

**Case study**

# North Lanarkshire

**In June 2008, North Lanarkshire Council introduced a new system of waste collection including, for the first time, liquid food and drink cartons. North Lanarkshire now has one of the highest recycling rates (43%) in Scotland.**

North Lanarkshire covers 147,000 households including the towns of Airdrie, Motherwell, Coatbridge, Wishaw, Cumbernauld, and Kilsyth. Housing stock in the area consists of traditional low level housing with 4,800 multi-storey flats.

The council operates an in-house co-mingled fortnightly collection with blue recycling bins and residual bins alternating weekly, this includes recycling collection from flats. The recyclate is then taken to a contractor for sorting and onward sale. In addition, the council also runs a brown bin collection scheme for garden waste and a trial green bin collection for glass.

North Lanarkshire was also the largest council in the UK to provide high rise flats with node® recycling systems at convenient locations near to the blocks. Nodes accept newspapers, magazines, flat and corrugated cardboard, plastic bottles and containers, food and drink cans, cartons and textiles.

## Key statistics

	Old service (Pre June 2008)	New service (June 2008 – present)
Collection	Weekly residual collection Paper collection every four weeks	Co-mingled fortnightly Flatted properties also covered by the service
Bin size	Predominantly 240 litres	Predominantly 240 litres
Population covered by service	90.5%	100%
Round structure	26 rounds operating over 5 days	21 rounds operating over 5 days Approximately 1,200 households on an average round
Materials collected	Paper	Liquid food and drink cartons, paper, plastics, magazines, cardboard, yellow pages, directories, steel and aluminium cans, empty aerosol cans
Recycling rate	28%	43%
Contract	Ad hoc arrangement with Stirling Fibre Council run collection	In house collections 5 year sorting contract with Shanks



## What goes into the Brown and Green bins?

- ✓ Garden waste – brown
- ✓ Glass bottles and jars – green

## What goes into the Blue bins?

- ✓ Liquid food and drink cartons (such as those made by Tetra Pak)
- ✓ Cardboard (flattened)
- ✓ Plastic food trays (clean)
- ✓ Textiles
- ✓ Paper
- ✓ Magazines
- ✓ Food and drinks cans
- ✓ Aerosol cans
- ✓ Plastic bottles
- ✓ Plastic containers
- ✓ Yellow pages/directories



## About the process

The materials are collected using North Lanarkshire's own refuse collection vehicles (RCVs) with bin lifting equipment. Full vehicles tip at Shanks' Blochairn MRF where the material is sorted using a semi-automated process. The majority of the materials (including cartons) are separated in the manual part of the process, as seen below.



## The sorting

The material is sent through a trommel where it is size segregated. It then passes through a magnet and an eddy current separator where it is separated onto two belts and sent through two picking lines. The cartons go through a stream which has 10 pickers separating out materials.

Beverage cartons are separated along with paper into bays and baled as mixed paper. The bales go to Newport Paper and Severnside for re-processing.

## Implementation of new collection system

The council was very much aware that for the scheme to work successfully, local residents needed to be convinced of its benefits. Through the Clyde Valley area waste group, the council was able to assess similar schemes used by other local authorities.

The council also became aware of a number of articles in journals which suggested that local authorities with similar make-up of housing and demographics were outperforming North Lanarkshire in its recycling rates. The important message to local residents was that North Lanarkshire would be adopting a 'tried and tested' system which had worked elsewhere.

North Lanarkshire awarded Shanks Waste Management Limited a 5 year contract to manage its waste and recycling.

The scheme change was implemented in two phases. The first phase, which introduced carton recycling, commenced in June 2008 and the second phase started in September 2008.

## Why change and why include cartons?

The main motivation behind the scheme change was to increase the council's recycling rates. The four weekly recycling collections were not recovering enough recyclable material. The inclusion of beverage cartons was a logical step forward in the improvement of the scheme.

Calls from local residents to include more materials for recycling convinced the council that more had to be done. As part of the contract negotiations during the retendering process Shanks agreed that beverage cartons should be added to the list of recoverable materials. This decision meant that the council looked favourably upon Shanks.

The council also weighed up the cost implications of implementing a new system. These included rising landfill taxes and increasing rates for disposing through recycling which all contributed to the decision to include cartons.

A change of collection system did involve some upfront costs but there are now on-going savings with the new scheme. Upfront expenditure included increasing the council's blue bin stock, consultancy, advertising and developing a more comprehensive communications strategy.

However, by changing to an alternate weekly collection, including the collection of waste from flats and increasing round efficiency and productivity, the council was able to reduce the number of rounds and the fleet size by 5 vehicles.

## Costs

The council spent money in three areas: communications, consultancy and capital. Communication included road shows, DVDs and booklet, which incurred a cost of £60,000. Consultancy was provided by Remade Scotland, Scottish Waste Aware and Jacobs Babbie carried out the waste composition analysis of the make-up of waste from flatted properties. The council only paid for the consultancy provided by Jacobs Babbie which cost £10,500.

