

Recycling and Composting Options Appraisal

1.0 Introduction

- 1.1 In line with its commitment to sustainable development, Waste Strategy for England 2007 aims to change the way waste is managed. Government policy seeks to break the link between economic growth and the amount of waste produced and to drive management of waste up the Waste Hierarchy. Where waste is produced it should be viewed as a resource to be put to good use; disposal should be the last option for dealing with it.
- 1.2 The aim of this study is to look at the impact of various options for the Partnership as a whole. This study looks at the overall effect that these options might have in helping the Partnership as a whole to meet its landfill diversion requirements by increasing the amount of waste recycled and composted, rather than examining impacts at an individual authority level.
- 1.3 The study intends to help guide the Partnership in choosing the most practical and cost effective means of increasing levels of recycling and composting across the counties.
- 1.4 This appraisal considers recycling and composting options in order to:
- Set achievable targets for recycling and composting
 - Enable the authorities to plan future service changes

2.0 Current Situation

2.1 Table 1 – Recycling and composting performance for each authority

Waste Collection Authority (WCA)	Combined BVPI Recycling and Composting for 2007/08		Predicted performance for Reuse, Recycling and Composting National Indicator in 2008/09 (%)
	Target (%)	Performance (%)	
Bromsgrove	20	43.41	43
Malvern Hills	20	25.50	26
Redditch	20	32.00	33
Worcester City	24	33.00	35
Wychavon	21	23.75	31
Wyre Forest	20	29.00	28
Worcestershire	30	38.01	40
Herefordshire	21	30.50	32
Combined			

2.2 Table 2 - Waste Collection Authorities – existing collection schemes

WCA	Residual Waste Collection		Recycling Collection		Green Waste Collection	Food Waste Collection	Bulky Waste Collection	Commercial Waste Collection
	Weekly	Fortnightly	Weekly	Fortnightly				
Bromsgrove	-	W	-	Bo	F	✘	✓	✓
Malvern Hills	Ba	-	-	Ba	✘	✘	✓	✓
Redditch	-	W	-	W	✘	✘	✓	C
Worcester City	-	W	-	W	✘	✘	✓	✓
Wychavon	Ba	-	-	Ba/Bo	P	✘	✓	✓
Wyre Forest	-	W	Bo	-	✘	✘	✓	✓
Herefordshire	Ba	-	-	Ba	✘	✘	✓	✓

Key

Ba - Bag; Bo - Box; C - Contracted out; F - Free; P - Paid for;
 W - Wheeled bin; ✓ - Service provided; ✘ - Service not provided

2.3 Household Waste Sites

2.3.1 The following materials are currently separated at one or more of the Household Waste sites in Herefordshire and Worcestershire for recycling or composting:

- Food and drink cans/aerosols
- Scrap metal
- Green waste
- Household and automotive batteries
- Paper and cardboard
- Soil and rubble
- Timber
- Textiles
- LPG bottles
- Shoes
- Glass bottles and jars
- WEEE (LDA, SDA, Fluorescent tubes, CRT's and Fridges)
- Oil
- Aluminium foil
- Plastic bottles
- Mobile phones
- Printer cartridges
- Household chemicals

As there is currently an extensive range of recyclables collected at the Household Waste Sites there are no plans to expand the range.

2.4 Street Sweepings

- 2.4.1 All street sweepings collected by the WCA's are currently landfilled. 'Street sweepings' consist of material collected through street cleansing operations and includes a large amount of detritus made up of grit, silt and other organic material which is mainly removed through mechanical sweeping operations.

3.0 Planned collection changes to increase levels of recycling/composting

- 3.1 A Core Collection Service has been identified and agreed across the Partnership as outlined in Policy 8:

Policy 8

The Core Collection Service

1. *All authorities will collect the same materials for recycling through a commingled collection;*
2. *All authorities will prevent waste and increase the amount recycled through restricting either:*
 - a) *Collection frequency and/or*
 - b) *Container size*

- 3.2 There are a number of planned changes to collection services which will also increase levels of recycling and composting over the next two years as listed below:

3.2.1 Bromsgrove

Introduction of the 'Core Service' fortnightly residual waste collection in a wheeled bin and fortnightly collection of recyclables in a wheeled bin on an alternating weekly basis with an expanded range of recyclables.

From March 2009 Bromsgrove will replace their existing free of charge green waste collection service with an opt in chargeable green waste collection service for 9 months of the year (March to November).

3.2.2 Malvern Hills

Consultation on the future arrangements for the waste collection service is currently being undertaken.

3.2.3 Redditch

No changes are currently planned other than the introduction of bespoke recycling services to a small number of properties which were unsuitable for the Core Collection Service (e.g. flats).

3.2.4 Worcester City

No changes are currently planned.

