection efficiency of the service.

The establishment of any changes to the overall net cost of managing waste as a result of the implementation of new recycling services is vitally important to ensure that when the Government calls upon local authorities to provide estimates for new burdens funding, we have robust evidence about the costs required to roll out the service county wide.

It is therefore recommended that the trial period be extended to 31st March 2023. In addition to extending the trial period, it is also recommended that the number of properties on each trial round is increased by a further 200 households (from 1,000 to 1,200 per round) to better align with the numbers of bins actually put out for collection on each collection date. This approach offers a significant opportunity to increase the productivity and value for money of the glass collection service and will provide valuable performance information to help confirm the future costs of the service if rolled out county wide. (Proposed locations for the additional 800 households to be incorporated into the trial are shown in Appendix 1 – these areas have been selected as they are in close proximity to the current trial area in order to minimise time and travel impacts and make sense on the ground as they cover whole streets/are self contained areas).

To extend the existing trial from November 2021 until the end of the current financial year will cost £18,000 in staff overtime, vehicle operating costs and on-going communications materials. The additional 800 wheeled bins to extend the number of households participating in the 4 trial areas will cost £13,000, so the full cost of both continuing and extending the trial during the remainder of 2021/22 would be £31,000.

The revenue cost of operating the extended trial throughout 2022/23 would be £43,000 to cover existing staff overtime, vehicle operating costs and marketing. This revenue cost has been put forward as a non-recurrent revenue growth bid for consideration by the County Council as part of budget setting process for consideration in February 2022.

Table 4. Indicative Timeline for Proposed Communications For Trial Extension and Addition of 800 Households

Milestone	Date
Cabinet Decision	9 th November 2021
Issue letter to existing participants detailing extension of trial & new collection calendar (next collection date 17 th December 2021) and separately to 800 additional properties (first collection 14 th January 2021).	12th November 2021
Bins delivered to 800 new participant households.	10th December 2021
1st scheduled collection for 800 new households on the trial	14 th January 2022

Implications

Policy	The kerbside glass recycling trial is in line with existing policy and seeks to further enhance recycling performance. It is also in line with the Council's Climate Change Action Plan and aims to make a positive contribution towards tackling climate change through the avoided carbon emissions associated with increased use of recycled content over virgin raw materials.
Finance and value for money	<p>It is considered that the trial has so far been a success and if this performance is sustained it will support the outcome of the theoretical modelling, which identified this collection arrangement as representing the most technically, environmentally and economically practicable solution for glass recycling collections in Northumberland.</p> <p>The actual trial costs to date are in line with estimated costs and allocated budget provision. The proposal to increase the number of properties served on each collection round under the extended trial period has the potential to significantly improve the overall efficiency and value for money of this new service.</p>
Legal	None at this stage.
Procurement	None at this stage.
Human Resources	<p>The trial has been delivered using existing staffing resources working over-time one Friday per month. Extension of the trial until 31 March 2023 uses the same operatives and vehicles.</p> <p>Additional staff would be required to enable the expansion of the scheme countywide in the future with a number of newly created</p>

	posts working alongside existing waste and recycling collection staff.
Property	None at this stage
Equalities (Impact Assessment attached) Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	<p>There are no additional equalities implications in respect of the recommendation to extend the trial period.</p> <p>The Council operates an assisted collection service for people who are unable to physically present their bins for collection on the kerbside, this arrangement is available for all collection services including the trial glass recycling scheme.</p>
Risk Assessment	The health and safety impacts associated with kerbside glass collections are being monitored and evaluated. The use of Personal Protective Equipment, in particular the provision of specialist ear defenders, are in place to ensure risks to staff are effectively managed.
Crime & Disorder	None
Customer Consideration	<p>A survey of participants in the trial indicates high user satisfaction levels with 89% of respondents being satisfied and only 4% being dissatisfied or very dissatisfied.</p> <p>The Council receives regular enquiries from the general public asking for improvements in glass recycling through the provision of a kerbside glass collection service. This trial will enable the Council to determine the most cost effective way of delivering a countywide kerbside glass collection service.</p>
Carbon reduction	<p>It is essential that a Life Cycle Assessment approach is used to determine the overall net effect of the carbon impacts associated with the kerbside collection of glass for use in recycling. The carbon impact of the trial has therefore been evaluated using the Government's Waste Resources Action Programme (WRAP) Carbon WARM model conversion factors. This updates the data reported previously in the interim update report to the Communities and Place Overview and Scrutiny Committee which used the conversion factors identified in a study of the Life Cycle Assessment of the carbon impacts associated with the recycling of glass compared to production of glass with virgin materials has been undertaken by PE Consulting.</p> <p>The Carbon WARM model shows that the 301.3 tonnes of glass collected during the 12-month trial provides a positive contribution to tackling climate change, even after taking into account the CO₂ emissions from the collection and transportation of the recovered glass, with the trial delivering an overall net saving of 98 tonnes of CO₂e. The system of</p>

