

Final Report

Alternate weekly collections guidance



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Foreword

The UK has made great strides in recent years in starting a transition from our historic reliance on landfill disposal towards systems which focus on recovering materials for reuse. Independent research conducted for WRAP has shown that in environmental terms recycling is almost always a better solution than either landfilling or incineration¹ and that, in climate change terms, the UK's current recycling level has the equivalent effect to taking 5 million cars off our roads. Waste Strategies across the UK all envisage further significant increases in recycling.

These achievements have required changes in the ways our refuse has been collected. This is happening in businesses and across the public sector too, but it is the impact on domestic collections which has drawn the most public comment.

Over 180 local authorities have now changed their collection systems so that the collection of material for recycling and/or composting alternates on a weekly basis with residual waste for landfill or incineration. These systems, which are diverse in their detailed design, have become known collectively as Alternate Weekly Collections (AWC).

AWC is not appropriate for all authorities and whether to adopt it must be a decision for local councils in the light of their local circumstances and the views of their electors. This guide is intended to help authorities decide whether AWC is right for them and to draw together, from the experience of other authorities, advice on how to design and implement a scheme which is effective, and which gains and retains the support of local people.

AWC has become a generic term to describe a diverse range of scheme designs and implementation, but the basic concept is that the reduced collection frequency for residual waste is an incentive for householders to separate recyclable material into the recycling collection. The lower cost of the residual waste service frees resources to fund investment in recycling services.

There are some very clear messages which emerge from councils' experiences so far and these are highlighted in this guidance. It is clear that well designed and executed AWC schemes should contain certain key features:

- There should be consultation with both elected members and residents when considering service changes. Once changes have been decided on, there should be continuing communication of the service changes across the different phases of planning and implementation including regular feedback to all.
- AWC must be accompanied by a high quality recycling service. Schemes should be designed for ease of use by residents and services should be reliable. Residents should be provided with sufficient container capacity for their recyclables – they must be able to recycle at least half of their waste materials to compensate for the reduction in residual waste capacity. Particular consideration should be given to bulky items like plastic bottles. Schemes should have some flexibility to deal with special circumstances.
- New schemes will initially be confusing for some residents and additional resources must be made available to provide residents, who require it, with additional support to help them adapt to the new services. Designing systems that are similar to successful schemes in neighbouring authorities will help to reduce confusion. Although there are powers of enforcement available to local authorities, successful schemes should rely first on public understanding and acceptance of the arrangements and reserve formal enforcement to the last resort.
- The design of the scheme should address known public concerns. So, storage of refuse should be in secure, rigid containers to respond to concerns about the increased risk of odour, flies and other nuisances as a result of storing waste for up to two weeks. Householders will need simple practical advice on wrapping and bagging waste to reduce these risks.
- Much of the public debate about AWC has focused on public concerns about storing food waste. WRAP has commissioned separate research and published guidance on the treatment of food and other biowastes

¹http://www.wrap.org.uk/wrap_corporate/about_wrap/environmental.html

within the domestic waste stream² . It is clear that in order to meet the Landfill Directive requirements it will be necessary to deal with food waste in the residual waste stream. WRAP's research indicates that on environmental grounds the best way to achieve this is to collect food waste separately and weekly and to process it either in compost or, preferably through processes such as anaerobic digestion which also allow recovery of energy. Authorities considering a move to an AWC system should take the opportunity to consider introducing separate food waste collections alongside it.

²http://www.wrap.org.uk/local_authorities/biowaste.html

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1.0 Alternate weekly collections

What are Alternate Weekly Collections?

There is no single definition of an Alternate Weekly Collection scheme (AWCs)³. However, the variants in use have the common features that residents are still provided with a weekly collection service, but they are asked to separate their recyclable, and in some cases compostable, waste from the residual fraction and the different fractions are collected on different frequencies. Generally, the residual waste is collected one week and the recyclable fraction is collected the next. Some AWC schemes, however, operate with weekly collections of food waste and / or dry recyclables.

AWC is designed to encourage participation in recycling and composting by restraining the extent to which recyclable waste can be put into residual waste bins and at the same time releasing resources of money, manpower and equipment to provide high quality recycling services. This approach should not lead to a reduction in the total collection capacity provided to individual households.

The Purpose of this Guide

AWC is not suitable for all authorities. The decision on whether to propose an AWC system must be one for local authorities to take in the light of local circumstances and local opinion. This guide aims to provide practical advice for waste managers and elected members within local authorities. It is designed to help them determine whether AWC is a suitable option and, if so, to support the planning and delivery of a successful service. Valuable experience and lessons learned by authorities that have introduced AWC are highlighted throughout in case studies.

The checklist at the end of this guidance provides an overview of the key activities to be considered during a move to AWC and provides an indication as to when these should be conducted and the amount of time they are likely to take.

1.1 Why are local authorities considering AWCS?

European and national legislation requires local authorities to both reduce the amount of waste sent to landfill and increase the amount that is recycled or composted. In addition, authorities must attempt to deliver good quality local services as efficiently as possible within their financial constraints in which they operate. The main drivers include:

- The Household Waste Recycling Act 2003 (requiring authorities to collect at least 2 materials from the kerbside for recycling by 2010);
- Recycling Targets and potentially, in England, the new residual waste targets proposed in Waste Strategy 2007;
- Landfill Allowances Trading Scheme (LATS) (requiring diversion of biodegradable Municipal Solid Waste from landfill) introduced to deliver the requirements of the Landfill Directive; and
- Central Government targets for efficiency savings.

Appropriately specified and well run AWC schemes can help deliver the following changes in behaviour:

- Raise awareness of the volumes of waste generated, prompting the segregation of materials for recycling and composting; and
- Prompting an overall reduction in waste arisings at the kerbside. The reduction is likely to be brought about by residents changing their habits regarding the amount of material they manage via other means (e.g. home composting) or by changing shopping habits to reduce e.g. food and packaging waste. .

1.2 Who operates AWC schemes?

As of April 2007, around 180 authorities in the UK are operating AWC schemes with others either running pilots or preparing to implement schemes during the coming year. Although AWCs were initially introduced into the less densely populated District and Borough Council areas, there are now successful examples of AWCs being

³ Some authorities prefer to use the term 'Managed Weekly Collections' or 'Alternate Bin Collections' to emphasise the point that residents will continue to receive a weekly collection service.

introduced into more urban boroughs and cities, where flexible and innovative arrangements have made implementation viable. So far, however, AWC has not been chosen for use in the most densely populated urban areas and in some authorities coverage of AWC is not universal.

More than 90% of councils in Northern Ireland are now operating an AWC scheme of some form, making this type of collection increasingly commonplace. In Scotland over half of the councils, and in Wales 6 out of 22, have moved to AWC.

Quote (WRAP): In 2003/04, 11 of the top 20 performing authorities in England were operating AWC. Of the top 20 highest performing local authorities in 2005/06, 19 were operating an AWC scheme, and all provided an organic waste collection service. The BVPI combined recycling and composting rates of these authorities ranged from 40.3% to 51.5%

Table 1.1 Top 20 English Recycling Authorities 2005/06

Local Authority	AWC?	Recycling	Composting	Percentage Of Household Waste Recycled and Composted
		BVPI 82a (i)	BVPI 82b (i)	(a) + (b)
North Kesteven	Yes	28.7	22.8	51.5
Rushcliffe	Yes	24.6	25.3	49.9
South Cambridgeshire	Yes	18.1	31.3	49.4
St Edmundsbury	Yes	21.5	27.1	48.6
Huntingdonshire	Yes	25.0	23.0	48.0
Melton Mowbray	Yes	23.0	24.0	47.1
Waveney	Yes	25.8	20.8	46.6
Forest Heath	Yes	22.3	23.8	46.1
Teignbridge	Yes	19.6	25.8	45.4
Lichfield	Yes	22.5	22.9	45.4
Daventry	Yes	15.6	29.0	44.6
Harborough	Yes	18.6	25.7	44.3
Broadland	Yes	31.0	12.5	43.4
Cherwell	Yes	22.4	20.9	43.3
Ryedale	Yes	18.2	24.5	42.8
Oswestry	Yes	16.9	25.7	42.6
Vale Royal	Yes	18.3	23.6	41.9
Canterbury	Yes	26.4	15.3	41.7
Bromsgrove	Yes	20.0	20.6	40.6
Three Rivers*	No	19.3	21.0	40.3

*Three Rivers operate a restricted capacity residual waste collection on a weekly basis, using a 140 litre wheeled bin

Table 1.1 shows the top 20 English local authorities in terms of recycling rate for 2005/06.

The recycling rate is made up of the contribution of dry recyclables (82a (i)) and composting (82b (i)). The specific waste and recycling schemes operated (and types of waste collected) by each of these authorities do differ, as a result of the nature of the authority area and other local factors.

The top 5 recycling councils in Northern Ireland are shown in Table 1.2 below:

Table 1.2 Top 5 Northern Irish Recycling Authorities 2005/06

Local Authority	AWC?	Percentage Of Household Waste Recycled And Composted As % Of Total Household Waste Arisings
Antrim	Yes	44.0
Banbridge	Yes	41.0
Limavady	Yes	35.9
Magherafelt	Yes	35.7
Down	Yes	33.7

2.0 Gathering the facts: Is AWC suitable for your authority?

This section will help you to gather the information you need to enable your authority to make an informed decision as to whether or not to introduce AWC.

2.1 Local and regional policy

Recycling and Composting Targets

A common reason for introducing an AWC scheme is to increase the level of recycling within an authority in order to meet local or statutory targets. It is important to note that AWC is not the only way to achieve increases in recycling. If this is your main driver then you should consider the following before making a decision:

- Where are you now in relation to the recycling targets that you have to reach?
- Could you improve your performance by modifying your current recycling service or reviewing how you engage with residents?
- What barriers have historically existed to making changes to the service and could these now be overcome?
- How could developments within the county or region impact on the collection services you are able to offer, e.g. the letting of a new county-wide disposal contract or investigations into joint working opportunities?

Local Government and Involvement in Health Bill

This Bill in Parliament would enable local authorities to establish Joint Waste Authorities, creating opportunities for partnership working and the delivery of harmonised services. Many authorities already operate joint officer working groups, providing a forum for discussing partnering opportunities and issues of scheme design. In other areas more extensive partnership working is in place leading to benefits from cost savings and greater consistency of services.

Somerset Waste Partnership

The Somerset Waste Partnership (SWP) comprises the county Waste Disposal Authority and the five Waste Collection Authorities of Mendip, Sedgemoor, South Somerset, Taunton Deane and West Somerset. The SWP has evolved from the formation of a joint advisory committee in 1992, through to the procurement of a countywide collection contract and intention to create a combined Somerset Waste Board in 2007.

This case study summarises the evolution of the *SORT-IT!* service in Somerset which includes weekly food waste collections, and the role of partnership working in pursuit of high performance.

Scheme Statistics:

Number of households: 228,000 (160,000 on full *SORT-IT!* to date)

Statutory Recycling performance [and targets] by WCA in 2005/6: Mendip 30.0% [25.0%], Sedgemoor 20.4% [19.0%], South Somerset 32.5 % [28.0%], Taunton Deane 25.5% [30.0%], West Somerset 22.1% [25.0%].

BVPI recycling rates for the three Somerset Districts with full *SORT IT!* (Mendip, South Somerset, Taunton Deane) are projected to be 41-47% for 07/08, with food waste contributing about a quarter of this performance.



Material	Frequency	Receptacle	Comments
Residual	Fortnightly	180 wheeled bin with options for 140s & 240s	The standard bin size is 180 litres but Mendip currently has 240 litre bins as these were already in use.
Dry Recycling	Weekly	55 litre box	Paper, glass, cans, foil, textiles and car batteries sorted at kerbside onto stillage vehicles.
Food	Weekly	25 litre lockable bin plus 5 litre kitchen caddy	Collected on same stillage vehicles as dry recyclables. Lockable bins are important for avoiding spills and minimising perceived risks of attracting vermin.
Garden	Fortnightly	Wheeled bin or compostable paper sack	Chargeable Opt In (charge varies by authority but to be harmonised at £20 pa for bins and £7.50 for packs of 10 sacks)

Case-study Theme: Delivering Integrated Kerbside Services in Partnership

Having undertaken joint public consultation, best value review and strategy development between 1996 and 2004, the authorities in the SWP have progressively signed up to and rolled out the '*SORT-IT!*' waste services. *SORT-IT!* comprises fortnightly refuse collections, weekly dry recycling (via a kerbside sort) and food waste collections, and separate chargeable garden waste collections. To date Mendip, South Somerset and Taunton Deane have fully rolled out *SORT-IT!*, with Sedgemoor and West Somerset hoping to do so through the county-wide collection contract due to be let in 2007. Adopting a common approach for collection services has been important in allowing the SWP to fully realise the benefits of partnership working and joint procurement.

SORT-IT! has delivered a short term surplus of LATS permits for the county. Income from the LATS has been ring-fenced to deliver the Municipal Waste Management Strategy, targeting investment which will minimise risk and cost to the partnership in the long-term. On the ground this means officers are pursuing 'invest to save' options for funding increased recycling and composting, including collections.

The partnership has been a long-term relationship that has evolved over time. Success is dependent on trust and commitment, especially during periods of change such as the procurement of the joint collection contract.

2.2 Public and political opinion

What Do Your Elected Members Want?

Any change to refuse collection services is likely to be controversial. It is the role of elected members to reflect the views of local people about service provision, standards and costs and to make decisions.

Gaining the support of all elected members for your recommended approach is a desirable goal and something which strenuous efforts should be made to achieve. Now may be the time to begin briefing Members about your research to enable them to consider service priorities and ask informed questions about the method.

What Do Your Residents Want?

To help your elected members perform their role, you should collate any available information about the expectations and preferences of residents. Some of the early moves to AWC were driven by residents' demand for better access to recycling services. Are you aware of what your residents want from their waste and recycling service? If you don't have this information you should consider undertaking a general consultation exercise, perhaps linked to wider issues relating to the waste management strategy to provide context.

Alternatively, you could explore the potential to draw on the activities of existing local consultative networks, such as Local Strategic Partnerships, Community Groups and Residents' Associations to supplement information regarding public opinion.

Once a decision in principle is made to make a change in the service, more detailed consultation with residents will be needed. This requirement is discussed in section 3.3.

2.3 Demographics and housing type

As a general rule, AWC schemes have been easier to implement in areas with medium density housing, due to ease of access for collection vehicles and sufficient space for the storage of multiple containers at individual properties. For this reason, some authorities have chosen to establish AWC schemes only in their medium density housing areas.

Collating information on the types of housing in your authority will help you determine whether AWC is appropriate and will identify areas where alternative arrangements may have to be considered. Consider the following:

- How many communal / high rise properties do you have?
- What is the split of urban and rural properties (you may have dedicated rural rounds to help analyse this)?
- How many properties could not accommodate additional or different containers if these were to be introduced?
- What proportion of properties have a garden?