3.2.5 Wychavon

Between September 2008 and March 2009 Wychavon will phase in the 'Core Service' of fortnightly residual waste collection in a wheeled bin and fortnightly collection of recyclables in a wheeled bin on an alternating weekly basis with an expanded range of recyclables.

Between September 2008 and March 2009 Wychavon will phase in a weekly food waste collection service where one week the food waste will be added to the residual waste stream and go to landfill and on the other week it will be taken to an in-vessel composting facility for treatment to create a soil conditioner.

3.2.6 Wyre Forest

From 2010 onwards Wyre Forest will introduce the 'Core Service' fortnightly residual waste collection in a wheeled bin and fortnightly collection of recyclables in a wheeled bin on an alternating weekly basis with an expanded range of recyclables.

3.2.7 Herefordshire

From November 2009 Herefordshire will introduce a weekly sack collection of residual waste and a fortnightly wheeled bin collection of recyclables.

4.0 Planned disposal changes to increase levels of recycling/composting

4.1 In order to deliver the recycling commitment of the Core Service, the Disposal Authorities are constructing a new Materials Reclamation Facility 'EnviroSort'. This facility will be able to sort an increased range of commingled recyclables including glass bottles and jars, cans, paper and cardboard, foil, mixed plastics and waxed cartons.

4.2 The commingled collection is already in place in Redditch and Worcester City and is proven to result in high levels of coverage, participation and capture of material.

5.0 Options for increasing Recycling and Composting

5.1 The recycling and composting options were identified through consultation with the Officer Waste Forum. Workshops were held to identify the options as listed below:

1. Introduce paid for collection of garden waste

2. Introduce free collection of garden waste to all households
 3. Introduce compostable kitchen waste collections to all households
 4. Commingled collection of recyclables to all households
 5. Introduce collection of textiles working in partnership with the Third Sector to all households
 6. Reduce the number of bring sites and/or range of materials collected
 7. Increase recycling and composting at Household Waste Sites to 75%
 8. Increase recycling and composting at Household Waste Sites to 80%
- 5.2 The number of options was then reduced to those that were considered to be deliverable in terms of cost and performance. Those that were discarded and the reasons why are outlined below:
- 5.2.1 Introduce free collection of garden waste to all households**
This option was discarded as it would result in a significant increase in the amount of municipal waste handled and the cost for both collection and disposal would be significant. The current JMWMS promotes home composting as the key way for dealing with garden waste.
- 5.2.2 Introduce collection of textiles working in partnership with the Third Sector to all households**
Detailed modelling was not completed on this option, however it is recognised that this idea is worth considering and will be carried forward to the Strategy Action Plan.
- 5.2.3 Reduce the number of bring sites and/or range of materials collected**
Bring sites still have a significant part to play, even where there is substantial kerbside collection. However, this option has been discarded until we have rolled out the Core Service across all authorities and are able to assess its impact.
- 5.2.4 Increase recycling and composting at Household Waste Sites to 75% or 80%**
The majority of Household Waste Sites are currently achieving recycling/composting levels in excess of 70% which is in line with the best performing sites in the country. Capacity for recycling/composting facilities at the sites has been reached and there would be a significant cost in developing these sites further. Therefore this option was discarded as a practical and cost effective way of increasing levels of recycling and composting.
- 5.3 During the Workshops, additional options of recycling street sweepings and commercial waste were identified and these have been carried through to the appraisal below.
- 6.0 Assessment of Options**

6.1 Costs and performance benefits against each of the options were modelled. As part of this, we were able to explore the impacts of options in different scenarios – for example increasing numbers of households receiving a service, or excluding a whole district area. The findings for each option are outlined below.

6.2 Paid for green waste collections

6.2.1 Wychavon is currently the only WCA offering a paid for green waste collection. This is available all year round, to all residents, but is dependent on there being space on the particular collection round the resident is on. Bromsgrove currently offer a free green waste collection service to all residents. This will change to a paid for collection from March 2009 for nine months of the year.

6.2.2 If this is an option the WCA's are keen to implement, then it is important that in order to avoid any confusion between neighbouring authorities a consistent approach is considered across the partnership. Differences in the existing plans can already be seen in both Wychavon and Bromsgrove, where although the cost to the resident is the same the period of the service differs i.e. one is for 9 months and the other is for 12 months.

