

COMMUNITIES AND PLACE OVERVIEW AND SCRUTINY COMMITTEE

DATE: 25 AUGUST 2021

NORTHUMBERLAND WASTE MANAGEMENT STRATEGY - KERBSIDE GLASS COLLECTION TRIAL UPDATE

Report of: Interim Executive Director of Place and Regeneration, Rick O'Farrell

Cabinet Member: Councillor John Riddle, Local Services

Purpose of Report

To provide an update on the kerbside glass recycling trial which commenced in November 2020 to include key performance measures including recycling yields, resident participation and acceptance levels, prior to a final report on the trial and proposed next steps for the roll-out of an enhanced glass recycling service being presented to Cabinet in October 2021.

Recommendations

It is recommended that the Communities and Place Overview and Scrutiny Committee:-

A) Notes the contents of the report and the success of the trial scheme so far, both in terms of high customer satisfaction levels and very high yields of glass collected per household, and;

B) that a report detailing the performance of the kerbside glass recycling scheme and estimated performance and cost of rolling out a kerbside glass recycling collection service in the county will be presented to Cabinet in October 2021.

Link to Corporate Plan

The kerbside glass recycling pilot scheme is relevant to the following themes in the corporate plan:-

- 'Enjoying' - We want you to love where you live
- 'Thriving' - We want to attract more and better jobs

Key Issues

1. 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 June 2021 shows that the trial scheme has been well received by participants with high satisfaction levels and very high yields of glass per household.
2. 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 an on-going communications activity to encourage participation totaling £43,000 per annum.
3. 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 21.9% increase in the amount of glass being collected for recycling in the county through its network of bring recycling sites. At this stage in the trial, it has not been possible to determine what additional impact the kerbside glass recycling trial has had on overall glass recycling activity in the county due to these changes caused by Covid.
4. The Government has undertaken further consultation on its Resources and Waste Strategy and, pending the outcome of the latest consultation exercises and the passage of the Environment Bill, 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 by Government 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.

1. Background

A Cabinet report titled 'Northumberland Waste Management Strategy – Proposed Trial of Kerbside Glass Collections' was presented to the Communities and Place Overview and Scrutiny Committee on 7th 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 commissioned 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 therefore 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.

The Communities and Place Overview and Scrutiny Committee supported the recommendations in the Cabinet report and Cabinet considered the committee's feedback when approving the report at its meeting on 13th October 2020, 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 2022 in the form of the Environment Bill, followed by the publication of statutory guidance.

2. Glass Trial Summary

The four trial areas cover Morpeth, Bedlington, Hexham and Alnwick / Lesbury with each one collecting from 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 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 June 2021. A final report detailing the trial outcomes and proposed next steps will be presented to Cabinet in October 2021.

2.1 Glass Recycling Performance - Trial Data

A total of 209 tonnes of collected glass have been collected for recycling since the trial began. 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 202 to June 2021

Trial Area	Number of Months	Houses Per Trial Area.	Average Bins Presented	Average Put out Rate	Average Weight Per Round (kg)	Avg. Weight Per Bin (kg)	Average Yield (kg/hh)	Total Tonnes Collected Per Trial Area
Hexham	9	935	429	46%	4867	11.4	62.5	43.80
Alnwick and Lesbury	9	1009	537	53%	6697	12.6	79.6	60.27
Bedlington	9	1023	626	61%	6303	10.2	73.9	50.42
Morpeth	9	925	550	59%	6146	11.3	79.7	55.31

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 increasing the numbers of households covered on the rounds so that they align with anticipated average numbers of bins (and weight of glass) placed out for each collection round.

The collection tonnages across all four areas have been extremely positive with an average projected yield per household per annum of 71Kg. 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 other dry recycling normally on a fortnightly frequency.

Table 2 – North East Glass Recycling Tonnage Per Household 2019/20

Authority	H/holds	Tonnes Glass	KG/hh.	Type of Container	Collection Frequency
Durham	248500	11354.57	45.69	35- 50 litre box	Fortnightly
Gateshead	94160	5030.82	53.43	Co-mingled In wheel bin	Fortnightly
North Tyneside	99560	5621.29	56.46	Inner caddy	Fortnightly
Newcastle	135000	4939.28	36.59	Inner caddy	Fortnightly
South Tyneside	72240	3846.72	53.25	Co-mingled	Fortnightly

				In wheel bin	
Sunderland	130540	5792.04	44.37	Co-mingled In wheel bin	Fortnightly
Northumberland (Trial number) *	3892	278.52*	71.56*	Separate 140 litre wheel bin	Monthly

* Forecast full year tonnage based on performance November 2020 – June 2021.