	<p>collection used in the trial has enabled the recovered glass to be sent for re melt, which yields the highest CO2 savings.</p> <p>The NCC Carbon Impact Assessment tool has been used and generated a score of 1.14, offering a positive carbon impact. A full copy of the assessment is attached as Appendix 3.</p>
Health and Wellbeing	None
Wards	The trial is being undertaken in the following wards: Alnwick, Bedlington Central, Hexham East and Morpeth Stobhill. The findings and outcomes of the trial will be relevant to all wards as they will influence decisions on the expansion of the glass recycling service countywide.

Background papers:

'Our waste, our resources, a strategy for England' HMSO 17 December 2018

Review of Waste Strategy - kerbside collection of household waste, February 2019

Communities and Place Overview and Scrutiny Committee, 7th October 2020, report titled 'Northumberland Waste Management Strategy – Proposed Trial of Kerbside Glass Recycling Collections'.

Cabinet, 13th October 2020, report titled 'Northumberland Waste Management Strategy – Proposed Trial of Kerbside Glass Recycling Collections'.

DEFRA Consultation 7th May 2021 – Consistency in Household and Business Recycling in England.

Communities and Place Overview and Scrutiny Committee, 25th August 2021, report titled 'Northumberland Waste Management Strategy – Proposed Trial of Kerbside Glass Recycling Collections'.

Report sign off.

Authors must ensure that officers and members have agreed the content of the report:

