



ENVIRONMENT

Countywide Integrated Waste and Recycling Collection Service



Summary

Local Government is under increasing pressure to deliver real efficiencies while at the same time improving customer service. In response to this challenge, the Northamptonshire Waste Partnership (NWP) is exploring the potential savings to be gained from a more collaborative, countywide approach to waste and recycling collection services.

The NWP includes all seven of the County's Waste Collection Authorities (district and borough councils). Currently, each authority structures its collection service around its own area boundary, however, early indications show that substantial savings could be realised if different working arrangements are implemented.

This interim case study focuses on the results achieved by the pilot authority - Daventry District Council.

Quote

"This project is a good example of a local authority partnership working hard to break down the barriers to collaborative working."

Helen Richmond,
Environmental Services Programme Manager,
East Midlands Centre of Excellence

Improvement through efficiency



Project background

In July 2006, the NWP was successful in obtaining a grant from the East Midlands Centre of Excellence to fund a feasibility study into a countywide integrated waste and recycling collection service.

The project is split into 4 key stages:

1st Stage – production of revised collection schedules for each Waste Collection Authority (WCA) partner, with a supporting report identifying savings to be made through implementation.

2nd Stage – overall report identifying options for further savings through cross-border working.

3rd Stage – options for integration of collection services between two or more authorities and steps needed for implementation.

4th Stage – options for full integration of collection services and steps needed for implementation.

Services under review

- Domestic refuse, green waste and dry recyclable collections
- Clinical waste collections (if applicable)
- Supporting infrastructure i.e. vehicle depots, fleet maintenance, transfer/treatment facility locations

Feasibility study

External consultants, White Young Green and Integrated Skills, were awarded a contract in September 2006 to undertake a detailed study which would enable them to plot a spatial plan of collection points together with vehicle depots, resources and disposal/delivery points. The consultants were tasked with developing more efficient collection rounds, with a focus on maximising the efficiency of fleet vehicles and staff time, irrespective of the existing district boundaries.

Pilot study

In October 2006, Daventry District Council - the project lead authority – was chosen to pilot the project feasibility study for Stage 1. Daventry's rounds were optimised electronically using a dedicated software package called RouteSmart.

Firstly, Daventry recorded all of its existing routes to enable the study to compare new routes against baseline data. In effect, the comparison matched 'new electronic routes' against routes that had historically been produced using local knowledge and experience.

The software developed several different collection scenarios and Daventry chose the one that best supported local need, while at the same time generating savings.

Pilot study benefits

The first year cash savings anticipated from implementing Stage 1 within Daventry DC are £95,000 which is made up of the following:

- Mileage reduction of 12-13% delivering savings of £25k p.a.
- Spare capacity to allow for vehicle washing will secure savings of £17k p.a.
- Employee overtime will be virtually eliminated, saving approximately £28k p.a.
- The planned purchase of an additional 6 wheeler Refuse Collection Vehicle (RCV) has been reduced to a 4 wheeler, saving £25k.

In addition, re-routing will produce a productivity gain of 4-5%, thus enabling the absorption of harmonisation requirements, including the elimination of special payments. The planned purchase of two additional RCVs, and crew costs, have also been avoided.

Engaging the partnership

In January 2007, the NWP held a 'showcase' event to share the results of the pilot study with the partnership stakeholders. The meeting was convened to determine whether the project should be implemented throughout the NWP, and to ensure 'buy in' from all key stakeholders.

The NWP unanimously agreed to expand the pilot study throughout the remaining six authorities. As of July 2007, all seven partners have identified potential improvements to their service using RouteSmart.

The pilot study with Daventry DC proved invaluable to the overall project, as others have learnt from both Daventry's mistakes and successes. Stage one is now nearing completion, with RouteSmart being applied to the remaining partner authorities' rounds data.