The above information might be obtained from a range of sources, including Census data, Council Tax and/or property databases maintained by the council, Geographical Information Systems (GIS) and feedback from operational staff.

Other information that it is useful to gather at this stage includes:

- Waste composition data. This will help determine what materials should be targeted for recycling e.g. plastic bottles. If you don't have your own, would a neighbouring authority's data (or county level data) be appropriate? You should also consider other waste streams that might be affected by changes to your kerbside collection scheme (e.g. bring sites)

Authority Insight: Uttlesford District Council found that food waste made up 40 to 45% of their residual waste whilst garden was only 5%. They therefore decided to introduce a weekly food waste collection alongside their AWC of refuse and dry recyclables to address the high arisings of this particular waste fraction.

- Transient populations. Authorities with large transient populations who live in rented accommodation (e.g. students, holiday-makers) have to develop tailored approaches to informing these residents of the recycling services. Is this an issue for your authority? Do you know the proportion of properties that are rented? Do you know where these properties are?

Nearest Neighbours and Family Groups

Useful Tip: To help assess whether AWC would work in your authority it is useful to speak to an authority with similar demographics and geography that has an AWC scheme in place. If you do not have a neighbouring authority that fits the bill, try undertaking a nearest neighbour analysis.

A nearest neighbour analysis is a way of benchmarking the profile of your authority (housing density, population etc) with other authorities in the UK. The model is run by the Chartered Institute of Public Finance and Accountancy (CIPFA) and can be found at www.cipfastats.net

You can set up the Nearest Neighbour analysis to compare your authority with others on the factors considered to be the most important for your authority. Of those authorities that are considered a close match, identify which are operating AWC, and consider contacting them to discuss their experiences.

In addition to the Nearest Neighbour assessment, you may also want to speak to those authorities in your Family Group. The Family Group is a list of authorities considered to be similar to yours, and is provided by the Audit Commission from financial data. Investigate what schemes those authorities in your family group have in place, and what you can learn from them.

Hartlepool Borough Council

Located on the Northeast coast of England, Hartlepool Borough Council (HBC) collects waste and recyclables from 40,000 households.

HBC decided to run a pilot AWC round in June 2005, covering one sixth of the borough. Council staff visited other authorities to learn from their experiences and to identify good practice. Following this, HBC decided to carry out a pilot involving the collection of garden waste, plastic bottles and cardboard, in order to maximise the materials targeted for recycling at the kerbside.

This was provided in addition to an established kerbside collection of glass bottles and jars, textiles and cans in a 55 litre box and paper in a reusable bag.

HBC is nearing the completion of the rollout of their AWC scheme, and are finalising details of how to tailor the scheme to cover the most urban areas in the authority.

Scheme Statistics:

Number of households: 40,000

Statutory Recycling target: 05/06 – 18%

Recycling performance: 04/05 – 19.1%, 05/06 – 21.7%



Material	Frequency	Receptacle	Comments
Residual	Fortnightly	240 litre wheeled bin	
Dry Recycling	Fortnightly	Combination of box and re-usable bags	Glass bottles and jars, textiles and cans collected in a 55 litre blue box Newspapers in a reusable bag and plastic bottles and cardboard in a reusable 'no-blow' bag fitted with a rubber weight.
Garden	Fortnightly	240 litre wheeled bin	

Case-study Theme: AWC in an Urban Authority

AWCs in urban areas face particular challenges when it comes to storage for bins, dealing with a changing population and developing tailored communications. Appreciating the fact that outside space at some properties was limited, HBC chose to use a kerbside box and re-usable bags for the initial collection of dry recyclables and added a reusable 'no-blow' bag as it was felt these would be easier to accommodate than an additional wheeled bin. This also has the benefit of enabling materials to be sorted at the kerbside (which reduces contamination) and maximises the usefulness and value of materials collected. Properties with gardens were provided with a wheeled bin for garden waste.

A comprehensive communications package has been used for the rollout, and is felt to have been an important aspect of the scheme's success. This comprises:

- Two leaflets delivered in different phases to each property. The first advised that the service was to be changed with the second providing specific details as to how it would affect individual residents.
- Door to door canvassers who aim to visit each property up to three times to advise residents about the new scheme and to answer any queries they may have;
- Community drop-in sessions where council officers talk to groups of residents in a relaxed environment, offering an opportunity for individual concerns to be addressed.
- A magnetized collection calendar was delivered with the new containers to remind people when to set materials out.

Aware that there is a high turnover of rented accommodation within the borough, Hartlepool are working with landlords to develop 'mover packs' so that new tenants are automatically advised as to how the waste and recycling services work when they take over a tenancy.

2.4 Current infrastructure

One of the most important factors influencing if and how an AWC scheme might work in your area is the existing collection infrastructure (vehicles, containers and contracts) and the willingness / ability of your authority to make changes to it.

Things to think about:

- Of the services currently in place, are there any that would be particularly difficult to alter? Examples include services that are tied in to contracts with third parties such as reprocessors or services that are well regarded by elected members and residents.
- If your service is operated by a contractor, what is the date for renewal of this contract? What would be required to alter the service mid-contract?
- What is the intended replacement date for your vehicles? Would your current vehicles be suitable for delivering an enhanced recycling service?
- Are the containers you currently provide / specify suitable for an AWC scheme? If you would need to purchase new containers then the cost of this would have to be considered.
- Are you dependent on new treatment facilities coming online e.g. an ABPR compliant composting facility to allow you to make food waste collections? Is there a sensible transitional arrangement that allows you to start collecting food waste before the treatment facilities are commissioned?
- Do you have the staff to manage a move to AWC? There may be no overall change in the number of operational staff (although the split between refuse and recycling collections may change) but additional support would be required to manage the change. Could this be funded?

Useful Tip: Take the earliest opportunity to talk to your operational staff about the implications of a possible move to AWC. Do they foresee any issues with changing collection frequencies or providing residents with new / additional collection containers?

2.5 What are the options available?

A range of materials, containment and collection scheduling combinations exist for AWC schemes. Most authorities operate subtle variations with differences often being a result of different starting points in terms of scheme configuration and infrastructure.

As a basic principle the total collection (i.e. container) capacity should not be reduced overall and the split in capacity between residual and recycling collections should reflect the recycling services offered. You must ensure that sufficient capacity is provided for the range of recyclables to be collected. This may require providing residents with additional or larger containers either generally or in response to individual requests.

2.5.1 Service options

This section describes some of the key success factors and potential pitfalls of different service options for each of the three main materials streams: refuse, recyclables and compostable material.

Refuse (Residual Waste)

A move to AWC represents a move from weekly to fortnightly refuse collections. Refuse is collected by many authorities via a 240 litre wheeled bin. For many, 240 litre wheeled bins have been the standard means of waste containment for a number of years; consequently existing containers are kept, but the frequency of collection is reduced from weekly to fortnightly. Some authorities, where 240 litre wheeled bins are not standard, choose to provide a smaller capacity bin to help further encourage waste diversion.

Authority Insight: South Somerset, Taunton Deane and Uttlesford councils have supplied 180 litre refuse bins when moving to AWC from a weekly sack collection service, coinciding with the introduction of weekly food waste collections.

Dry Recyclables

For an AWC scheme to be effective, it is essential that a comprehensive service is provided for recyclable materials and that sufficient capacity is provided for the householder to store these materials prior to collection. Many residents are confused by complicated rules applied to some schemes and by the degree of variation between schemes in neighbouring authorities. Recycling schemes should be as simple as possible for the users and clearly communicated to them.

AWC works effectively with both kerbside sort and co-mingled collections of dry recyclables. The key issues for consideration are:

- The range of recyclable materials collected. Particular consideration ought to be given to bulky materials such as plastic bottles and cardboard;
- The capacity provided to householders to store their recyclables prior to collection, be that in bags, boxes or bins; and
- The reliability and quality of the collection services.

Compostable Materials

If garden waste is accepted within the residual waste stream, then moving to a fortnightly refuse collection, service with limitations on the collection of excess or side waste, may mean that residents require an alternative outlet for this material. Options include further promotion of home composting or an opt-in garden waste collection either free or chargeable; so that only those residents that really need the service will use it. An alternative option might be to collect garden waste with bulky waste, on request.

If garden waste has been restricted in the residual waste collection or has been charged for as a separate collection, then introducing an authority-wide free of charge collection will mean you are likely to collect more waste than previously, and your costs will increase. You could also risk diverting material from home composting, which is considered to be a more sustainable practice.

When targeted through a dedicated service, most authorities collect garden waste on a fortnightly schedule, though there are often variations to this during winter months. Seasonal fluctuations in garden waste can raise issues when seeking to integrate garden waste collections with other services, e.g. through rounds that mirror refuse. This is explored further in section 3.8.

On average, food waste is around a fifth of the residual waste stream and WRAP's separate advice on the handling of biowastes recommends that food waste is collected separately and weekly⁴. By offering a separate weekly food waste collection, you would be able to divert material away from the refuse bin and thereby help residents manage capacity and secure diversion from landfill. Some authorities are considering collecting food waste with garden waste. The evidence is that, where this happens, the tonnages of food captured for recycling are generally low as residents dispose of their food in both the organics and residual bins (tending to use whichever is due to be emptied next). Offering a weekly food waste collection can also help to manage one of the most common concerns about AWC from residents who do not like the idea of storing food waste for up to two weeks.

Food waste is discussed in more detail in section 3.7.3 of the guidance.

2.5.2 Collection options

Decisions regarding which materials to collect, containers to use and the frequency of collection, must take account of the collection infrastructure available or possible. It is also essential to consider the impact your choices will have on the quality of collected material. This section describes the different collection options available.

⁴http://www.wrap.org.uk/downloads/Biowaste_Summary_Report_Final_240507.6e93b0a8.pdf

Vehicles

There are numerous options available, including:

- Rear End Loading (REL) compaction vehicles (available in a variety of sizes);
- 2 or 3 compartment variations to the standard REL;
- Compartmentalised top loading vehicles;
- Various designs of stillage vehicles, suitable for kerbside sorting of dry recyclables (often purpose built to suit particular operations and to allow the collection of food waste); and
- Kerbsider and Eurocycler vehicles, which enable sorting of dry recyclables into troughs then top loading into compartments.

It is important that the benefits and limitations of the different vehicle options are considered fully when developing your scheme. Inappropriate vehicle specification can have a significant impact on efficiency and cost. It is therefore critical to effectively match the capacity of the vehicle to the materials to be collected.

Useful tip: As a general rule, the more flexibility your vehicle has regarding the use of space then the greater likelihood of an efficient operation.

Containers

Predominantly there are three types of containers in common use: wheeled bins, boxes/crates and sacks. Each is available in a variety of sizes.

- Wheeled bins are the most common containers used for residual waste collection and the most common size in use is 240 litres. It is generally accepted that the introduction of 240 litre bins on weekly collection services has led to increased quantities of waste being collected, which has led some councils introducing wheeled bins for the first time to opt for 140 or 180 litre containers. It is also accepted that collection rounds take longer with wheeled bins when compared to disposable sack collections. Wheeled bins offer the benefit of containing waste, which reduces the risk of litter and animal damage. They are also thought to be a better manual handling option than other containers in that they do not usually need to be lifted. They are not trouble free, however, as uneven terrain, steps, kerbs and slopes frequently have to be negotiated. This can lead to slips, trips and sprains which are amongst the most commonly occurring injuries in collection activities. There are also risks associated with bins falling off bin lifts, either because they have not been presented properly or, more commonly, due to the bins being damaged. Being struck by falling objects is another common cause of injury within the industry.
- Boxes/crates are the containers in most common use for dry recycling collections. These are necessary for kerbside sorting operations which, in turn, allow contaminants / non-recyclable materials to be rejected and left at the kerbside. Boxes generally have to be lifted and carried to the collection vehicle and it is therefore important that safe systems of work are identified and implemented. The size, design and number of boxes to be used needs to be considered. The chosen solution must balance adequate capacity for householders with safe working practices (regarding lifting and minimising strain). This may include considering different containers for heavier materials such as paper and glass and discouraging the carrying of multiple containers (which could also impair vision). It is also important to ensure that the design of the vehicle is suitable to allow ergonomically acceptable loading to take place.
- Sacks, once the standard container for residual waste, are less common today as many authorities have introduced waste containers to help improve street cleanliness, ease of collection and prevention of vermin. Sacks are not generally suitable for AWC of residual waste which includes food. Where, for practical reasons, residual waste needs to be presented for collection in sacks, because wheeled bin collections are not possible provision needs to be made for the sacks to be contained securely between collections. Disposable sacks are used by some authorities for collecting co-mingled dry recyclables. One-trip paper sacks are used by others for garden waste whilst re-usable sacks of various shapes and sizes are in use for particular material streams - most commonly paper and garden waste. Sacks are generally considered to present a number of occupational health and safety issues including manual handling problems from lifting and carrying (including

multiple carrying), potential for injury from sharps, and muscular-skeletal injuries from throwing the sacks onto the vehicle.

There is no one ideal combination of containers as each is more suited to certain areas and tasks. The priority is to successfully manage capacity: limiting capacity for the activity that you want to discourage, enhancing capacity for the activities that you want to encourage.

Useful tip: Consider the range of containers available and the range of options you are likely to offer to your residents. Once you have decided which containers to make available, map the roll-out areas according to the best fit of container options to property types.

Health and Safety

It would be a mistake to assume that the choice of container(s) in itself makes for a safe operation. Whichever containers you choose, you will need to establish and enforce safe systems of work. You will need to revisit your risk assessments (or carry out new assessments) to reflect any changes that you are proposing to introduce. The assessments will need to take account of any proposed changes to containers, vehicles, range of services, collection frequencies, set-out rates, weights in containers, rounds and interaction with the public. In addition, it will be important to consider the effective involvement of staff and the public in managing and implementing any changes.

Useful Tip: Before deciding on any new containers, request samples from each supplier to trial. Get the crews involved in these trials - and elected members if possible too. Ensure that the ones you select work properly for your authority, and are not necessarily just the cheapest!

Broadland District Council

Broadland District Council (BDC) is a part rural, part urban authority lying to the north of Norwich in Norfolk. The district consists of approximately 53,000 households - the majority being private residential properties, either semi or detached.

Up until 2003, BDC operated an opt-in 'green box' scheme (with 55 litre boxes) which served about 25,000 households with a fortnightly collection of glass, textiles, cans and paper. This collection service only served the properties on the urban fringe of Norwich; rural areas received no recycling service other than bring banks. Participation rates were typically less than 60% of the households receiving a collection. The service was provided by two stillage vehicles, with materials transferred to recyclers in bulk.