2.2 Contribution of the Pilot Scheme to Overall Glass Recycling Performance

It assumed that a significant proportion of the 209 tonnes of glass collected under the pilot scheme 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 very difficult to distinguish what impact the kerbside glass pilot has had on overall glass recycling levels.

The total amount of glass recycled glass in the county during April 2020 to March 2021 rose by almost 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 by 604 tonnes 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.

Table 3 – Growth in Tonnage of Recycled Glass Collected During Lockdown 2020/21

2019/2020	Q1	Q2	Q3	Q4	Year Total
HWRC	433	466.4	415.7	425.7	1740.8
Bring Sites	1012.6	1042.9	1005.1	1036.3	4096.9
Total					5837.7
2020/2021	Q1	Q2	Q3	Q4	Year Total
HWRC	152.9	366.5	283.4	333.8	1136.6
Bring Sites	1560.8	1515.6	1404.5	1501.0	5981.9
Total					7118.5
% Yearly Increase					21.9%

The tonnage of glass collected from HWRC's in Q1 (April to June) 2021/22 was 338 tonnes, an expected recovery from the same period in 2020/21 when sites were affected by Covid 19 related closures, but 95 tonnes less than the same period in 2019/20 before the impacts of Covid 19. The drop in performance from 2019/20 is most likely to be as a consequence of the HWRCs being less readily accessible and convenient than the bring site glass recycling facilities, as the HWRCs were still operating under amended working arrangements which limited the numbers of users on site at the same time.

It is anticipated that there should be a clearer indication of the potential growth in tonnage collected due to the introduction of the kerbside collection over later stages of the trial as we move out of lock down impacts and glass recycling tonnage at bring and HWRC sites returns to normal. However, it is possible that due to on-going changes in consumption habits and recycling practices following the pandemic, that it may not be possible to accurately measure the net increase in collected glass as a direct consequence of the trial.

2.3 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 and further work may be appropriate at some point to validate the data received.

Table 4 – Resident Feedback Response by Trial Area

Trial Area	Number of Properties per Trial Area	No of Responses	% Responding	% All Responses
Alnwick and Lesbury	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 for this report 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.

2.4 Financial Implications

The trial delivered in 4 areas incurred revenue costs of £43,000 (labour, fuel and communications campaign).

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 and to establish the net additional glass tonnage collected by the kerbside collections and the revenue budget implications associated with the processing of this waste through the Council's Waste PFI Contract.

2.5 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.

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

2.6 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 that would reduce exposure 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.

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, the outcome of which 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 wastes 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 in the trial 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. Next Steps

As discussed, whilst the trial has been successful so far in securing high yields of glass per household and excellent user satisfaction levels, the impact of Covid 19 has served to cloud the effectiveness of the waste data collected in terms of its contribution to/impact on overall glass recycling levels across the County. Further analysis of the tonnage collected per household, participation and presentation rates during the remaining trial period will inform the development of the business case for a separate glass collection to be deployed across the county having regard also to the Government's planned announcements on future obligations for recycling collections and associated funding arrangements for Councils.

It may be necessary to consider extending the period of the trial to obtain a clearer understanding of the effectiveness of the kerbside collection of glass on the potential yield of additional glass being diverted from the residual waste stream, now that Covid-19 restrictions have eased.

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 for recycling services, we have robust evidence about the costs required to roll out the service county wide.

Implications Arising out of the Report

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	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. The actual trial costs to date are in line with estimated costs and allocated budget provision.
Legal	None at this stage.
Procurement	None at this stage.
Human Resources	The trial has been delivered using existing staffing resources working over-time one Friday per month. Additional staff would be required to enable the expansion of the scheme countywide.
Property	None
Equalities (Impact Assessment attached) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	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. The use of different coloured bin lids for glass recycling bins should assist those residents with low vision to determine which is the correct bin.
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

<p>Customer Consideration</p>	<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>
<p>Carbon reduction</p>	<p>A major 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 involving over 200 glass manufacturing plants across Europe. This identified that on average 1 tonne of recycled glass (cullet) replaces 1.2 tonnes of virgin raw material, saving 0.67 tonnes of CO2 for every tonne of finished glass.</p> <p>The 209 tonnes of glass collected for recycling by the trial so far therefore offers a net saving of 140 tonnes of CO2, making a positive contribution towards tackling climate change through the avoided carbon emissions associated with increased use of recycled content over virgin raw materials</p>
<p>Wards</p>	<p>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.</p>

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.

Report sign off.