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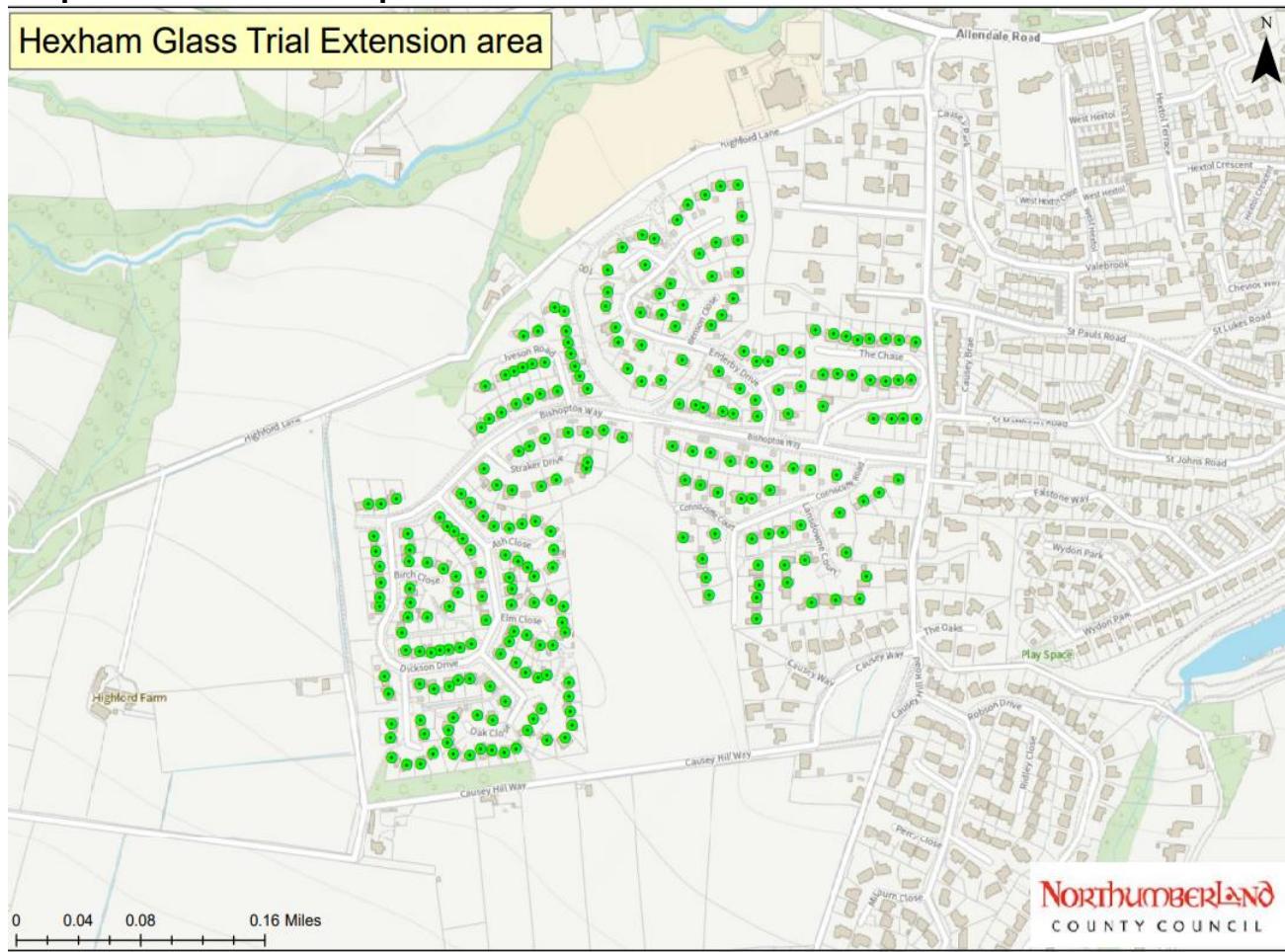
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