The overall recycling rate with the 'green box' scheme was stuck at about 10% with little room for significant improvement. This was phased out in 2003/04 as the AWC scheme was introduced.

Scheme Statistics:

Number of households: 53,000

Statutory Recycling target: 05/06 – 27%

Recycling performance: 04/05 – 38.3%, 05/06 – 43.4%



Material:	Frequency	Receptacle	Comments
Residual	Fortnightly	240 litre wheeled bin	Green Bin
Dry Recycling	Fortnightly	240 litre wheeled bin	Co-mingled collection - Grey Bin
Garden	Fortnightly	240 litre wheeled bin	Opt-In Chargeable – Brown Bin

Case-study Theme: Receptacles chosen for AWC

During 2002, the Council's cabinet decided that an AWC was the best option available in terms of creating the step change in recycling performance required to meet the Council's recycling targets of 18% in 2003/04 and 27% in 2005/06 within the resources available. It would also be capable of serving the vast majority of households across the district with a uniform service collecting paper, card, plastic bottles and cans/aerosols. The introduction of the AWC scheme also brought about a number of policy changes to minimise waste and maximise recycling. These included banning garden waste from the refuse bin, not accepting side waste (apart from recyclables) and instituting a 'lids down' policy when collecting all bins.

BDC carefully assessed the district before commencing the phasing-in of the service. This meant there was a good understanding of the varying service needs of different properties and was planned accordingly. There was also very close working with the service provider in designing the introduction of the service which meant that they did not overstretch themselves and there was minimal disruption. Additional staff and resources were brought in to deal with issues that inevitably arose and to address public enquiries.

The containers - twin 240 litre bins - were chosen after carefully assessing the reasonable volume requirements of residents and given that the Council had been using this sized bin for a number of years for refuse collection. Households can also be supplied with 140 litre bins and 360 litre bins in certain circumstances. Communal facilities are serviced with 1100 litre bins where appropriate. Consequently the service is flexible in meeting needs but with an emphasis on encouraging waste minimisation and maximising recycling. The scheme's success has been based on good public commitment combined with strong political support and communications. Sound strategic planning and ongoing innovation with the Council's service provider has been key for successful implementation along with a dedicated staff and workforce. The Council was the top performing recycling and composting authority in Norfolk and second in England for recycling performance (2005/06).

2.6 How will an AWC scheme change yield and participation?

2.6.1 *Impact on residual waste tonnages*

It is sometimes assumed that a move to AWC will result in the weight of the refuse bin on a fortnightly collection doubling from that experienced on a weekly collection. Experience suggests that it is more likely to be 1.5 times the weight (e.g. 17-22kg fortnightly compared to 12-15kg weekly). This is a result of the reduced capacity for residual waste and the increased diversion of material into recycling schemes.

Nevertheless the impact of this higher weight per collection must be taken into consideration when reviewing risk assessments.

2.6.2 *Impact on recycling schemes*

Experience has shown that AWC schemes result in an increase in both participation in recycling and set out of recycling containers. Daventry District Council provided a weekly refuse service alongside a weekly kerbside sort collection for dry-recyclables and experienced a 45% increase on the yields of recyclables collected when they changed to a fortnightly refuse collection scheme.

Authority Insight: As a result of the SORT-IT! scheme in Somerset, recycling collection yields for the same materials have increased by more than 50%, food waste has contributed a further 12% to recycling rates and refuse has halved.

2.6.3 *What are the implications?*

It is important that you consider the requirement for more containers to be emptied when designing your rounds (see section 3.8). You should also consider the implications of further increases as the number of residents participating increases, this will also result in a greater volume of material set out for collection. This will have an impact on the number of properties that an individual crew will be able to service within a day.

Authorities operating AWC schemes have recorded participation rates in the range of 80-95% for some recycling schemes. As your recycling collections become the primary service offered by your authority, you should aim for this level of participation. Plan for high recycling rates, and keep up publicity and encouragement to achieve them.

Cambridge City Council

Cambridge City Council (CCC) is an authority of 46,000 households located in the Eastern Region. CCC implemented an AWC system in October 2005 which involved moving the whole of the city to the new scheme at the same time. This is a small city but none the less an urban area with a significant proportion of flats and a highly transient population.

The changes in Cambridge only involved moving to a fortnightly collection of residual waste plus the addition of plastic bottles to their existing recycling scheme. The recycling tonnages have therefore predominantly increased as a result of increased participation in recycling linked to the reduction in capacity for refuse. Refuse and dry recycling are collected one week and organic waste and plastic bottles collected the following week. CCC operates a no-side waste policy that was in operation before the change.

Scheme Statistics:

Number of households: 46,000
 Recycling performance 04/05 - 29.5%
 Statutory Recycling target 05/06 - 30%
 Recycling performance 05/06 - 35.2%



Material	Frequency	Receptacle	Comments
Residual	Fortnightly	240 litre wheeled bin	Grey/black bin
Dry recycling	Fortnightly	55 litre box	Black
Organic waste	Fortnightly	240 litre wheeled bin	Green bin
Plastic bottles	Fortnightly	55 litre box	Blue

Case-study Theme: Changes in yields of material

The tonnage of dry recyclables and organic waste collected increased significantly, alongside a substantial drop in tonnage of waste that was landfilled. This has produced a 10% increase in recycling rate from 29.5 – 39.5% over a 2 year period. The council believes this increase would not have been possible without the move to AWC.

Year	Dry Recycling	Organic waste	Residual	Recycling Rate
2004/05	6,368	7,659	33,482	29.5%
2005/06	7,300	9,225	30,430	35.2%
2006/07 (predicted)	8,000	10,000	28,200	39.5%

2.6.4 Impact on other services

The introduction of AWC should not be considered in isolation as it is likely that it could have an impact on the other services provided by your authority.

Trade Waste

- On a weekly schedule, many authorities co-collect trade waste with domestic refuse. Consideration will have to be given to how this will be managed within an AWC scheme. Some commercial customers will welcome the opportunity to start recycling and be willing to move to a fortnightly collection for residual waste, whereas others will still require a weekly (or more frequent) collection service. You will need to determine whether it is possible for your authority to continue to provide a weekly service or whether alternative arrangements, such as outsourcing this work to a third party, will have to be made. You may also wish to consider offering recycling services to businesses.

Useful tip: Have a meeting with the local Chamber of Commerce and listen to their ideas about recycling; for instance some businesses may prefer a drop-off point to a collection service due to storage capacity constraints.

- Which materials would it be possible for the authority to collect?
- How would collecting business recyclables affect the capacity of the service and would further capital and revenue investment be required?
- How would the materials be stored and the receptacles emptied?
- What charges would be levied to the businesses? Would a reduced rate for collecting recyclable materials be appropriate?
- How would collecting trade waste for recycling affect the income for the trade waste service and would there be a knock-on effect to other services if income is reduced?
- How could trade waste recycling collections improve the authority's LATS position and which materials would it be of most benefit to the authority to collect?

Street Cleansing / Fly-Tipping

Changes to the manner in which waste and recyclables are collected will inevitably have an impact on street scene management. Moving from sacks to wheeled bins within an AWC service may well improve the street scene, reducing litter through better containment. Conversely inadequate containment methods and lack of clear communication to residents about how to use the service could lead to greater problems with litter, fly-tipping or 'side waste'. This is usually a short-term problem and can be addressed through effective communications and customer support.

Developing a fly-tipping and litter prevention strategy can help to support the implementation of your AWC scheme. Defra published a research report and good practice guidance in July 2006. This guidance: "Fly-tipping; Causes, Incentives and Solutions" may provide a good starting point for developing initiatives⁵. It is useful to consider the following:

- Do you have a significant problem with fly-tipping? If so is this likely to be exacerbated by a new collection system? What actions can you take to prevent any increases?
- If neighbouring or similar authorities have introduced AWC what changes did they see in fly-tipping and littering levels?
- Are there any fly-tipping hotspots in your area? If so what containment methods and preventative measures can be taken in these areas?
- Could a fly-tipping problem migrate to another area when AWC is introduced i.e. across district or county boundaries?
- Could residents be tempted to burn their wastes?
- Could residents be tempted to put their waste into their neighbours' bins?

⁵ www.defra.gov.uk/environment/localenv/flytipping/research/index.htm

- Will there be greater use of household waste recycling centres? If so, do they have the capacity and suitable opening hours?
- Whose responsibility is it to respond to spillages of recyclables or waste (to avoid unnecessary impacts on other services)?

Fly Capture⁶ along with street cleanliness monitoring through BVPI 199, should be used to monitor any changes in fly-tipping or littering. At minimum it would be advisable to:

- Monitor the AWC areas for a period of time prior to the scheme being introduced (1 – 6 months); and
- Monitor at similar levels and intervals after the introduction.

This information can then be used to target resources effectively enabling the scheme to be improved where necessary.

Household Waste Recycling Centres and Recycling Banks

Due to the increased interest and participation in recycling, as a result of improving recycling services, changes in yields are likely to be experienced at Household Waste Recycling Centres (HWRCs) and recycling banks when you move to AWC. The amount will depend on the level of change made to the kerbside recycling services. If for example a new material is added to the kerbside collection service it is likely that the tonnages of that material collected from bring facilities will decrease.

Useful tip: When adding a new material to a recyclables collection, it is useful to determine where the tonnage of this material will come from. Assuming this material was previously collected by bring banks, roughly calculate the amount of extra material captured as 50% from existing bring banks and 50% from the residual waste stream.

Authority Insight: The decrease in total waste arisings collected by the SORT-IT! collection authorities in Somerset following the move to AWC is much greater than the increase in arisings found at the HWRCs, which at most is only a third of the collection decrease. The waste stream found to have decreased the most was food waste. This is thought to have resulted from the separate food waste service encouraging less wasteful shopping and more home composting, as well as some moisture loss arising from the separation, transfer and storage of food waste.

2.7 Costs

Having considered all of the factors above, and regardless of whether you have selected an AWC configuration or are still considering a range of options, the potential costs of implementing and running a revised service must be assessed.

It is commonly believed that an AWC scheme will result in cost savings for your authority. This can be true, but savings are dependent on the service that you currently have in place. If you do not already have a good quality recycling service, it may require significant investment to provide an effective AWC scheme. For some authorities, the costs of this may be partly offset by cost savings in the residual waste service. Consider the following scenarios:

- A weekly refuse service coupled with basic recycling (one or two materials) will need to be altered significantly to make the transition to AWC, and so is likely to result in increased costs (a reduction in refuse costs but an increase in recycling costs).
- A weekly refuse service coupled with a more comprehensive recycling service (dry-recyclables and organics) is likely to require less alteration to implement AWC and therefore may yield some reduction in overall cost.

Cost Modelling

As part of preparing a case for a move to AWC, a cost modelling exercise can be useful. This enables the likely cost of a move to AWC to be compared against the cost of other options, such as an enhancement of your recycling services whilst maintaining a weekly refuse collection. This exercise can also evaluate the cost of doing

⁶ <http://www.defra.gov.uk/environment/localenv/flytipping/flycapture.htm>

nothing. Based on your current waste growth and diversion rates, what are the ongoing service costs taking account of increasing landfill tax and potential LATS penalties?

To ensure continuing public support, it is important for changes to be implemented effectively first time. It is therefore important to be realistic about the cost of implementing schemes. The costs that will need to be assessed in order to be able to compare potential options are:

- Operational Costs – what does the service cost to run now, and what will it cost in the future; and
- Roll-out Costs – what one-off costs will be incurred during the roll-out process?

Operational Costs

When modelling the operational costs of current and potential future services, you should consider the following:

- Financing cost and replacement frequency for containers;
- Vehicle costs such as financing / leasing, fuel, maintenance and depreciation;
- Staff wages and supervision costs;
- Material revenues and recycling credits;
- Disposal costs (gate fees / landfill tax);
- Monitoring of fly-tipping; and
- Ongoing communications and publicity.

Roll-out Costs

A number of one-off costs will be incurred when rolling out the service. These include, but are not limited to:

- Container purchase (these can be either a one off payment or financed, in which case the finance becomes an operational cost);
- Communications costs (leaflets, road-shows etc, see Section 3.14);
- Clearing and enforcement of possible increases in fly-tipping;
- Temporary staff such as door-to-door canvassers, bin deliverers or call centre staff. You may also need extra crews to cover each phase of rollout where additional collection round capacity is required; and
- Re-training of staff (overtime payments).

Kerbside Analysis Tool (KAT)

One way of calculating the operational costs for a number of future refuse and recycling services (not just AWC) is KAT, a spreadsheet costing tool available from WRAP⁷. This tool allows the user to input their current collection scheme parameters and costs and to estimate the costs of different collection scenarios.

The tool determines the infrastructure requirements for both recycling and refuse collections; providing a cost for each option. It can also be used to model the impact of changes in participation, set-out and capture rates. This approach is used by many authorities when scoping future options for their waste and recyclables collection services. The results can be used to develop a discussion paper for elected members to enable them to make informed choices about service provision.

⁷ http://wrap.org.uk/local_authorities/toolkits_good_practice/index.html

Derwentside District Council

Derwentside District Council (DDC) is an authority in the North East of England with approximately 40,000 households. With a strong political backing, DDC rolled out their AWC scheme to all households in July 2006.

The planning for the rollout started well ahead of 2006, and as part of the move, the collections were changed to a four day week in 2004. The ROTATE team at WRAP were engaged to support on the publicity campaign, and this included press articles, leafleting and a mobile information unit.

The waste team at DDC liaised with call centre staff pre-rollout to brief them on what calls they could expect during the roll-out. Whilst there were initially a high volume of calls requesting more information, this has now tailed off. Tonnages for recycling have dramatically increased, with January 2007 figures 77 tonnes higher than their previous maximum.

Scheme Statistics:

Number of households: 40,000

Statutory Recycling target: 05/06 – 18%

Recycling performance: 04/05 – 12.5%, 05/06 – 20.5%,

Projected 06/07 29.0%



Material:	Frequency	Receptacle	Comments
Residual	Fortnightly	240l Green lidded wheeled bin	Alternate week to Recycling
Glass & textiles	Fortnightly	55l Green box	Collected separate on same day as dry recyclables
Dry Recycling	Fortnightly	240l Blue lidded wheeled bin	Alternate week to Refuse

Case-study Theme: Costs of AWC

Prior to the introduction of AWC, the total budget provision for waste collection services was £1.5M. This included a kerbside sort of dry recyclables (via a box) and weekly collection of refuse.

The AWC scheme involved delivery of a new blue-lidded wheeled bin to all households (240 or 140 litre) for a fortnightly co-mingled dry-recyclables collection, a dedicated fortnightly glass collection via the retained green box and a fortnightly refuse collection. Residents that could not accommodate an extra wheeled bin were given a roll of 50 clear plastic recycling sacks for a year. The total cost of these new bins and sacks was £568,450.