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

	initials
Monitoring Officer/Legal	NM
Executive Director of Finance/S151 Officer	JW
Chief Executive	DL
Executive Director	RO'F
Portfolio Holder(s)	JR

Report Authors

Colin Curtis

Resources and Waste Commercial and Contracts Manager

Telephone: 07919570052

Email: colin.curtis@northumberland.gov.uk

Greg Gavin

Head of Neighbourhood Services

Telephone: 01670 622278

Email: greg.gavin@northumberland.gov.uk

Paul Jones

Service Director - Local Services

Email paul.jones01@northumberland.gov.uk

Tel 01670 623432

Appendix 1 : Glass collection areas

Bedlington area : 1,092 properties (shown in yellow), a mixture of private households and council households

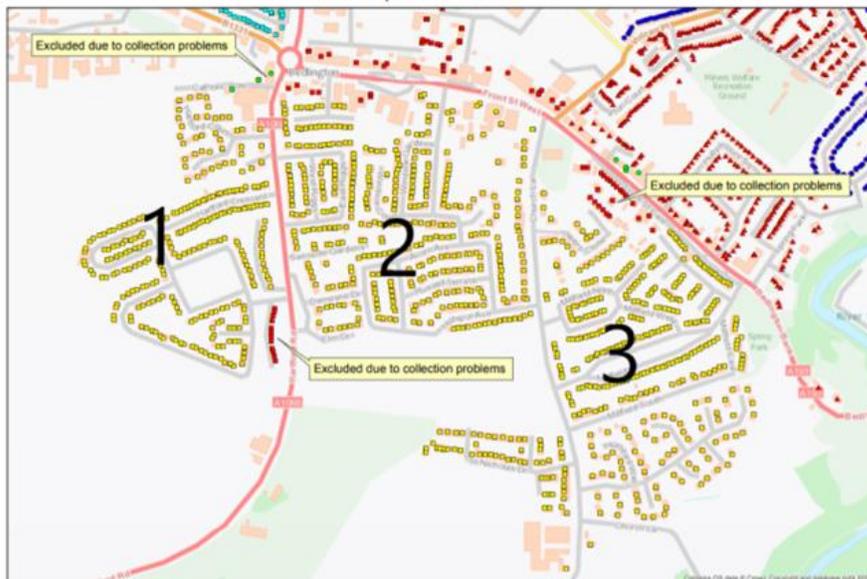
Ward: Bedlington Central. Cllr Christine Taylor.

Area 1: Hartford Crescent, mostly privately owned houses with some privately let. The Hartlands is a mixture of housing associations, privately let and privately owned houses.

Area 2: Acorn Avenue, Russell Terrace, Hotspur Avenue, Demesne Drive Horton Avenue, Windsor Gardens, Windsor Court, Swinside Gardens, South/North/West Riggs & Nergerton Riggs. This area is made up of privately owned houses, some of which are privately let, and no social housing.

Area 3: Millfield North/South/East/West are mainly social housing with the same private owned/ privately rented properties. Tower Close is mainly privately owned/ privately rented properties.

Updated Glass Collection Area - 1092 Properties Bedlington
and Properties Excluded - 49