WCA	Currently offering or considering offering service	Proposed annual fee (£)	Period		Estimated uptake (%)	Estimated yield (Kg/hh/yr)
			9 months	12 months		
Bromsgrove	✓	30	✓		70	200
Malvern Hills	✓	75	?	?	10	400
Redditch	✓	30	✓		20	400
Worcester City	✓	30	?	?	10	400
Wychavon	✓	30		✓	15	400
Wyre Forest	✗	-	-	-	-	-
Herefordshire	✗	-	-	-	-	-

6.2.3 If this option is implemented as specified in the table above it is projected that it will deliver approximately 14,200 tonnes of green waste replacing the current level of approximately 8,300 tonnes collected by Bromsgrove. This would give rise to a 0.95 percentage point increase in performance in household waste recycling over and above the introduction of the 'Core Service'. As this option is for a charged for collection service there are no additional costs to the WCA's. However, working on the assumption that, as has happened previously, this is all additional material the cost of processing it would be in the region of £350,000 per annum.

6.3 Food waste collections

6.3.1 Wychavon is the only WCA currently offering a food waste collection service and due to the expense of implementing such a system it is unlikely that any of the other WCA's will want to offer their residents a

similar service. Based on the costs experienced by other authorities that have implemented separate food waste collections, the collection costs for a Partnership wide scheme could be in the region of £4,900,000 per annum. From the disposal point of view as the material is currently landfilled, if the alternative solution is cheaper than paying the landfill tax, this would be financially beneficial to the disposal authorities. If this option was adopted it would result in an increase in household waste recycling performance of 5.12 percentage points over and above the introduction of the 'Core Service'

- 6.3.2 Although this option could significantly raise the recycling performance of the partnership it is felt that the most suitable area to invest in for this waste stream is in minimisation as it will save the resident money on collection costs via the Council tax and also enable them to reduce their spending on food so they are better off in two ways. This means that with Wychavon being the only authority offering this collection service the contribution to the recycling performance will be an improvement of 0.41 percentage points over and above the introduction of the 'Core Service'.

6.4 Commercial waste recycling

- 6.4.1 The WCA's have been pushing for the opportunity to offer a recycling collection to their commercial customers. Now that we have a Partnership wide approach to recycling of household waste with the revised service in the process of being delivered, commercial waste recycling is an area that can now be investigated further.
- 6.4.2 The two most common materials that have been identified are glass and cardboard. There are a number of issues that need to be resolved before commercial recycling collections can be implemented and these include:
- Billing arrangements. The two materials mentioned have significantly different densities so the current arrangements would need to be revised.
 - Delivery point for the materials. If they are to be collected separately in order to charge by weight then there is no point in putting them through the new EnviroSort facility.
 - Do we want to concentrate on just two materials or expand it to more?
 - Is it an opportunity to work more closely together to provide cross district collections?
 - Is it an opportunity to use some of the vehicles that are being replaced as the household recyclables collections change?
 - Do we want to offer an incentive for the commercial sector to recycle?
- 6.4.3 Any changes in this area will not improve the household waste recycling rate of the Partnership but would potentially reduce the amount of biodegradable municipal waste landfilled, thus reducing the likelihood of fines under the LATS regime.

6.5 Street Sweeping recycling

6.5.1 It is believed that this could be a quick win for the Partnership and it would be relatively easy to separate this material for processing, the main issue is finding a suitable facility to process the material. Initial investigations suggest that approximately 50% of the material collected could be recycled, this equates to approximately 5,200 tonnes per annum. Should this be possible then implementing this option would give rise to an increase in performance of 1.45 percentage points over and above the introduction of the 'Core Service'. The collection cost implication is minimal and could involve delivery of the material to an alternative destination. From the disposal point of view as the material is currently landfilled if the alternative solution is cheaper than paying the landfill tax then this would be financially beneficial to the disposal authorities.

7.0 Preferred options

7.1 The partnership believes that the best way forward for their residents is:

- Implementation of the 'Core Service' across all collection authorities
- Maintain the current range of recyclables available at Household Waste Sites
- Implementation of paid for green waste collections where appropriate
- Implementation of street sweeping recycling if a suitable processing point can be found locally
- Food waste is dealt with through waste minimisation, but Wychavon continue to collect from their residents
- Commercial waste recycling is investigated further and if the issues can be resolved then it should be implemented where appropriate.

7.2 It is believed that if this mix of options is implemented it would give rise to a household waste recycling rate in excess of 43%, which is an increase of approximately 7 percentage points on the current level of 36.39%. This gives rise to Target 3 as below:

Target 3

To achieve national recycling/composting levels of household waste of 40% by 31st March 2010 as a minimum and work towards achieving 45% by 31st March 2015 and 50% by 31st March 2020.

Achieving the Target:

The aim of the target is to achieve the minimum recycling and composting levels that the Government has set in Waste Strategy 2007. The Authorities have committed and will continue to commit funding and set their fees and charges in order to reach the targets through a combination of approaches including promotion, communication collection and treatment processes.

The Partnership has set a target of 43% recycling/composting before 31st March 2014. As new collection and treatment methods are introduced, the Partnership will review its ability to exceed this target in line with the 2015 national target of 45%.