Delivery of the bins to residents was by round order, so that on the same day as refuse was collected the blue lid bin and recycling information was delivered to each home. A collection calendar showed residents that only the recyclables bin would be collected two weeks later. The rollout period took 4 weeks for all of the urban properties and was undertaken round by round. The rural properties followed a few weeks after.

Initial projections estimated that the new service could be operated with fewer resources, meaning a potential reduction in costs. In reality DDC found that high contamination within the dry recycling collections (18-20% as at April '07) has meant that a similar level of resource is required; therefore the new service is operating for a similar cost but achieving a recycling performance 5 percentage points higher than the previous scheme. This level of contamination is not unusual for a newly introduced co-mingled scheme. It is hoped that by tackling the contamination issue (as other authorities have successfully done), recycling performance can be increased further and costs can be reduced.

2.8 Is there another way?

Whilst AWCs are one of the most effective methods of achieving reductions in landfill and increasing recycling within budget, there are alternatives. Some of these experiences are described below.

2.8.1 Reducing the capacity available for residual waste

Rather than reducing the residual refuse collection frequency, some authorities have chosen to maintain weekly refuse collections but to reduce the size of container.

Three Rivers District Council, Hertfordshire

Three Rivers District Council (TRDC) operate a weekly refuse collection via 140 litre wheeled bins, a fortnightly collection of dry recyclables via three boxes (targeting plastic bottles and cans, glass bottles and jars and paper) and a fortnightly collection of garden waste, food waste and cardboard via 240 litre wheeled bins. The collection of the dry recyclables and compostable waste alternates but is collected on the same day as the refuse.

TRDC's recycling rate for 2005/6 was 40.43%, placing them inside the top 20 for English Authorities. They are aiming to achieve 44% for 2006/07.

Eden District Council, Cumbria

Eden District Council (EDC) covers 830 square miles in the North East of Cumbria. It has approximately 24,600 properties and a population of around 52,000, making it the most sparsely populated district in England.

In early 2004/5 the Council rolled out its kerbside recycling and garden waste collection services to an additional 10,000 properties and also brought in restrictions on the amount of residual waste it would collect. The garden waste scheme was later provided to a further 7,000 properties.

The Council provides a maximum of two blue sacks per household per week for the collection of refuse. Large households of six or more occupants are entitled to one additional blue sack per week. Households where additional waste is generated by a medical condition may also be supplied with additional blue sacks. If residents need additional blue sacks, these can be purchased for £1 each (April 2007).

Between 2003/4 and 2004/5 EDC significantly increased its recycling rate and was in the top ten "most improved" authorities (as defined by DEFRA) for 2004/5.

- 2003/4 – 17.4%
- 2004/5 – 33.2%
- 2005/6 – 36.96%

2.9 Presenting options to members

The preceding sections have been designed to cover all aspects that you will need to consider when researching the potential for AWC in your authority. For many officers, the next step is to prepare a decision paper for elected members to consider.

The remainder of this guidance is designed for authorities who have selected but not yet introduced AWC. It provides a practical step-by-step approach to implementation.

3.0 Road to implementation

This section assumes that you have chosen an AWC scheme as your preferred option, and takes you through the common steps to implementation. The steps are arranged in the approximate order that they should be approached, although some activities can be undertaken concurrently.

3.1 The timeline

This guidance, rather than being a strict timetable to be adhered to, will give you an approximate 'time to implementation' within each section, allowing you to plan how long in advance to start each activity. This approach is designed to encourage you to start the process early, avoiding common pitfalls, and rushing implementation in the last few months. A well-planned and smoothly implemented scheme has the potential to be rolled-out with limited disruption for residents.

More time in up front = fewer problems downstream

3.2 Project management and resource planning

Firstly, assign a project manager and identify a team with specific roles. If your contract is operated by a third party, then consider how you will work with them, and agree roles at an early stage (there is more information on working with third parties in Section 3.13).

Authority Insight: Rushcliffe Borough Council planned the rollout of their recycling2go service with a detailed project plan, captured using Microsoft Project. This allowed the Council to see the extent of all of the activities that needed completing, the resources required, their expected timescales, and the impact of late delivery on other tasks.

For planning purposes, it is not advisable to fix a date for implementation too early in the process. If possible, try instead to set a window during which you will aim for rollout.

3.3 Engaging with the public

As would be expected, the significant change in service associated with a move to AWC leads to increased information requests from the public. Engaging with residents as early as possible and throughout the process will help to alleviate the communication requirement during roll-out.

Consultation during implementation will build on the consultation carried out as part of the decision making process discussed in Section 2.2. It is important to make residents aware of the preferred options and to consult them on the specific details of the scheme. Consultation is a two-way process and, to engage the public effectively, their opinions must be used to shape your future scheme.

Consider asking community representatives to participate in workshops to discuss the design of the new service and to address specific concerns. Be clear about the purpose of any consultation activity and the influence that participants are able to have on the outcome.

As part of any consultation exercise, it is important to feedback to participants about outcomes. This should include communicating how views expressed have been considered and/or reflected in the planned scheme.

3.4 Engaging with elected members

One of the common messages from authorities that have implemented AWC schemes is the importance of gaining and maintaining support from elected members for the change in service. Despite your best efforts, the introduction of AWC is unlikely to be popular with all residents. Public concerns are often expressed through their elected representatives.

Elected members can be a real asset to your project team; helping to disseminate information, dealing with enquiries and concerns and communicating a positive message regarding the improved scheme to the local community. Equally, it will be important for you to respond to concerns raised by Members and to be flexible to individuals' requirements when developing the detail of your system.

Some authorities have found it useful to invite elected members to briefing sessions about the proposed new scheme. This provides the opportunity to issue Members with information packs highlighting the reasons for the change in service, the exact details of the new scheme and responses to some of the more frequently asked questions. Meetings with Elected members from other authorities that have successfully introduced AWC can also be popular.

Below are some examples of how authorities have successfully engaged with elected members:

- Prior to Daventry District Council introducing its pilot AWC scheme in 1998, elected members were asked to try the scheme out for themselves so they could determine whether it would be possible for residents to manage with the alternate week collections. This allowed them to provide informed responses to queries from residents and to become champions for the scheme; and
- The Elected members from Vale Royal Borough Council along with all staff (including operational staff) attended a set of workshops on what changes were being made and why, so that they could act as ambassadors and answer basic questions from the public;

Time to Implementation

Start consultation 18 to 24 months in advance of rollout. However, this process should be ongoing.

Mid Sussex District Council

Mid Sussex District Council (MSDC) lies at the eastern edge of the County of West Sussex and has a population of approximately 129,000. Proposals to introduce an AWC scheme were developed as part of the Council's contract re-tendering, with the new scheme due to launch in the second half of 2007.

MSDC have historically collected refuse weekly in sacks, alongside a twin box recycling service targeting different materials on alternate weeks. The proposed AWC service comprises 2 x 240l wheeled bins: 1 for refuse, 1 for mixed dry recyclables, alongside a separate chargeable garden waste service (also via a 240l bin). All bins are grey but with different coloured lids to reduce the pool of bins required.

From the point of undertaking a service review to the planned point of rollout will have taken 2 years.

Scheme Statistics:

Number of households: 52,000

Statutory Recycling target: 05/06 – 30%

Recycling performance: 04/05 – 21.3%, 05/06 – 22.6%, within 12 months of rollout projected – 30.0% and within 5 years – 40.0+%



Material	Frequency	Receptacle	Comments
Residual	Fortnightly	240 litre wheeled bin	Grey Bin (Grey lid)
Dry Recycling	Fortnightly	240 litre wheeled bin	Grey Bin (Blue lid)
Garden	Fortnightly chargeable	240 litre wheeled bin	Grey Bin (Green Lid)

Case-study Theme: Engaging Members as part of AWC Planning and Procurement

With the upcoming expiration of their waste and recycling contract in 2007, MSDC invited potential bidders to take part in a novel method of procurement. Bidders were given a brief which consisted of strategic targets and aspirations, and invited to propose their own methods for delivery of a service to meet these needs. Through a Competitive Dialogue Process (CDP), short listed bidders were then engaged in meetings to discuss and refine proposals, with all tender information handled electronically to increase efficiency. The CDP approach ensured tenders were submitted with realistic pricing based on their own proposals, reducing the issue of hidden risks being costed in had submissions been made in response to a Council specification.

As the AWC option was evaluated alongside alternatives, MSDC had relatively little difficulty securing cross-party support. This was in part due to external advice sought during the options scoping phase (including from ROTATE and the Regional Centre of Excellence). Elected members were also taken to visit six other authorities to observe their schemes. As detailed proposals were drawn up two working groups were established: one involving officers and one with Elected members. These continued throughout the planning phases and will remain in place until rollout has been completed.

The working groups have ensured that Elected members from all parties remain engaged throughout the process, including the phases of scheme communication (comprising press releases, articles in local newspapers, attendance of town parish meetings and leaflet distribution) in advance of rolling out bins.

3.5 Securing outlets for collected material

Moving to an AWC scheme will alter the balance and yields of waste and materials sent to your various reception facilities. Checks are required to ensure that there will be no problems (with material quality and quantity) when the scheme starts. This will be particularly important if the service change involves a switch from kerbside sorting to co-mingled collections.

3.5.1 Refuse

The tonnage of residual waste sent for disposal will decrease as a result of the restricted capacity for refuse leading to increased recycling and possibly some waste prevention e.g. home composting. For a proposed AWC scheme you need to consider:

- What change in tonnage of refuse might be expected and how may that change in the future?
- Will refuse be delivered over the whole fortnight, or one week on and the other week off? If one week on, one week off:
 - Can the reception facilities handle this frequency?
 - Can the increased number of vehicle movements be accommodated?
 - Are there any planning or licensing issues?
- Are there any 'minimum tonnage / volume' agreements with reception facilities that would need to be re-negotiated?

3.5.2 Dry-recyclables

AWC will lead to an increase in the tonnage of dry recyclables collected therefore you need to consider:

- Whether existing bulking facilities, MRFs and reprocessors can handle the new range and volumes of material that will occur – what is the maximum that they can receive from you and how close are you to the limit (allowing for future growth)?
- Could you negotiate a better price for sale of materials if you are sending higher yields?
- Does the facility hold the appropriate licence for any increases in tonnage? Care should be taken when dealing with sites that operate under an exemption.
- Will material be delivered over the fortnight or on dedicated weeks?
- If the scheme is new, what level of contamination might be expected and how will this be managed?

Useful Tip: Ensuring that your service provider has both the capacity to deal with increased tonnages and a plan in place to deal with it is essential. Whilst capacity may be the MRFs problem once you have a contract in place, any issues they are having will soon be your problem too if not dealt with.

Good practice guidance on MRFs can be downloaded from the WRAP website⁸.

3.5.3 Compostable material

The composting facility you propose to use may already be receiving organic materials from HWRCs or from other collection authorities. You therefore need to ensure that:

- They can accommodate the volume of materials that you anticipate collecting, this is particularly important if they are operating under an exemption. If more than one collection authority is delivering material into a site, it is worth checking how your collection schedule aligns with theirs (will you both be delivering material on the same day?).
- The mix of materials you are collecting does not pose a problem for the site. Cardboard is sometimes co-collected with garden waste however not all sites are happy to accept cardboard, or some stipulate the type of board. Likewise, if you intend to collect food waste, confirm whether liners are acceptable and, if so, what type?

⁸ http://www.wrap.org.uk/local_authorities/toolkits_good_practice/materials.html

- Your collection schedule coincides with the facilities capacity to accept material.

Time to Implementation

If your scheme is dependent on a new facility, it could be in excess of 2-3 years for a MRF or IVC to come online.

For an IVC, an optimistic timeline would be (for a facility treating less than 40 ktpa):

Planning : 6 – 9 months

Construction: 9 – 12 months

If you do not have a contractor in place to deliver this project, procurement may take around 12 months.

3.6 Who will the scheme apply to?

Whilst an AWC scheme may be appropriate for the majority of households in your authority, there may be some where it will be more difficult to accommodate AWC. Although you should aim to keep schemes as simple and uniform as possible, it will be necessary to retain flexibility so that access to recycling services is not limited to certain housing types.

It is likely that you will be aware of particular areas within your authority where access for collection vehicles or storage of containers may be an issue and a more flexible approach may need to be adopted. It is useful to collate this information to consider how AWC may affect these households and what alterations to the proposed service may need to be made in order for it to be effective.

Properties that have posed a problem for authorities moving to AWC include:

- Communal dwellings with bulk containers;
- Houses with multiple occupancy; and
- Terraced properties either with front of property collections or with back alley collections. Terrace properties can also be difficult to serve as they may have limited space to store bins, either at the front or rear of their property.

Authority Insight: Preston City Council adopted a flexible approach to assessing how best to serve terraced properties on the AWC scheme. In many cases recyclable and food waste is collected from the front of properties (made feasible by the smaller containers) with refuse collected from the rear

For properties that have no rear access, you can consider for residual waste collection:

- Providing a wheeled bin, which will have to be kept at the front of the property; or
- Retaining a sack collection for these properties, but with a clear limit on the number of sacks that can be placed out per week and providing a bin for the purpose of storing sacks between collections.

Useful Tip: Authorities that provide an AWC service using sacks for residual waste (where wheeled bins cannot be accommodated) set a limit on the number of sacks that residents can set out for collection. This generally ranges from 3 to 5 sacks per fortnight, with more for large families.

Remember that you will have to update risk assessments to account for the increased weight and the long pulls for collection crews from properties to vehicles. Also, ensure you have a clear policy regarding whether bins are returned to point of collection or left together at the bottom of the alley.

In addition to these general issues, there may be individual properties that will struggle with the change to AWC. As part of the communications leading up to the implementation, householders ought to be advised of the proposed scheme - see Section 3.14 for details. Take this opportunity to ask residents to contact the authority by return form / postcard with any issues they envisage having in terms of storing containers / access. These individual issues can then be followed up by household visits, which will help to validate the issue and determine the extent of the problem at each location. Household visits are discussed in more detail in Section 4.2.3.

In areas where there are higher levels of deprivation, transient populations or regular instances of contamination, it is important that post-rollout communications continue to inform and remind residents on a regular and ongoing basis on how to take part in the scheme.

It may be that, with some innovative thinking and a degree of flexibility, arrangements can be made to incorporate all of the more difficult to service properties into an AWC scheme. On the other hand, it may be decided that the additional cost or effort required means that it is not possible, and that they will have to remain on the existing refuse service - this will very much depend on local circumstances. If this is the case, ensure that your policy is clear as you will receive enquiries from residents who want to recycle more (and perhaps are not offered the full kerbside collection) and those who want to remain on a weekly refuse collection.