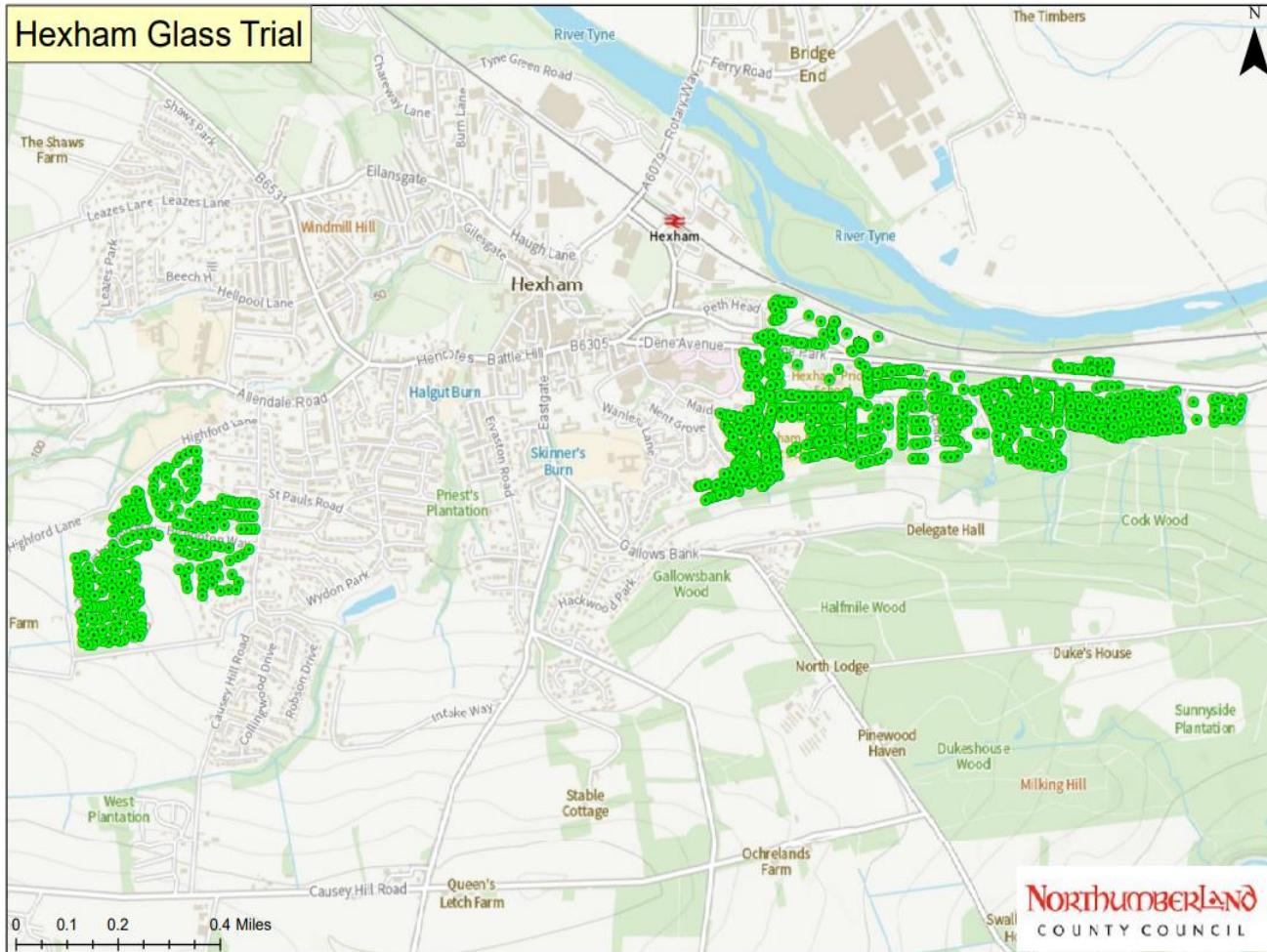
Appendix 1: Glass collection areas including proposed additional properties