Implementation of stage one is predicted to deliver significant savings across the County and provide each authority with electronic management data including:

- Maps showing individual service locations, colour-coded by route (see figure 1 'Daventry collection routes' and figure 2 'Daventry blue route');
- Maps showing the sequence in which locations are serviced and/or vehicle travel paths;
- Route summaries showing time, distance and waste tonnage by route;
- Lists of all locations serviced on each route;
- Instructions to drivers showing turns, street services and numbers of service locations by street (see figure 3 'street by street' directions).

Figure 1 - Daventry collection routes

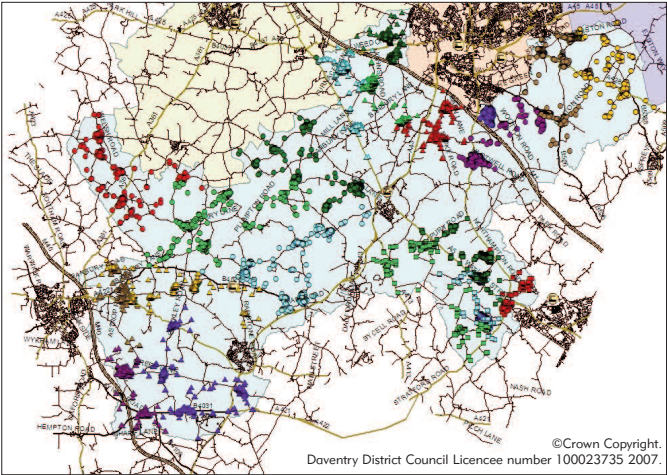


Figure 2 - Daventry blue route



Figure 3 - Street by street directions

Solution Name: <active scenario>

Solution Label:

Report Date: 07/05/2007

Report Time: 13:16

Disclaimer: The directions provided below are computer-generated and may not reflect actual traffic conditions. You are required to obey all traffic rules and regulations at all times. Such traffic rules and regulations shall take precedence over the computer-generated directions.

Route 101

DIRECTIONS	ADDRESS	CUMULATIVE DISTANCE (miles)	CUMULATIVE TIME (h:mm)
■ Start route	Towcester Depot		07:30
Left out of facility	Street ID #19221591	0.000	07:30
Turn left onto (0.165 miles)	OLD TIFIELD ROAD E	0.165	07:30
Cross on right	Service Road	0.053	07:30
Turn right onto (0.166 miles)	A5 B	0.321	07:31
Cross on left	<OLD GREENS NORTON ROAD E	0.202	07:30
Keep left on (0.030 miles)	A5 B	0.351	07:31
Cross on left	<A43 B	0.327	07:31
Cross on left	<A43 B	0.344	07:31
Turn left onto	Access Road to TOWCESTER ROAD D	0.526	07:31
Straight onto (1.038 miles)	TOWCESTER ROAD D	1.564	07:33
Cross on left	<OLD GREENS NORTON ROAD F	0.526	07:31
Cross on left	<Service Road	0.759	07:31
Cross on right	Service Road	1.388	07:33
Straight onto (0.232 miles)	TOWCESTER ROAD E	1.796	07:34
Cross on left	<CALVERT ROAD E	1.564	07:33
Cross on left	<COX GARDENS E	1.625	07:33
Cross on right	Service Road	1.681	07:33
Cross on left	<CHURCH VIEW E	1.667	07:33
Cross on right	Service Road	1.731	07:34
Cross on right	NEW ROAD E	1.749	07:34
Turn right onto (0.308 miles)	BLAKESELY HILL D	2.105	07:34
Cross on right	NEW ROAD E	1.807	07:34
Cross on right	NEW ROAD E	1.852	07:34
Cross on left	<BENHAM ROAD E	2.006	07:34
Veer right onto (2.441 miles)	Access Road to BANBURY LANE D	4.546	07:39
Cross on right	Service Road	2.699	07:35
Cross on left	<Service Road	2.836	07:36
Cross on right	Service Road	3.065	07:36
Cross on left	<Service Road	3.483	07:37
Cross on right	POPLARS CLOSE E	4.501	07:39
Keep left on (0.035 miles)	Access Road to BANBURY LANE D	4.581	07:39
Cross on left	<HILLCROFT VIEW E	4.551	07:39
Straight onto (0.810 miles)	Access Road to BANBURY LANE D	5.391	07:41
Cross on left	<HIGH STREET D	4.613	07:39
Cross on left	<Service Road	4.683	07:39
Turn left onto	BANBURY LANE D	6.100	07:42
Turn right onto (1.012 miles)	Access Road to MORETON ROAD D	7.111	07:44
Cross on left	<Service Road	6.786	07:44
Cross on left	<Service Road	7.108	07:44
Keep left on (0.157 miles)	Access Road to MORETON ROAD D	7.269	07:45