Authority Insight: Uttlesford District Council sent out questionnaires to their residents to ask them if they would have any issues handling their new three bin collection system. Of the 29,300 sent out, 4,391 were returned and 1,279 were granted an exemption from the scheme.

The case study from Tamworth shows how one authority tackled the introduction of AWC into communal dwellings and flats.

Tamworth Borough Council

Tamworth Borough Council (TBC) lies in the county of Staffordshire, to the North East of Birmingham. The Council provides an outsourced waste and recycling collection service to their residents.

TBC has rolled out a district-wide, three-stream AWC to all residents comprising fortnightly refuse, fortnightly garden waste and weekly kerbside sorted dry-recyclables.

TBC has been particularly progressive in their efforts to involve both multi-occupancy and high-rise properties in AWC. This case study summarises their approach.

Scheme Statistics:

Number of households: 31,035 (approaching 100% on AWC)

Statutory Recycling target: 05/06 – 18%

Recycling performance: 04/05 – 31%, 05/06 – 36%



Material	Frequency	Receptacle	Comments
Residual	Fortnightly	240 litre Black wheeled bin	Alternate weekly
Dry Recycling	Weekly	Boxes	Kerbside sort comprising 55 litre box for paper and plastic bottles, 38 litre box for cans, card and glass
Garden	Fortnightly	240 litre green wheeled bin	Alternate weekly

Case-study Theme: Multi-occupancy and High Rise Dwellings on AWC

Following rollout of their AWC scheme to the majority of households in 2004, TBC received interest from residents living in multi-occupancy dwellings regarding participating in the scheme. In order to meet this demand, the Council developed a two-pronged approach:

Multi occupancy dwellings:

- Sites are surveyed for the potential to accept extra wheeled bins for recyclables collections, they are provided with four 240-litre wheeled bins for paper, card, glass bottles and cans, and a 360-litre wheeled bin for plastics. The bins have different coloured lids and apertures for each material;
- The planning process in TBC stipulates sufficient storage space for recycling containers for all new build multi-occupancy dwellings. Older dwellings are having their storage space assessed (and in some cases rebuilt) on a case by case basis; and
- Kerbsiders used for collections were retro-fitted with bin-lifts in order to make collections possible.

High Rise dwellings:

- There are 6 high rise buildings in Tamworth; each has 15 storeys of 4 flats. Residents in these buildings are given two bags; one for glass, cans and plastics, and one for paper and card.
- Collections are made in a two hour window at each building, during which residents cannot use the refuse chutes. Sacks are set out for collection during this time only, and collection crews work in teams to collect the material. The crews use the refuse chutes with an operative below to collect the material. Two-way radios are used to communicate when material is being sent down.

Residents are sent leaflets advertising the scheme and a letter pre-rollout. Council officers hold meetings and visit dwellings as appropriate. A recent survey of those residents in high rise and multi-occupancy dwellings showed that 89% recycled on a regular basis.

3.7 Key materials to consider

When introducing AWC, there are certain fractions of the waste stream that ought to be given careful consideration. The arrangements made for the collection of plastic bottles, cardboard and food waste can all influence how easily residents are able to manage their waste within the home and ultimately how successful the introduction of AWC is.

3.7.1 Plastic bottles

Plastic bottles have a low bulk density, meaning that although very light they take up a large volume. Unless these are collected for recycling, they can impact on the householders' ability to store their residual waste for a fortnight.

The addition of plastic bottles to an existing kerbside recycling service will have a significant impact on container and vehicle capacity. If co-mingled collections are made using RCVs, an estimated 20% extra capacity will be required to accommodate plastic bottles whereas for services sorting at kerbside onto non-compacting vehicles, an additional 30-40% capacity is likely to be required. It is important that your collection resource and round planning take account of this.

3.7.2 Cardboard

Cardboard can take up a lot of volume. Unless recycling opportunities are provided, it will take up valuable space within the refuse bin.

There are a number of options for the recycling of cardboard. Some authorities collect it on its own; others collect it co-mingled with paper and other materials whilst others collect it co-mingled with garden waste for composting. The method of collection and the end markets available will impact on the types of card accepted. As with plastics, cardboard has a low bulk density so consideration will have to be given to how it will be collected and the impact on the rounds.

Useful Tip: Some composting sites will accept cardboard in garden waste collections however the seasonal impact can mean that over the winter there is too great a proportion of cardboard to garden waste for successful composting. Ensure your composting site is confident that they can deal with this imbalance as once a collection scheme has been implemented it is very difficult to withdraw a service.

Both plastic bottles and cardboard are lightweight materials that can easily blow away in high winds if not properly secured. Typical solutions to this problem are:

- Lidded bins and boxes;
- Weighted collection bags; and
- Co-mingling with heavier materials (acknowledging downstream impacts on material quality).

3.7.3 Food waste

Where there is concern about AWC systems it commonly centres on the reduced collection of food waste. Some residents view less frequent collections of food waste negatively, and have concerns about possible risks to public health from odours and the attraction of vermin.

There is a pressing need to divert biodegradable waste from landfill⁹ which has led some authorities to introduce systems that include the separate weekly collection of food waste alongside alternate weekly collections of refuse.

⁹ Around 6.7 million tonnes of food waste is produced by UK households each year - this represents around one-fifth of total household waste. However, the composition of household waste will vary considerably from area to area and in some areas the food waste element will be greater than 20%.

Collection options

Food waste can be collected separately from refuse in two ways:

- Combined with garden waste typically in a wheeled bin and with collections fortnightly.
- Presented as food waste only in a dedicated container and then collected in either a dedicated vehicle or into a separate compartment of a vehicle collecting other waste or recyclable streams.

There are a range of vehicle and containment systems available for these two collection options, however, research conducted by WRAP into approaches to collecting household garden and food waste (biowaste) suggests that on cost and environmental grounds it is preferable to¹⁰:

- Avoid adding food waste to garden waste collections. All the waste collected will have to be treated by enclosed or in-vessel composting due to the requirements of the Animal By-Products Regulations. Typically mixed collections attract a small proportion of the available food waste meaning that higher treatment costs must be paid for the much larger garden waste fraction compared with the cost of windrow composting;
- Collect food waste separately and weekly. The evidence indicates that higher captures of food waste are achieved where food waste is collected weekly and where refuse is collected fortnightly.
- Where food waste is collected separately, containers should be provided to make the separation of food waste easy for residents and to encourage them to take part in the service.

Key to achieving high yields of food waste for recycling appears to be the frequency of the food waste collection relative to the frequency of refuse collection. There are marked differences in the levels of participation and capture between schemes which are operating alongside AWC and non-AWC systems, with consistently greater performance where food waste is collected weekly and refuse fortnightly. (Further information available on the WRAP website – see link below).

Authorities collecting food waste

While there is increasing pressure on authorities to divert more biodegradable waste from disposal there are still relatively few authorities collecting food waste in the UK at the present time (around 65 authorities as of May 2007, some of which are only trial schemes). Of these, less than half are operating food waste collections as part of an AWC service (19 are co-collecting food with garden waste and 10 are providing a separate weekly food waste collection). Preston City Council, Uttlesford District Council and three Somerset Districts are examples of councils that have introduced weekly food waste collections at the same time as introducing AWC.

WRAP is supporting 17 trial food waste collection schemes across England in order to develop better understanding of costs and performance and hence provide information and data to further inform local authority decision making. Approximately half of these trials are in areas with AWC.

Food waste collections and AWC

For local authorities considering AWC, WRAP's advice is that serious consideration ought to be given to the integration of a weekly food waste collection into the design of any new AWC schemes. It increases the amount of waste collected for recycling, is likely to be acceptable to residents and when delivered alongside fortnightly refuse collections can be a cost-effective means of diverting biodegradable materials from landfill.

For those authorities operating AWC schemes and collecting food waste with garden waste, the overall waste management system will have been configured to deal with this combination of materials. Even so, those authorities minded to reconfigure their collection system are encouraged to consider replacing the 'mixed' system with separate collections of garden waste and of food waste, with the food waste being collected more frequently than the garden waste and the refuse.

For the majority of AWC authorities who do not provide a separate collection service for food waste, this may become more viable in the longer term particularly if an authority wants to further reduce the amount of biodegradable waste disposed to landfill and as new facilities for treating food waste are commissioned.

¹⁰ The reports of the research studies commissioned by WRAP are available on the WRAP website - http://www.wrap.org.uk/local_authorities/biowaste.html. Also available is a report summarising the key findings of this research and the conclusions WRAP has drawn from this work and a guidance document on food waste collections.

Irrespective of how food waste is collected under AWC schemes residents must be provided with advice and guidance on how to deal with this waste so as to avoid increasing nuisance and odour. Residents disposing of food waste in their refuse bins can be encouraged to home compost their uncooked fruit and vegetable waste along with their garden waste and should be advised to wrap all other food waste in newspaper or liners before they placed it in their wheeled bin for collection. Further examples of the advice that can be provided to residents is provided in the DEFRA report on AWC health impacts¹¹ and highlighted under section 3.14.

3.7.4 Biodegradable Packaging

It is important to have clear guidelines about what can and cannot be placed into recycling collections and to ensure that these are communicated well to householders. Many retailers are increasingly selling their goods in biodegradable packaging (or using biodegradable carrier bags) and marking them as 'compostable'. As residents are encouraged to recycle more, they may be tempted to include these items in collections of compostable waste. If your reprocessors are unable to handle them, it is important to make this clear to householders.

¹¹ DEFRA Waste Implementation Programme / Wycombe District Council - Health Impact Assessment of Alternate Week Waste Collections of Biodegradable Waste, February 2007.
<http://www.enviros.com/PDF/Defra%20HIA%20Alternate%20Week%20Collections.pdf>

Uttlesford District Council

Uttlesford District Council (UDC) is a predominantly rural authority in North West Essex. UDC has historically collected refuse weekly in sacks, alongside a twin box recycling service (black and green boxes) via an outsourced service.

In 2004/05 UDC had the third highest amount of waste (per head of population) in Essex at 457 kg. At that time the Council undertook a review of waste and recycling services, recognising the upcoming expiration of their waste contract and the need to improve recycling performance. Considering the composition of the residual waste at that time, it was apparent that a large fraction (45%) was putrescible, indicating that composting (as part of an integrated recycling service) could deliver significant increases in performance. Based on a range of options considered, an AWC refuse and recycling plus dedicated weekly food waste collection was selected, with a separate chargeable garden waste service.

Scheme Statistics:

Number of households: 30,000

Statutory Recycling target: 05/06 – 30%

Recycling performance: 04/05 – 23%, 05/06 – 25.6%, AWC projected – 48%



Material:	Frequency	Receptacle	Comments
Residual	Fortnightly	180 litre wheeled bin	Grey lid
Dry Recycling	Fortnightly	240 litre wheeled bin	Green lid
Food	Weekly	140 litre wheeled bin	Brown lid (plus kitchen caddy)

Case-study Theme: Collecting Food Waste alongside AWC

Following visits to authorities in Suffolk and Somerset and presentations to all political parties, a decision was made in December 2005 to proceed with the AWC refuse/recycling and dedicated food waste scheme. Following an intense period of planning and presentations in the first half of 2006, including the launch of a recycling hotline, the scheme was rolled out in full to 26,000 households between June and October. The weekly food waste rounds mirror the refuse and recycling providing same day collections.

The service was projected to cost £13 per household per annum more than the core AWC refuse and recycling service (£61 per household versus £48) whilst delivering a recycling rate of 48% compared with 34%. Performance levels since November 2006 where recycling rates have been above 50% show the scheme is delivering against the key strategy aims of meeting the statutory recycling target.

Comparing performance in January 2006 and January 2007, the recycling rate increased from 22.5% to 56.8%, waste to landfill reduced by 50% and total waste arisings reduced by 10.3%.

3.8 Resource requirements

Moving from a weekly to a fortnightly refuse collection does not mean that the refuse fleet can be cut in half. The extra yield of waste per collection from fortnightly collections will slow crews and may involve extra trips to the reception facility.

Authorities moving to AWC schemes often undertake a re-routing exercise. New routes are designed to be implemented with the rollout of the AWC scheme, and to cope with the extra yield from the fortnightly schedule. Redesigning rounds may also provide an opportunity to address existing areas of inefficiency, e.g. the regular use of support vehicles to help rounds that have grown over time. If you do not have the time (or resources) to re-route your rounds before introducing AWC then you should use experience gained from operating a pilot round to ensure future collections run smoothly when rolled out authority-wide.

As a rule of thumb, authorities moving to AWC schemes often find that their refuse fleet reduces to two thirds of the equivalent weekly resource level. An authority with 10 front line refuse vehicles may therefore find that 6 or 7 vehicles are needed for the alternate weekly schedule. The variance depends on the relative spread of housing in the authority, and the locations of depots and reception facilities.

Where Do You Start?

One of the first priorities is to get your data in order. It will be easier to create an accurate prediction for the future if you are able to understand current performance. Individual round data should be collected so that the average yield of different materials per household on each round can be determined, along with seasonal variations in garden waste. Review what households are producing over a two-week period to support your assessment of what the yields per household will look like with the new AWC service.

Authorities typically experience average refuse yields in the range 17 – 22 kg per household per fortnight, and this range can be used as a starting point (although lower yields have been seen where separate weekly food waste collections are provided). How would your current rounds operate with this range of yields?

Are there any rounds where yields have historically been much higher than the average? This is often the case on rural or farms rounds. It is advisable to consider refuse yields first as these are likely to be rate limiting in terms of the weight collected. If you are operating a kerbside sort dry recycling scheme then this is likely to be rate limiting in terms of time. These are important round design considerations as they will influence base resource requirements and also the order in which you approach the new round design when seeking to provide same day collections across the different kerbside services.

Simple Yield Assessment

Round 1 on a Monday collects refuse on a weekly basis from 1,350 households, which set out an average of 12 kg per collection. This means that in total the vehicle collects 16.2 tonnes of refuse in the day, and with a payload of 10 tonnes it has to make two tips.

On an alternate weekly schedule, these same residents may set out an average 20 kg per collection, meaning the same vehicle would have to collect 27 tonnes. This would result in an extra tip for the vehicle.

What would be an acceptable two tip round size for this vehicle? If it were to collect 18 tonnes then it would collect from 900 properties. What length of day would this create, and how might the rounds be evenly balanced?

In reality, there are more factors in play than this simple assessment allows for, but the principle demonstrates the need to collect and understand good quality data. Due to the complexity of the issue you need to move away from looking at authority-wide tonnes per annum and start focussing on waste at property level. This will then enable you to work out for each of the routes (new and old) what this means in terms of payloads and tips, thus helping to balance the service.

When undertaking the above assessments, remember to factor in the different payloads of your vehicles (such as narrow access vehicles) and the reduced tonnage that can be collected with lower bulk density materials e.g. cans and plastic bottles.