The council also received a £52 million grant from the then Scottish Executive's Strategic Waste Fund which was to be spread over a period of 20 years. The money has contributed to updating and upgrading the council's refuse collection vehicles and increasing their bin stock.

## Learning from mistakes

The implementation of the new alternate weekly collection system was made easier by the lessons the council had learned in 2001 when North Lanarkshire tried to implement a similar system. That scheme (which did not include cartons) ran for a year and half but it eventually collapsed due to:

- poor quality material into the recycling stream
- poor infrastructure of the council's waste management provider and
- lack of communication with the public

## Communications

Past experience taught the council that they would have to have a robust strategy to communicate the changes.

### **£60,000 was spent on the education bus and road shows, DVD and recycling leaflets**

Holding around 50 road shows, the council handed out and delivered booklets, leaflets and DVDs explaining the changes to every household.

To supplement the literature, Waste Aware Officers were on hand to deal with any recycling queries.

The council also took advantage of advertising opportunities and made use of the space on the sides of their vehicles for campaigns, with an interchangeable mesh panel and frame system. This has allowed them to focus on specific messaging. The council did not find they needed to do any additional communication specifically for cartons.

<b>Communications</b>	Overall communication campaign including education bus and road shows, DVD and recycling leaflets	£60,000
<b>Consultancy</b>	Provided by Remade (Scotland), Scottish Waste Aware and Jacobs Babbie	£10,500
<b>Capital</b>	Increasing the blue bin stock and updating refuse collection vehicles	Strategic Waste Fund provides them with a £52 million grant to spread over 20 years



## Impact of the changes

The scheme has been running for over eighteen months and has proved popular with local residents. Participation rates stand in the 90th percentile when previously they were in the 30th percentile. To address specific contamination problems (unrelated to cartons) the council sent out a team of Waste Aware Officers to provide further assistance to local residents who had not acclimatised to the new scheme.

The council have not found that the inclusion of cartons has caused any operational or communications problems. New refuse collection vehicles did not need to be purchased and the various roadshows that the council organised communicated the workings of the new collection system well. In addition, they have also been contacted by other Local Authorities interested in how they collect cartons.

***“This time there was more willingness from the public...made it easier to re-visit”***  
– Alex McLaren, Waste Minimisation Officer



## Benefits

Eight years on from the original scheme the council found that the perception towards recycling amongst local residents had changed. There appeared to now be a new willingness from people to participate and enthusiasm for their waste to be recycled. The council increasingly received queries from residents as to why card and cartons could not be recycled.

In addition, with landfill taxes rising and the rates for disposing through recycling looking more financially beneficial, it persuaded the council further that an alternative was necessary and beneficial.

Year	% recycled
2007/08	32% (paper only collection)
2008/09	39% (Phase 1 of the AWC introduced June 08, Phase 2 in September)
2009/10	43%

The inclusion of materials such as cartons for recycling at kerbside has significantly increased the Council's recycling rate. Looking at paper alone, the old system recovered 8,600 tonnes, while this year it will recover 10,400 tonnes, an increase of 21%

In addition, with the introduction of a new system, the council were also able to start collecting from flatted properties. The recyclate from these properties, as previously mentioned, was assisted by the Taylor 'Node' system and the same 'in house' vehicles used for household collections.

***The “Recycle for Good” campaign has so far donated £30,000 to charity.***

Charities that have benefited through the participation of the council and residents alike include Help the Aged, Children First, St Andrew's, the local hospice, Children's Heart Foundation and the Motor Neurone Scotland Society.

All schools are now able to recycle the milk cartons they receive through government funded schemes.

***Schools can recycle their cartons for free in the scheme as North Lanarkshire Council also operates the blue bin scheme for schools.***

Through its “Recycle for Good” campaign, the council encourages residents across all age spectrums to get involved in recycling. Depending on the recycling rate, a number of nominated charities receive financial donations which change year on year (residents can write into the council to suggest which charities could benefit).

## About ACE UK

The Alliance for beverage Cartons and the Environment (ACE UK) represents the UK's leading beverage carton packaging manufacturers.

Formed in 2007, ACE UK takes on the role formerly played by the Liquid Food Carton Manufacturers' Association. Its mission is to:

- support environmental policies, activities and legislation in the field of packaging, waste, recycling and recovery, consistent with the requirements of the UK market;
- contribute to UK environmental policy, activities and legislation related to beverage carton packaging, in particular the promotion of renewable resources; and
- communicate the environmental credentials of beverage cartons.

### Recycling support

Email: [recyclingofficer.uk@tetrapak.com](mailto:recyclingofficer.uk@tetrapak.com)  
Telephone: 0870 442 6182

Write to: Tetra Pak (UK) Ltd, Bedwell Road, Cross Lanes, Wrexham, LL13 0UT



This paper contains a minimum of 80% recycled beverage cartons.

[www.ace-uk.co.uk](http://www.ace-uk.co.uk)

[www.tetrapakrecycling.com](http://www.tetrapakrecycling.com)