Next steps

The next step in the project is to explore avenues for joint working, and draw upon data contained in the shared database to optimise routes for waste and recycling collection services across existing boundaries.

It is proposed to hold facilitated workshop sessions where the NWP can test draft criteria and identify two or three joint-working options worthy of further exploration. The agreed model, detailing the joint working options, will then be fed into RouteSmart and a final report prepared identifying potential savings, steps to implementation and an action plan to address potential barriers to integration.

The final stage of the project - the fully integrated countywide option - will also be discussed at the workshop sessions. This option might only be regarded as aspirational in the short to medium-term but remains a vision for the partnership, which proposes to carry out the modelling regardless of the probability of the option being realised.

The project undertaken by the NWP is a good example of where partners are working hard to break down barriers and the traditional 'silo mentality'. To this end, the partnership has also engaged the Waste Disposal Authority (Northamptonshire County Council) so that its staff can use the shared database when planning additional waste treatment and disposal sites.

Essential ingredients for success

- A clear, project-based approach with work streams identified and processes staged;
- A defined organisational structure consisting of a Project Board and Project Team;
- Clearly defined roles and responsibilities from the start of the project;
- A transparent and clear communication process, facilitated by the project lead and partners;
- Engage all stakeholders on a 'carrot and stick' basis.

Risks

Major risks to the successful completion of the project were discussed at a NWP risk management workshop. Potential risks were identified at the beginning of the project and graded 'high', 'medium' or 'low' according to their probability and impact. Each risk was assigned to a 'Responsible Person' to ensure they were managed effectively.

Overleaf are the key risks identified at the risk management workshop.

Improvement through efficiency

Risk Identified	Action Taken
Project ownership	The implementation of a pilot stage in order to facilitate a showcase meeting of benefits that could be gained locally by participating in the project
Resource availability	Obtain formal commitment from PMT and authorities for resource allocation
Political sign up	Regular feedback to NWP
Poor management data	Early assessment of current data and action plan to achieve base level
Existing contractual arrangements	Early discussions and negotiations
Restricted market for consultants to undertake the work	Investigate partnership working with other authorities/schemes

Role of RCE

The East Midlands Centre of Excellence provided grant aid of £110k to fund the whole feasibility study. A Return on Investment (ROI) was undertaken at the start of the project and estimated the benefits of integrating waste and recycling collection routes across the NWP at £2.3 million. Improvement and efficiency savings were forecast using the RSe Brent ROI model and relate to total savings over a period of 5 years from commencement of the project. The ROI will be re-calculated at the end of the project.

The Northamptonshire Waste Partnership

Corby Borough Council
Daventry District Council (Lead Authority)
East Northamptonshire Council
Kettering Borough Council
Northampton Borough Council
South Northamptonshire Council
Borough Council of Wellingborough

Transferability

The key processes and principles from this ambitious project can be applied to similar schemes both regionally and nationally. If you are interested in obtaining further information about this project, please contact Jo Gilford or Helen Richmond.

Quote

“Northamptonshire now has a single shared database that contains optimised rounds for waste and recycling collection services in each of the borough and districts of Northamptonshire. Partnership working is very demanding but we are now one step nearer to cross-border working and an integrated waste collection and recycling service.”

Jo Gilford,
Corporate Manager
Daventry District Council

Contact

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