3.9 Routing

3.9.1 Review routing principles

It may be an appropriate time to review the principles behind your collection schedule. In order to make the service simple to understand and use, you should aim to provide same day collections across services. Having a set collection day for waste and recyclables is easier for residents and generally results in higher levels of participation than when materials are collected on different days of the week. For authorities that operate multiple collections (each with their own productivity levels) this can be complex and there can be a loss in efficiency (depending on how you approach the round design exercise). There are various ways to design and deploy rounds so that same day collections are maintained, including round mirroring and daily zoning of rounds.

Mirrored Rounds

With same day collections, it may be possible to mirror refuse and recycling / organic waste rounds (depending on how well the rounds balance in terms of time to complete). This means that the routes do not change for the collections, making operations much simpler.

There will be an efficiency impact with mirrored rounds as the designs will usually be sub-optimal for at least one of the collection services. Rounds are generally created for the refuse service, as these have the higher yields. Recycling and/or garden waste services then adopt the same round sizes. Differing levels of participation and capture on recycling services can lead to further inefficiencies. In particular, higher garden waste yields in the summer may make collection routes difficult if crews need to tip extra loads of garden waste.

Useful Tip: When considering mirroring rounds, make sure you take account of the variable capacity of your vehicles for different waste streams. For example, dry recyclables have a lower bulk density than residual waste and need to be collected with less compaction which impacts of the effective payload of the vehicle.

Zoned Rounds

Creating daily collection zones with rounds designed for each service's own logistical requirements represents an efficient way of delivering same day services. Linked benefits of this approach include local assistance from neighbouring crews to cover struggling rounds and/or breakdowns and simplified communication of collection days. If considering the feasibility of zoned rounds think about how you will phase days with respect to the following day's collection of missed bins, potential congestion issues in urban zones and training requirements given that drivers and crews need to have knowledge and ownership of multiple areas in the authority.

Authority Insight: Prior to the introduction of its AWC refuse and recycling scheme, Newark and Sherwood reorganised all of its rounds into same day zones. This meant that post-launch recycling rounds could be fine-tuned to account for higher than expected participation and yields without changing householder's collection days.

3.9.2 Geographically referenced data

Does your Authority have access to a database containing the geographically referenced data of the properties in your authority? There are various database types and related software packages available, but the core data includes detailed address information, some indication of property type and geographic co-ordinates (either grid references or latitudes and longitudes).

Increasingly, waste management departments are using Local Land and Property Gazetteer (LLPG) data to help manage the service. Do not under-estimate the amount of time it may take to cleanse this data so that it is fit for your purpose (typically 3 – 6 months); however, using this data to design your AWC can help in the long-term management of the scheme. As the data is often held and managed by other Council teams you will need to ensure you work closely with them to understand the data and how it can be kept up-to-date for your purposes.

In addition to the benefits mentioned above, the data can also be used to manage calls (new bin requests), complaints (logging when they have been received and resolved), missed collections and performance management.

Authority Insight: Fylde Borough Council used their GIS to simplify the phased introduction of their AWC scheme. The tool was used to divide the Borough into collection zones, plan routes and provide maps for crews to follow prior to service introduction

3.9.3 Round design

A review of rounds can typically take between 1 to 6 months, depending on the level of data already held by the authority (if any) and the definition of the scheme you intend to introduce. Re-routing plans need to be finalised before residents can be informed of new collection days. Therefore it is crucial that route design is completed well in advance of the new scheme's rollout date.

If you do not have any internal data (such as GIS data, weights of materials, round times) then it is still possible to have new rounds designed for you. Specialists have developed tools to enable authorities with even the most basic data to access round design techniques.

Authorities that re-route early can expect to have much more time to plan the implementation of the service. This also allows time for crews to pilot and learn new rounds and gives them time for a 'reality check' on the upcoming service.

Useful Tip: When re-routing your collection rounds, remember to include any known future developments in the new rounds. This will ensure that your routing will be valid for the maximum amount of time before further re-balancing is required.

Reading Borough Council

Reading Borough Council (RBC) is located in the county of Berkshire in the south of England. The borough is very urban in nature, and covers an area of approximately 40km² to the West of London. RBC has a growing population of approximately 144,000 people, living in around 63,000 properties.

RBC rolled out their AWC of refuse and co-mingled dry recyclables during 2006. In addition to this the Council has introduced a garden waste service, available to all households that subscribe. Residents have to pay the purchase price of the container, for which they are then provided with a free fortnightly collection.

Scheme Statistics:

Number of households: 63,000

Statutory Recycling target: 05/06 – 24%

Recycling performance: 04/05 – 21%, 05/06 – 21.6%,

Projected 06/07 – 33%



Material:	Frequency	Receptacle	Comments
Residual	Fortnightly	240l Black wheeled bin	
Dry Recycling	Fortnightly	240l Burgundy wheeled Bin	Co-mingled collection
Green	Fortnightly	240l Green wheeled bin	Chargeable Opt In

Case-study Theme: Designing Rounds for AWC

A Council wishing to implement alternate weekly collections is faced with the challenge of predicting changes in yield and participation on kerbside collections, assessing what impact this may have on collection speed and then re-routing of rounds in order to deliver efficient collections.

Approaching a change to their collection schedule, RBC re-routed their vehicle rounds in order to compensate for predicted changes in yield and participation. This was undertaken manually by experienced Council staff, who reduced round sizes according to the higher yields they expected.

In order to ensure that these rounds would stand up to a range of yields and collection speeds, RBC engaged external consultants to assess the new rounds using specialized waste logistics software. RBC provided their consultants with their in-house property database, overlaid with the new round numbers. The consultants used these data to performance test each of the new rounds, and determined which rounds were at risk of being potentially imbalanced.

Following the rollout of AWC, RBC are monitoring the performance of their rounds as the scheme develops, and making adjustments as necessary to keep a fair balance of work between crews.

3.10 Other issues to consider as part of round planning

Dedicated Weeks or Split?

Operating an AWC scheme does not necessarily mean having one week of refuse collections and one week of recycling across the whole authority. From a communications point of view it may be simpler to have one material collected across your whole authority on one week, and other material(s) collected the alternate week. On the other hand, if you have dedicated services operating to half the authority on week one, and the other half on week two, this will mean a steady stream of material to your reception facilities. In addition, there will be vehicles from both services available each week to collect missed bins.

Crew Deployment

Your priority should be to balance the workload across all crews. If the collection rounds on one of your services (e.g. refuse) are always longer than another (e.g. garden waste), then having crews dedicated to one service may cause friction between employees. Consider re-balancing rounds or, if crews work across services, the introduction of fortnightly or seasonal hours may address this issue.

Training should focus on new activities, roles and responsibilities as well as the reasons for the introduction of the new scheme. All associated risk assessments will need to be reviewed to take into account the changes in collection operations.

Christmas Working

The Christmas period is likely to see a large increase in the amount of recyclable material you collect as well as a general increase in the amount of refuse. Further issues can be presented by bank holidays which can disrupt the collection calendar. You can consider the following:

- It is advisable to maintain your AWC scheme across the Christmas period. Any changes to the collection calendar are likely to cause confusion. If it is not possible to maintain the schedule, ensure any modifications to your calendar are simple, and well publicised.
- Plan for overtime payments for crews as the yields increase in the weeks post Christmas and New Year. Consider drafting staff from garden waste collections (if available) to assist.

Assisted Collections

Residents that currently receive an assisted collection will require the same following introduction of the AWC scheme. Do you have a list of these residents' current requirements to inform any new rounds that will be started? You may need to re-evaluate the assisted list. Can this be undertaken when you survey properties to determine if they can accommodate additional or different containers?

Time to Implementation

You should aim to have your operational decisions made 9 to 12 months prior to rollout of your new scheme

3.11 Supporting policies

You may already have supporting policies for your current collection service. Having policies in place will be equally, if not more, important for an AWC scheme. Ensuring policies are well-researched, fair and agreed with elected members before the new service is introduced is essential. If all of your staff, elected members and residents are well-informed about your supporting policies then everyone will feel that they are being treated the same.

3.11.1 Family size

If you already operate with wheeled bins, or have a current policy limiting the amount of refuse that can be set out, you may already have decided what exceptions to the rule you will make.

Households with a low number of occupants, or those with residents that recycle a large proportion of their waste may prefer a smaller residual bin. Elderly residents may also request a smaller bin as it is easier to move. Households with many residents may have difficulties in adhering to an alternate weekly collection. A clear policy

should be adopted on who will be provided with extra capacity for their refuse, and what this extra capacity might be. You could consider the following approaches:

- Issue a standard bin to all properties. Any resident who feels the bin is the wrong size (too large or too small) can contact the Council who will assess the situation and replace if necessary.
- As part of the pre-implementation communication, advise residents of the containers that are to be issued to them and ask that any resident who feels they require an alternative size to contact the authority. Each household that responds can then be assessed on a case by case basis.
- Many authorities suggest that if there are 6 or more people in the household, then this qualifies for an extra or larger bin. Where a smaller refuse bin (e.g. 180 litres) is provided as standard, then 5 or more in a house may qualify for an extra or larger bin.

Useful Tip: If residents request additional capacity for their refuse, then ask them to complete and sign a request form to confirm the validity of their request. Experience from other authorities shows this tends to eliminate unsubstantiated claims.

You will also need to decide whether to increase capacity by providing an extra bin or by replacing the current bin with a larger one.

Table 3.1 Larger Bin vs. Extra Bin

Larger Bin	Extra Bin
Only one bin to empty means less collection time for the crew	Refuse is split between two bins making them less likely to get overloaded
Larger bin size makes policy clear to those residents that don't have one	Bin lifts sometimes have problems with larger bins
Crews can more easily check which properties are entitled to larger bins.	Extra bins may put off those residents who don't really need the extra capacity

Issues

Large bins work for families that need the extra capacity, but they may become victims of 'bin envy'. A clear policy from the Council will help residents to understand why some houses are allocated different bin sizes.

It is important to keep a record of the different containers that residents have or, at least, those that vary from the norm. Once properties change occupancy, it may be that the larger bin is no longer needed. You may be able to monitor changes in occupancy with other Council services or by getting feedback from collection crews and residents.

Some residents may be tempted to purchase their own wheeled bins and present these for collection. Ensure that crews are easily able to identify the authority containers from private purchases.

Disposable Nappies and Real Nappy Incentives

Residents with young children are dependent on capacity in their refuse bin for disposing of nappies. Some authorities have adopted policies for families with children in nappies.

An example of this is for additional (or larger) bins to be issued to households with 5 permanent residents including a child in nappies, or 4 permanent residents with more than one child in nappies.

In an effort to reduce the amount of waste sent to landfill, some authorities operate real nappy incentive schemes. One example is West Sussex County Council, which offers residents who want to take part in the scheme a reduction in their Council Tax, along with a starter pack of real nappies.

3.11.2 Closed lid and no side waste

A closed lid/no side waste policy means that crews will only collect bins with a closed lid and will not collect any material left alongside the bin. This has a number of aims:

- Restricting side waste encourages waste minimisation, re-use and recycling and can reduce overall waste volumes; it increases participation and diversion of waste through the recycling schemes offered. If side waste is collected, then there is reduced incentive for residents to recycle;
- Restricting side waste increases crew efficiency and reduces occupational health and safety risks including from needle stick/sharps and lifting injuries; and
- Ensuring that all waste is contained within the wheeled bin reduces the risk of littering and the potential for odour and vermin issues.

Most authorities will permit additional recyclables to be placed out for collection although it is recommended that additional containers be provided for this material to mitigate health and safety risks and potential problems associated with litter.

3.11.3 Contamination

All recycling schemes require good communications to ensure that residents are aware of the materials accepted for recycling and how these should be presented for collection. Inevitably, however, there will be residents who inadvertently place the wrong materials for collection in the wrong containers. Good communication and support for residents on introduction and during the bedding in period will help to ensure that most residents will actively support the new service and that should be the first priority.

With the introduction of AWC, and the reduction in capacity for residual waste, there will inevitably be some residents who are tempted to use recycling containers to dispose of additional residual waste thereby contaminating the recycling collections. It is relatively easy for crews to reject contamination in kerbside sort schemes, leaving it in the collection container. Co-mingled collections and organic waste collections are more difficult to monitor for contamination, as crews are unable to check all contents. Contamination removed at the MRF or composting site will be rejected and sent for disposal. High levels of contamination may result in whole loads being rejected at a cost to the collection authority.

It is desirable for quality controls regarding contamination to be introduced to coincide with the launch of an AWC scheme:

- Consider using temporary staff to check bins prior to collections in the first weeks of operation of the service;
- Reject contaminated bins, but make sure residents are informed about which materials are responsible for the bin not being collected; and
- Produce tags or stickers for the bins to speed up the process of informing residents, using language which is informative and helpful and not threatening.

3.11.4 Enforcement

The introduction of an AWC scheme will be a significant change for householders. Explaining it will require considerable time and effort on the part of council staff during rollout. It will take time for people to adjust to the new service and you need to bear this in mind. The underlying aim should be to get as many people participating as possible, by providing the necessary information and practical support.

Useful Tip: For those residents struggling to adjust to the new service household visits, perhaps including bin audits (undertaken by Field Officers), may help to advise people on how they might more effectively manage their waste and recycling. By using Field Officers a degree of responsibility will be removed from collection crews allowing them to continue with their daily tasks.

For the minority of residents that are unwilling to co-operate it is advisable to have a clear approach agreed with elected members on how you will enforce the supporting policies. While Section 46 of the Environmental Protection Act 1990 allows authorities to specify the receptacles which should be used for the collection of waste and recycling, it requires householders to be notified in advance. It is important therefore, when advising householders of the change of service to ensure that the requirements of Section 46 are met.

Many local authorities adopt a no side waste and a closed lid policy for an effective AWC scheme, but the approach to enforcing these rules varies. Some authorities recognise the transition from a weekly refuse

collection to an alternate weekly collection to be a significant change for their residents and enforce side waste and closed lid policies progressively, concentrating initially on improving understanding of the new service. Conversely, some authorities decide to enforce the waste restriction policies from the outset of the scheme to avoid the risk of confusion when trying to implement the policies later.

It is important not to be heavy handed in enforcement. This could have the perverse effect of deterring residents from using recycling schemes. In particular the use of prosecutions and fixed penalty fines should be a last resort.

Whichever approach is used, you will need to consider the following issues:

- Are crews to leave side waste where they find it or is the side waste to be placed in the emptied bin?
- What training will crews need in order that they can apply these policies appropriately?
- How will incidences of non-compliance be recorded so that they can be followed up?
- If complaints are received regarding uncontained waste, whose responsibility will it be to deal with them?
- Does the authority have the capacity to respond quickly to incidences so as to discourage any further offences and build-up of materials?
- How will any enforcement action be progressed? First time offences should be managed differently than repeat offences?