Proposed Additional Properties- Hexham West:

Hexham Glass Trial Extension area



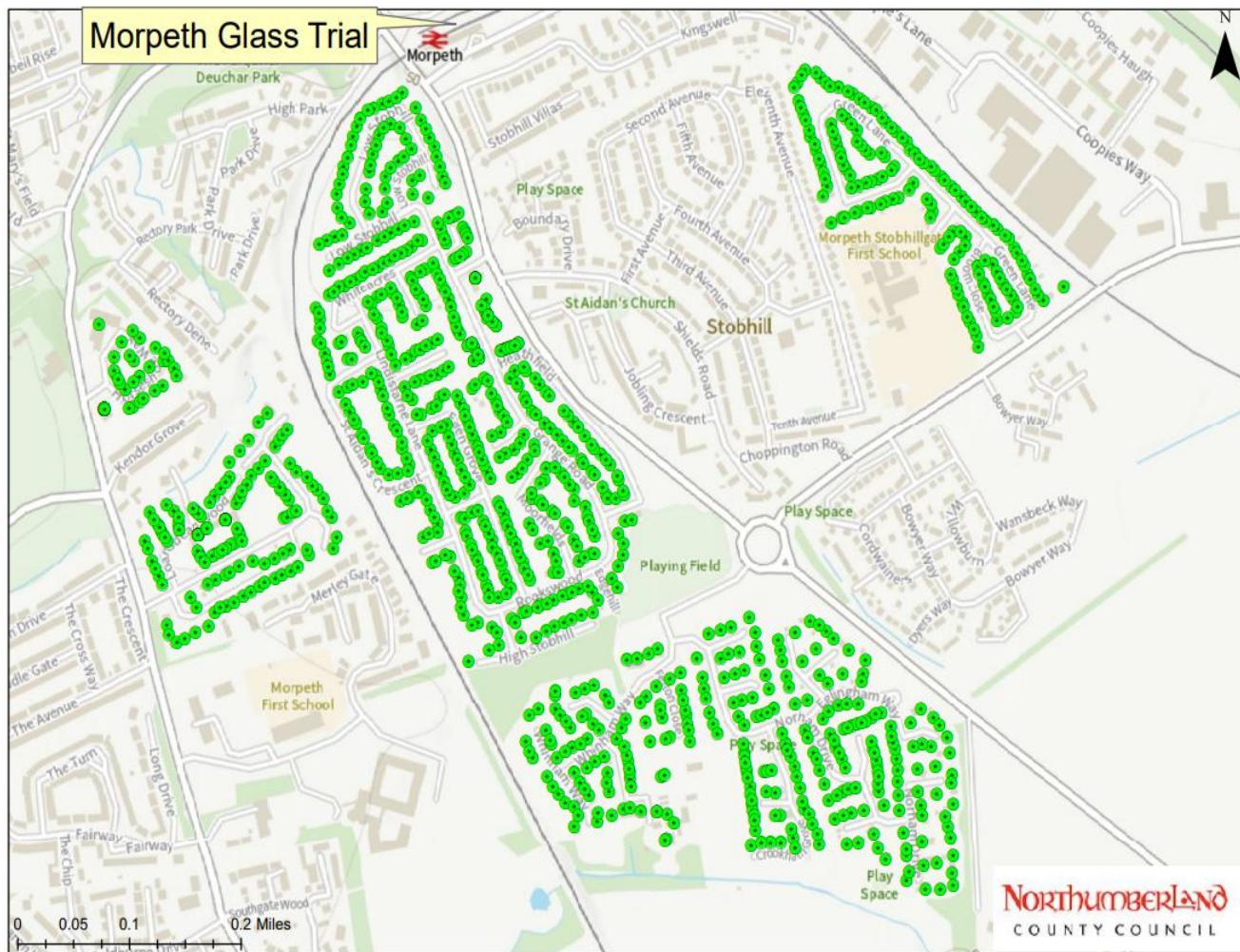
Proposed Glass Trial Area - Hexham:



Morpeth Glass Trial Area -Proposed Additional Properties:



Morpeth Glass Trial Area Including Proposed Additional Properties



Alnwick and Lesbury Trial Areas Including Proposed Extension Area at Hipsburn Village:

(Additional Properties at Hipsburn: Steppey Lane, Lesbury Road, Hipsburn Crescent, Hillside, Curly Lane, South View, The Coppice, Hipsburn Steadings.)

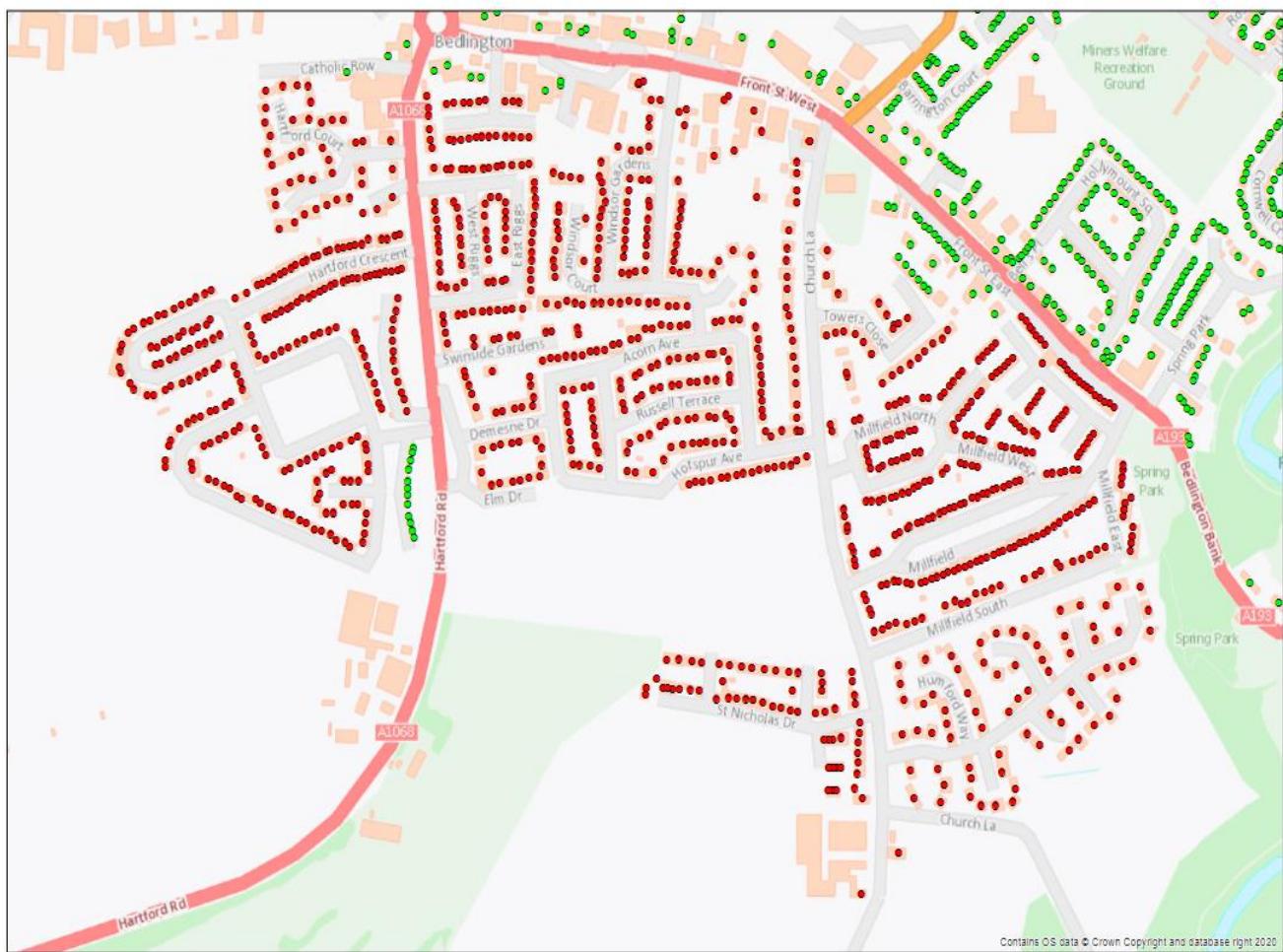


Alnwick and Lesbury Trial Areas Existing



Bedlington Trial Areas - Existing

Existing Glass Area



Appendix 2: Summary of customer satisfaction survey May 2021

A customer feedback survey was developed and issued to all 3,892 properties participating in the trial in May 2021. A total of 639 responses were received representing a 16% return rate. Response rates varied by trial area and further work may be appropriate at some point to validate the data received.

Table 3 – Resident Feedback Response by Trial Area

Trial Area	Number of Properties per Trial Area	No of Responses	% Responding	% All Responses
Alnwick	1009	199	20	31%
Bedlington	1023	167	16	26%
Hexham	935	116	12	18%
Morpeth	925	157	17	25%
Totals	3892	639		100%

The key findings from an analysis of the responses to the questions is given below:

Question 1. How many times have you put out your bin?

Only 3% on average failed to put out their bin on any occasion, with the Hexham area highest at 5.2% and Morpeth the lowest at 2.5%.

53% of residents placed their bin out on all 7 monthly collections that had been undertaken at the time of the survey, and 79% put out their bin between 5 and 7 times.

Question 2. Would you like your collection more or less frequent?

Almost 60% of respondents stated their preference for the monthly frequency, while only 3% preferred two weekly and 24% two monthly.

Question 3. When you put out your bin how full is it on average?

43% of respondents indicated their bins were one quarter full on collection day, 29% half full, 19% three quarters full and only 5% full, indicating there is sufficient capacity for residents' glass using a 140 litre wheel bin on a monthly collection.

Question 4. Is the Glass Recycling Wheel Bin Convenient?

90% of respondents replied that the wheel bin was convenient.

Question 5. How satisfied or dissatisfied are you with the kerbside glass collection?

Residents responded that 89% were either satisfied or very satisfied, 5% stated no preference leaving 4% very dissatisfied or dissatisfied with 2% failing to reply.

A summary of the comments received from the 639 responses is too detailed to be reproduced but the narrative reflects the high levels of support in the questionnaire responses. A small number commented on the noise made when filling the bins, and the weight of the wheel bin in certain circumstances when full, which will be investigated further as the trial progresses.

Appendix 3 – NCC Carbon Impact Assessment Tool

The overall impact assessment for this proposal is: 1.14 , which includes:

Policy score: 2

Partnerships and Engagement score: 2

Heating score: 0

Transport score: 0

Renewable Energy Generation score: 2

Carbon Sequestration: 0

Waste score: 2