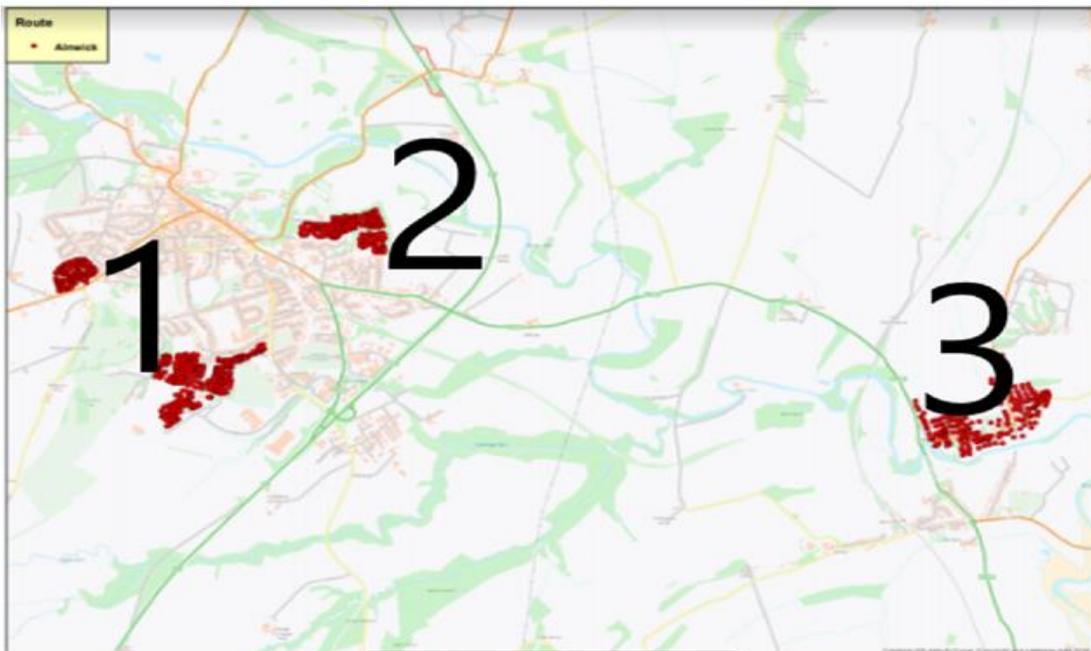


Alnwick & Lesbury Area : 1,016 properties.

Ward: Alnwick. Cllr Gordon Castle

- Area 1: Streets/ Info: Alnwick; Chapel Lands, Fairfields, Reivers Way- privately owned. Barrasdale Estate- social housing
- Area 2: Streets/ Info: Alnwick; Allerburn Lea - privately owned/ rented, no social housing
- Area 3: Streets/ Info: Lesbury; Lealands - privately owned

Overview map : Alnwick & Lesbury



Area 1 - Alnwick detailed map - Chapel Lands, Fairfields, Reivers Way



Area 2 : Alnwick detailed map - Allerburn Lea



Area 3 - Lesbury detailed map - Lealands

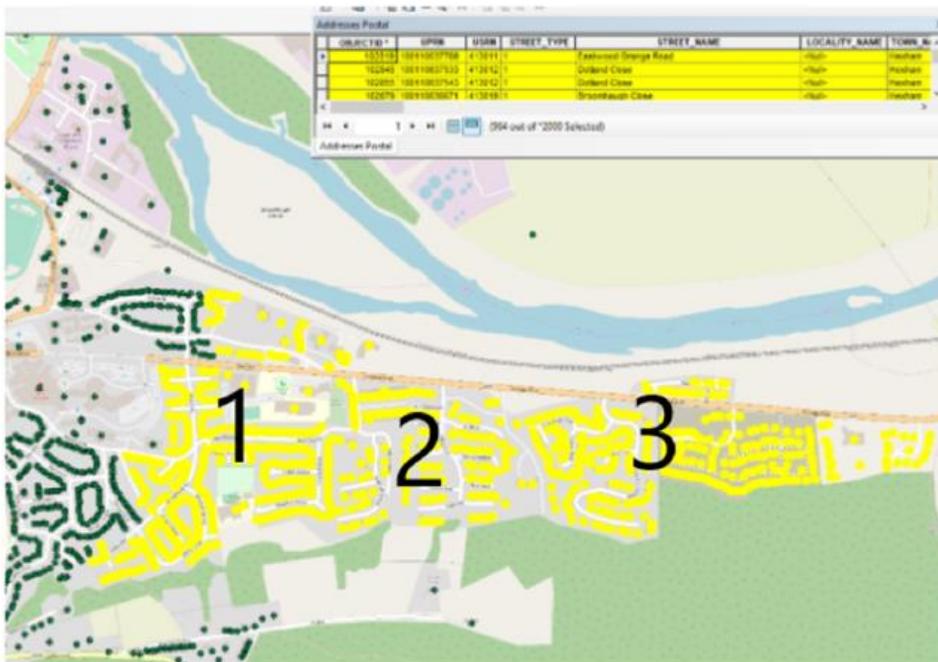


Hexham : 964 properties (shown in yellow) of mixed property types.

Ward: Hexham East, Cllr Cath Homer

A mixture of privately owned/ rented properties & social housing

- Area 1: Dean Avenue, Dene Park, Bywell Avenue, Dilston
- Area 2: Edgewood, Eastfields, Edgewood
- Area 3: Hornbeam Crescent, Anick View, Laurel Road



Morpeth area : 925 properties (shown in yellow) of mixed housing types

Ward: Areas 1,2 & 3, Morpeth Stobhill, Cllr John Beynon;

A mixture of privately owned/ rented properties:

- Area 1: Low Stobhill, Stobhillgate, Grange Road, Heathfield, Moorlands, Edgehill, High Stobhill, Rookwood, Eden Grove, Whiteacres.
- Area 2: Green Lane, Charlton Gardens, Broom Close.
- Area 3: Whinham Way, Norham Drive, Thornton Close, Swinton Close Felton Close, Chathill Close, Eglington Way Eglington Close, Acomb Close, Whalton Close, Glanton Close, Crookham Grove