It may be beneficial to work with other agencies to help to prevent fly-tipping and to respond if it does occur. For instance partnership-working can be developed with the police and fire services and with private landowners. This can speed up reporting and mean that removal is swift and the appropriate action is taken.

Where possible, any contamination ought to be rejected at the kerbside, with clear information about the rejection provided for residents. St Edmundsbury Borough Council in Suffolk operates a yellow and red card scheme linked to their three bin AWC scheme. If a dry recyclables bin contains light contamination (e.g. plastic film, hard plastic, polystyrene) the bin is emptied and a yellow sticker is left advising the resident of the mistake. If the bin contains heavy contamination (food waste, glass, nappies) the bin is not emptied and a red sticker is left. The resident can then choose to remove the contamination and have the bin emptied on its next scheduled collection or pay £10 for the bin to be emptied before this time. In 2006/07 only 1 in 430 recycling bins put out for collection had to be rejected due to contamination and only 7% of the material taken to the material recycling facility was rejected.

Useful Tip: Operationally, it is important to support collection crews who have rejected side waste or contaminated recycling containers. If they are regularly sent back to collect a rejected bin, they may be inclined not to reject it in the first place. Consider how your operations and call centre staff interact and identify opportunities to facilitate 'real time' transfer of information between the two.

Time to Implementation

Your choice of policies will be influenced by your operational plan; hence these should also be agreed 9 to 12 months in advance of your rollout.

3.12 Implementation strategies

Alternate weekly collections have been introduced using a variety of strategies: some authorities have piloted schemes prior to introducing them across the authority, others have introduced AWC in one go and have planned the implementation strategy accordingly. Some have chosen to introduce AWC in manageable discrete phases, whilst other authorities have had to introduce it in stages due to resource restrictions. The strategy you choose to adopt will depend on your circumstances.

3.12.1 Pilot schemes

Pilot schemes can be a good way of assessing how residents will participate in AWC schemes. A pilot may require some temporary extra resource, but the experience you will gain could prove invaluable to the further rollout of the scheme. This is a great opportunity for both staff and elected members to gain experience of dealing with

enquiries generated by the change in service with a more manageable number of households. You may want to consider the following:

- Think about how you label your pilot. If you choose to refer to it as a 'trial' then residents may assume that it is not a permanent change and therefore never fully engage in the scheme. Referring to a 'Pilot Area' or 'The First Phase' is more likely to get the support from residents who may be keen to be first to get involved in the new scheme.
- How well 'the pilot or first phase' is received by residents will have a significant impact on the subsequent roll-out. If there is support for the scheme, this will act as a great advertisement. Effective and appropriately resourced implementation is therefore essential. Ensure you have staff who can respond promptly to enquiries. This will help to prevent initial issues developing into difficult complaints, which may generate negative publicity and impact on the subsequent acceptance of the scheme.
- As well as judging whether your residents will adapt to the AWC, your staff will get invaluable information and experience of how the service will change from an operational perspective. Use the opportunity to gather information such as crew work rates and yields of material.
- Consider asking residents about their experiences of the scheme. What worked well and what didn't? You may be able to use this opportunity to fine tune communications material or aspects of service delivery.

Useful Tip: During a pilot scheme, monitor the level of phone calls you get from residents. Based on the number of households that are part of the pilot you can get an idea of how many calls you will get if you go authority-wide.

Useful Tip: Ensure that the pilot is representative of the proposed full scale roll out if you intend to use it to inform yields and round performance levels when rolling out further.

3.12.2 Big bang or phased introduction

Some authorities have chosen to introduce their new scheme all in one go whilst others have chosen to introduce it over a number of phases.

'Big Bang' or Single Phase Rollout:

By opting for the 'big bang' approach, the implementation can be managed as a single process. Everything is geared up for the change in service on a given week, therefore containers and communication materials are delivered across the authority within a defined period and all residents are aware that the scheme will affect them. There are also benefits operationally as a single service is being delivered rather than continuing weekly collections in some areas whilst introducing AWC in others.

If taking the 'big bang' approach, it is important to recognise the resource required as many thousands of residents will have to become accustomed to the new service. This may lead to long and stressful days and weeks for both operational and support staff.

Phased Rollout

Choosing to introduce a new scheme in distinct phases can help if resources are limited. It can also make the implementation more manageable for collection crews, who will have to deal with changes in materials presented and the increased monitoring of side waste and contamination. As with the operation of a pilot, a phased introduction will enable you to learn from your mistakes; however, it does mean that you are dealing with similar issues for a longer period of time.

Experience suggests that it is better for authorities to run a pilot scheme to gain their own first hand experience of AWC. Pilot schemes should be followed by rapidly phased rollouts, with time between each phase for consolidation.

Time to Implementation

The method of rollout may be constrained by the new round designs, and should therefore be in place 6 months before rollout. If this is not the case, your rollout plan should be in place 3 months before going live.

Banbridge District Council

Banbridge District Council (BDC) in Northern Ireland is a relatively small authority with 40,000 residents living in around 17,000 households. The authority is quite rural in nature.

BDC only have a small number of staff working in their waste management department, and so decided to stagger the rollout of their scheme. The phases of this rollout were designed to coincide with government waste management grants which paid for the capital expenditure needed (e.g. bin purchase). These grants meant that the rollout could be managed without having to take significant finance from other council services.

Scheme Statistics:

Number of households: 17,000

Recycling performance: 04/05 – 39.2%, 05/06 – 41.0%

Projected 06/07 – 45%



Material:	Frequency	Receptacle	Comments
Residual	Fortnightly	240 litre wheeled bin	Grey Bin
Dry Recycling	Weekly	55 Litre Black Box	Aluminium cans, old hand tools, steel cans, aluminium foil, paper, textiles, small batteries, glass bottles and jars and plastic bottles
Green	Fortnightly	240 litre wheeled bin	Brown Bin

Case-study Theme: Phased rollout of AWC Scheme

BDC initially rolled out the AWC scheme as a brown bin for garden and food waste to be collected on the alternate week to the grey refuse bin. This service was presented to a first phase of 2,500 residents in 2001. Initial feedback from residents was that there was not sufficient space in the refuse bin on the alternate weekly schedule, so BDC engaged an external contractor to collect dry-recyclables on a weekly schedule. In addition to this, BDC separated trade and residential collections to make management of the schemes simpler.

By rolling their scheme out in phases, not only were BDC able to manage the financial burden of purchasing new bins for the garden waste, they could also cope with any operational problems that arose, and enquiries received from residents. Each phase gave the council more experience of rolling out and running the scheme, and meant that subsequent phases were introduced more smoothly.

BDC made good use of enquiries management software to log all calls to the department. They had a policy of visiting all those who called the council, something that would not have been possible with a larger rollout. The software also allowed trends in complaints to be analysed, so staff could see where specific problems were arising. Council staff ensured that each problem was dealt with so that they did not escalate. The rollouts were generally operated between January and February, as Horticultural staff had spare resource to deliver bins.

Now that the scheme has been rolled out to all residents (completed in 2006), BDC are focussing on continuing publicity, to get as many residents participating as possible, and to educate new residents. They exceeded 40% recycling/composting in 2005/06 making them one of the highest performing councils in Northern Ireland.

3.13 Managing third parties

Many Authorities provide their waste and recyclables collections via a third party contractor. The move to AWC for these authorities may require more effort to turn the aspirations of the Authority into operational reality by the contractor. Proactive communication is needed, with flexibility on both sides, especially if more than one third-party is involved.

You may want to decide how your AWC scheme will operate, or you may decide to ask your contractor how they would propose to deliver the service. Contractors can help with the planning of the new service, giving you invaluable information on how the service will operate. Equally you should be prepared to share with them information from GIS or LLPG systems which may help them plan the service effectively.

Acknowledge that you may suffer from a lack of transparency, as the working details of the scheme will be held by your contractor. This poses a risk for you as it is the Council as well as the contractor that will be held accountable if things go wrong. Work closely with your contractor, and request details of how your scheme will operate on the ground. As a minimum, a good contractor should provide:

- Detailed round information, including the number of properties served by each vehicle each day and expected round timings;
- Details of any new vehicles required and how these will operate effectively (especially for split back / pod vehicles);
- Expected staffing levels;
- Expected yields of materials and calculations of vehicle fill rates and number of tips per day;
- A review of and changes to health and safety policies and risk assessments; and
- Detailed breakdowns of cost for each element of the service.

Useful Tip: Remember that your contractor is providing the waste collection service on your behalf, so their vehicles, uniforms and any containers should also include the Council's branding.

Some contractors are now offering open-book contracts with authorities. Typically brought in at procurement or re-tendering stage, these contracts may make any service changes easier to manage and cost up.

Take the opportunity to interrogate contractor proposals early (focusing specifically on resource levels), so that any areas of risk are worked through jointly in advance of rollout. Consider including an output measure in the contract based on contamination rates as a way of promoting active monitoring and control of this important issue.

Ensure that everyone is clear on roles and responsibilities for each task. Be careful that staffing issues such as training and contractual arrangements are addressed in advance of the new service commencement, including who will be responsible for:

- Communications;
- Bin deliveries;
- Timetables;
- Checking whether facilities are adequate; and
- Dealing with complaints.

Time to Implementation

Irrespective of who operates the service, the same time is required to make changes to your scheme. Discuss the timescales needed for your contractor, using those indicated in this guidance as reference.

If you are letting a new contract, allow as much time as possible between point of contract award and new scheme rollout to work with the service provider. Ask for a representative from your contractor to work with your council for a minimum 6 months prior to rollout of your new scheme.

3.14 Communicating with residents

3.14.1 Develop a communications plan

When you have begun the development of your AWC scheme, you can start to plan the rollout, which may involve setting firmer dates. You will need to develop a communications plan, which will include aims and objectives, targeting, branding, communications mix, budget and timescales. Although communications material may not be presented to the public until 3 months before the scheme starts, you will need to start this process early as it may take much longer to produce and print any material, and order livery for vehicles.

A simplified communications timetable with indicative timings is shown in Table 3.2:

Table 3.2 Communications timetable example

Weeks Before Start of Collections	Communication Activity
12	Press release / Briefings
8	Notification pack to residents
8	Press release
4	Road-shows in all new rollout areas
4	Press release
2-1	Distribution of bins and service leaflets
0	Start of new collections / Launch Event

Information that you send to residents may be supported by an advertising or public relations campaign. It is important that your information clearly explains the new scheme to residents. The information also needs to explain the reasons why your authority is making the changes, what you hope to achieve and why it is important that they participate.

Be creative with your communications to ensure you reach all of your residents; don't rely on leaflets alone. Consider the branding that you will use to engage residents, and get them to instantly recognise your service. The Recycle Now branding¹² is available from WRAP for authorities to use in conjunction with their local communications, whilst allowing them to alter the tone of their advertising for the target audience.

Consider some (or all) of the following ways of communicating:

Leaflets

Leaflets need to communicate the message using clear illustrations or photography and plain English. Provide translation into other languages, if appropriate. Your leaflets can be delivered by Royal Mail, temporary staff or by crews. Consider how the leaflets can be used. Can they be used during the rollout to remind people of how to participate?

Recommended good practice is to provide an introductory leaflet to inform residents of the proposed changes, why they are being introduced and the benefits, followed by an instruction leaflet explaining how to participate, frequently asked questions (FAQs), collection day information and clear notice of the containers to be used.

Road Shows

Take a mobile information unit or stand to local events so that your staff can talk to residents about the scheme and why it is important. These events can provide residents with an opportunity to discuss any queries on a one to one basis. If there are no appropriate events to attend then create and publicise a local tour. Also consider attending parish council meetings, residents groups and community groups.

Bin Stickers

¹² <http://www.recyclenowpartners.org.uk/index.html>

An effective method of communication is to place a sticker on top of the residents' bins to inform them of future changes. This should ensure that everyone who currently receives the service is informed about the changes.

Door-To-Door Canvassing

Face to face communication with residents is a particularly effective method, but requires significant resources. This should not be used as a generic method of communication – it should be used to target low and medium performing areas once a scheme has been rolled out. Door-to-door canvassing should be carefully planned with objectives defined from the outset.

Council Communications

Ensure that information regarding the AWC scheme is available at Council buildings and access points, as well as including information in any Council publications. Contact local community groups and neighbourhood partnerships to see if they will publicise the changes through their networks.

Others

Your vehicles could carry the same logos and colours as your recycling campaign, to help raise awareness and encourage residents to recycle. Local buses can be used to display advertising, as can billboards.

Make changes to your website to include answers to common questions and downloadable files, such as collection calendars once the scheme rolls out. Preston City Council included videos on their website explaining the background to the recycling services introduced as part of the move to AWC, and guidance on how residents should take part.

3.14.2 Dealing with enquiries

A system needs to be in place before the AWC publicity campaign is launched in order to answer subsequent questions from residents. Demands on officer time can be reduced by implementing a number of simple steps to handling 'Frequently Asked Questions':

- Maintain a list of FAQs on the Council website and ensure that this can be easily found. A quick search of other authorities' websites can help collate sample responses. Supporting literature issued as part of the scheme communications should also include this information.
- Consider holding briefing sessions for all Council employees, to include information on the reasons for the scheme being introduced and responses to common questions and complaints. In this way all staff will have a basic level of knowledge of the scheme, which will enable them to manage simple queries from the public. Also remember, many council staff will also be residents in your authority.
- Many authorities with AWC schemes have taken the view that collection crews should not be distracted from their core tasks by having to deal with questions or complaints from the public. One option for minimising disruption caused to collections is for crews to be supplied with referral cards that can be handed to members of the public, containing contact details (website and/or helpline number). However, this should not detract from the need for crews to be properly briefed on the main features of the scheme and the rationale for it.
- Where budgeted for, consider recruiting implementation officers to help deal with questions and complaints during the early stages of the scheme. Recognise the time required to make system changes, such as re-scripting customer responses for complaint management software.

The above steps will help to ensure that only complex queries are escalated to officer level, and will ensure that consistent responses are provided at all levels within the Council.

3.14.3 Communicating through the press

Your local press provide a great opportunity for you to communicate to your residents, to inform them of the changes to their service, and to keep them informed on how the scheme is progressing. Develop a media relations element to your communications plan, using either your internal or an external communications/marketing team for support.

If you want your residents to be fully engaged in the scheme, it is vital that you let them know how they are doing. Failure to do this may result in residents thinking that their contribution is not worthwhile and they may stop recycling as a result. It is equally important to ensure that there is a balance between any negative publicity that may occur and the positive messages from the Council and others. You must take responsibility for this and liaise proactively with your local press.

Communication to the press should be consistent with that given to residents. Consider the following steps:

- Develop a 'Press Pack' to give full and accurate information to local media such as radio and newspapers. Ensure they have the information in enough time to research and report on it before the scheme rolls out, but delivered at the same time that residents receive information directly.
- Meet with press contacts to discuss the reasons for your move to AWC. Explain the system to them, showing them the bins and the collection methods.
- Produce regular press briefings on all aspects of the scheme – positive messages and responses to criticisms. Consider writing a weekly column in your local press on less formal aspects of the scheme, such as 'champion recyclers'.
- With all your communications, ensure that the branding is applied consistently, so as to build up recognition by residents of the service and what it represents.

Time to Implementation

Press briefings should take place at the same time as residents get their information. These activities should start around 3 months prior to rollout. The press should be involved from the outset – get them on board early and they are more likely to be supportive. If you are undertaking a consultation exercise the press should know about it.

4.0 The rollout and beyond

This section outlines 'rollout' elements of the AWC scheme. This can be roughly defined as a few weeks before the rollout itself, and up to about 6 months after. It is important that this stage is planned and implemented correctly to minimise any potential problems.

You should consider the potential effects that the rollout of the AWC may generate. For example

- Do you have sufficient staff to help with the rollout?
- Will you be able to answer questions from your residents quickly and effectively?

The message from authorities that have gone through this process is to keep going, and things will eventually settle down.

4.1 Rollout communications

Having informed residents that a new scheme is coming, and answered their questions, you will need to provide them with detailed guidance on how to participate in the new scheme. This needs to include:

- A calendar of the collection schedule for each scheme;
- A list (or graphic chart) of the materials that will be collected and in which receptacle they need to be placed; and
- Contact details for further information.

To assist residents your calendars need to be easy to read and contain all the necessary information. This could also help to reduce the number of enquiries received by your call centre. It is a good idea to deliver the leaflets at the same time as any new containers. A leaflet sent out with a new container is more likely to be read than one that is sent through the post (which may be regarded as junk mail)¹³.

Time to Implementation

Collection calendars are often delivered with containers to save resources.
These should both be delivered between 2 to 4 weeks prior to rollout.

4.2 Resources

Depending on the approach to rollout, your department may face changing demands upon resources.

4.2.1 Operational

The work level for staff will increase by varying amounts during rollout, depending on many factors. Many authorities have chosen to employ temporary staff during the rollout, and for a period of time afterwards.

Make an assessment of all of the tasks that need to be done – do you have sufficient staff to carry out all the tasks? Allow for additional collection staff in the first few weeks as it is possible that there will be more missed collections due to confusion amongst residents as to which bin to put out and when. Also, there may be more contaminated bins which, depending on policy, may need to be collected. In the short term, consider using resources from other services or have additional spare vehicles and crew (e.g. Agency staff) available. Both of these solutions will require negotiations with managers and/or union representatives.

¹³ Further advice on developing communication campaigns is available from the RecycleNow Partners website <http://www.recyclenowpartners.org.uk/index.html> or from ROTATE. Information on the services provided by ROTATE is available on the WRAP website http://www.wrap.org.uk/local_authorities/rotate/index.html

Plan for potential problems - an effective rollout should be backed up by a solid plan to deal with any problems.

- Do you have the option to hire vehicles in at short notice if you don't have enough resources?
- How will you deal with rejected loads if contamination is high (as people learn how to use your service)?

Useful tip: In addition to temporary staff, existing staff may have to work longer hours during the rollout. Approach the collection crews and unions early to negotiate these extra hours.

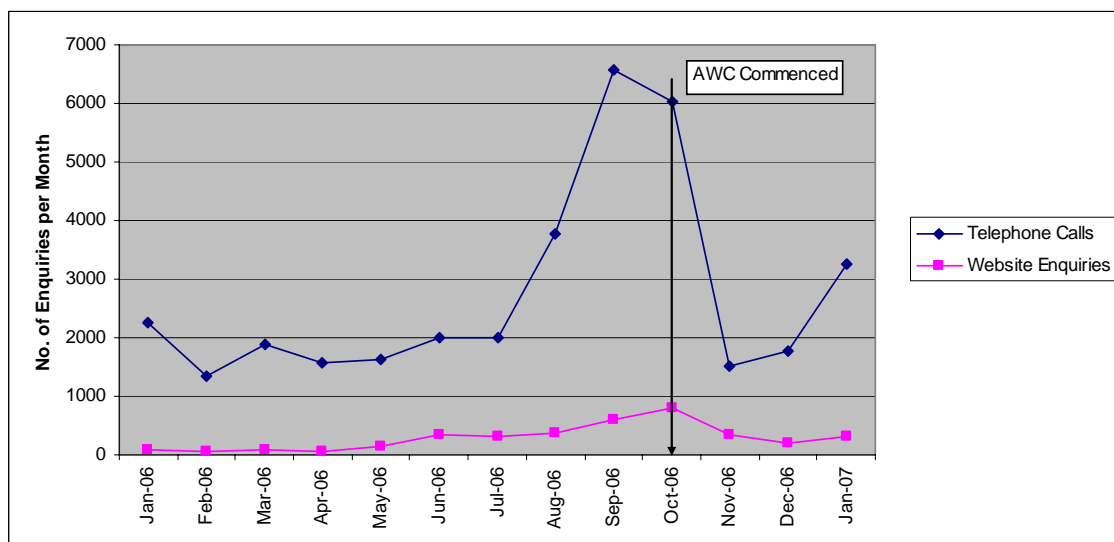
Authority Insight: Newark and Sherwood District Council drafted in staff from other Council services to act as waste enforcement officers during the first weeks of the AWC rollout. These officers worked ahead of collection crews to inspect co-mingled recycling bins and reject any that were contaminated.

4.2.2 Call Handling

Prepare for a dramatic increase in the number of calls that you will receive during the rollout. Consider employing temporary staff to answer straightforward questions and log any requests and issues.

Authority Insight: Reading Borough Council (63,000 households) rolled out their AWC scheme borough-wide in October 2006. The number of enquiries received by the Council is shown below.

Figure 4.1 Reading Borough Council – Change in Number of Enquiries Received



Useful Tip: If possible, don't overstretch the Council switchboard with enquiries about the AWC scheme pre, during and post rollout. Consider using a dedicated phone line for all AWC enquiries.

4.2.3 Customer services

You will receive calls from residents who have difficulties participating in the scheme, who will require more time devoting to them. Deal with these issues quickly - don't let them escalate to become bigger problems.

Household Visits

Be prepared for an increased number of household visits during the rollout. If residents are having problems adapting to alternate weekly collections, a household visit can be useful to assess the situation, and help to demonstrate which materials can be recycled and which cannot.

If, after a household visit, it is evident that a household does not have sufficient capacity for their refuse, consider giving them more capacity (larger or extra bin).

Authority Insight: Bristol City Council sourced external assistance to support residents during the early phases of its new scheme. The contractor was passed the details of any residents that the council were unable to deal with

over the phone. The contractor followed up the issues raised by these residents through phone calls and household visits.

4.3 Container deliveries

Ensuring that all containers arrive promptly and according to plan is of great importance. Errors at this stage may prompt bad publicity that careful planning could easily avoid.

Work with your supplier to ensure that they can deliver your bins when you want them. This may mean negotiating mutually workable delivery dates – remember if they are stretched then problems may occur. Will you need to store the bins at your depots? The storage space needed for all the bins may be significant so make sure you have space – especially if you are rolling out in one go.

Useful Tip: It is important to have someone with local knowledge from the Council accompanying the bin supplier when they are making deliveries, to ensure that all households get their bin. It is also useful to have another person who can talk to residents about the scheme.

Have a clear policy in place if residents refuse to accept new or additional containers to minimise problems for the delivery staff. For those households that have been assessed as capable of housing a wheeled bin, consider suggesting they try the bin for a couple of weeks, after which time you will make a follow-up visit to provide advice on recycling and to assess whether alternative containment options may be appropriate.

Authority Insight: One authority had to delay the rollout of their AWC scheme at the eleventh hour due to their bin supplier missing their deadline and failing to inform the Council in time.

Useful Tip: If you have left your wheeled bin for more than two weeks before collections then ensure that residents know not to use them until the appropriate time. A sticker on the bin lid should let residents know when their first wheeled bin collection will be. If you are delivering your bins early, plan for the need to distribute additional leaflets and collection calendars close to and during rollout.

4.4 Monitoring and evaluation

The early days of your scheme will provide you with invaluable information about how it is performing, along with any issues that need to be dealt with straight away. Plan your monitoring and evaluation in advance, including de-briefs with crews and reviews of the scheme after pre-set intervals.

4.4.1 De-briefs with crews

The crews will have front-line knowledge of how the scheme is working; they can tell you of any issues that are occurring across the authority. Plan de-brief sessions with them (with overtime payments if needed) and use this opportunity to update them on the reasons for the scheme, and instructions on how to deal with resident's questions. This is an ideal time to review how 'closed lid' and 'no side waste' policies are working in practice and what impact they are having on collections.

4.4.2 Press updates

Any initial problems with your scheme may lead to negative media publicity. Invite the press in and explain why problems have occurred, and more importantly what swift action you are taking to rectify these problems. If letters from residents are being printed in the local papers, always find the time to respond as this is an opportunity to reiterate a positive message.

4.4.3 Strategic review

Around 3-6 months post-rollout, when the scheme has settled down, review performance of the scheme based on relevant statistics. WRAP have produced a guidance document - 'Monitoring and Evaluation' available from the website¹⁴. Your review may include:

¹⁴ http://www.wrap.org.uk/local_authorities/toolkits_good_practice/monitoring_and_evaluation_guidance/index.html

- Analysis of the tonnage of material collected;
- Costs of the service;
- Analysis of impact on other services;
- Monitoring data from call-centres; and
- Any commonly reported problems.

This review can be used to compare your new service with projections and with the old service. Publicise achievements that link back to the strategic issues identified in the very early public consultations, for example reduced waste to landfill. Are the policies delivering the required outcomes? Do you need to change the resource levels on any of your services?

4.5 Feedback and the future

Customer Satisfaction

Your residents' satisfaction of overall service provision may decrease during the first year of operation, as new systems are implemented and people deal with the change. Assuming your new alternate weekly collections are fit for purpose, and the service is operated correctly, you can expect satisfaction levels to increase again shortly after.

Authority Insight: Vale Royal in Cheshire rolled out an AWC scheme to all residents in April 2004. A selection of results from their satisfaction surveys in November 2004, July 2005 and December 2006 are shown below:

Table 4.1 Vale Royal Customer Satisfaction Surveys

Question	Result		
	Nov 2004	July 2005	Dec 2006
Satisfied with the publicity of the new scheme prior to its start / the publicity of recycling in Vale Royal	74%	75%	85%
Overall satisfaction with the new scheme	69%	85%	83%
Residents that found they had reduced the amount of refuse set out for collection	66%	78%	97%

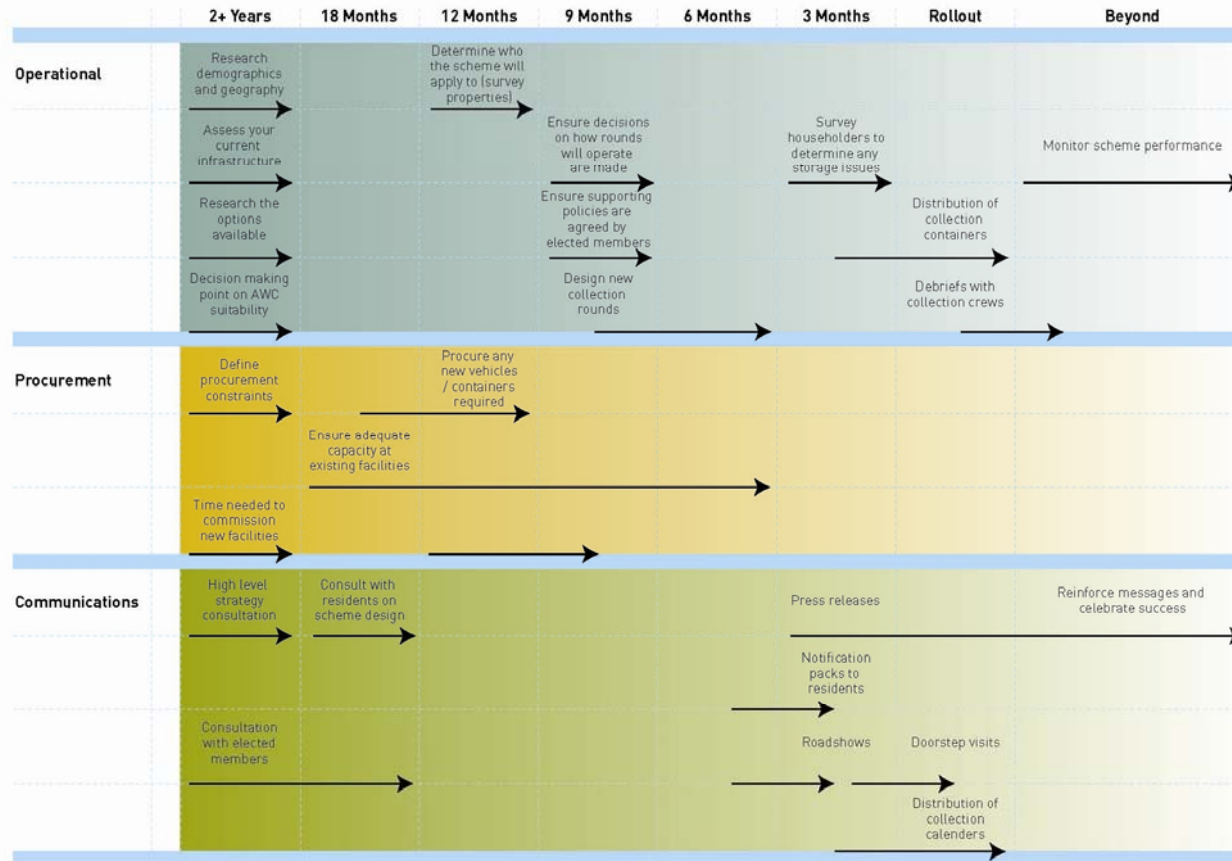
Once your scheme is in place, ensure that you regularly provide positive feedback to all stakeholders, including the public, collection crews, elected members, council staff and the press

In the future you may need to introduce further kerbside services or modifications to those you roll out. It is vital that you maintain publicity and support for the scheme. Ensure that you monitor the scheme and continue working to increase participation rates, for e.g. through ongoing education and awareness-raising. These activities will all help you to reduce the amount of waste sent for disposal.

This can also be a time to evaluate figures and explore further efficiency savings with modifications to rounds – see Section 3.9.

5.0 Timeline checklist

Here is a final summary of the major issues you should be taking into consideration on the road to AWC:



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