



WASTE, RECYCLING AND STREET CLEANING SERVICE DESIGN OPTIONS FOR THE FOREST OF DEAN DISTRICT

Committee	Gloucestershire Joint Waste Committee
Committee Date	13 October 2015
Significant Decision	Yes
Responsible Officers	Steve Read, Head of Service, Gloucestershire Joint Waste Team (01823 625707; steve.read@gloucestershire.gov.uk);
Main Consultees	Residents of the Forest of Dean District
Purpose of Report	The purpose of this report is to consider the best fit waste and recycling service design option, taking into account the results of the recent consultation with Forest of Dean residents, to divert more waste from landfill and increase recycling at the best possible price acknowledging the financial pressures that Forest of Dean District Council (FODDC) is under.
Recommendations	<p><i>It is recommended that the Committee:</i></p> <ul style="list-style-type: none"> a) Endorses the proposed change to FODDC collection service to include: <ul style="list-style-type: none"> I. Weekly food waste service, fortnightly residual waste and fortnightly chargeable garden waste as is and: II. A move from fortnightly kerbside sort dry recycling (glass, cans, paper, aerosols and batteries) to weekly kerbside sort dry recycling with the addition of plastic bottles, cardboard, small Waste Electrical & Electronic Equipment (WEEE) and textiles collections. III. The removal of the large bulk carrier plastic and cardboard recycling banks as these materials will now be collected at kerbside. IV. The retention of the 37 recycling bank sites which service properties unable to use the kerbside service. b) Provides feedback to the Forest of Dean District Council on the proposed service design option.
Resource Implications	The changes can be implemented within the current FODDC budget and can deliver savings which will contribute to the MTFS. In addition the change in service will deliver savings to Gloucestershire County Council as the disposal authority through diversion of more material from landfill to less costly and more sustainable routes.

1. BACKGROUND

- 1.1.** The FODDC Refuse & Recycling collection, Recycling bank provision and servicing and Mechanical Sweeping contract 2006 with Biffa Waste Services is due to expire on 30 July 2018. The expiry of the contract provides an opportunity to explore new arrangements for both service design and service delivery.
- 1.2.** The FODDC is signed up to The Joint Municipal Waste Management Strategy (JMWMS) 2007-2020 along with other members of the Gloucestershire Waste Partnership (GWP). In 2012 FODDC implemented a service change to support the objectives of the strategy. This resulted in a significant change to the way recycling and waste is collected in the District, with a move to fortnightly collection of residual waste, separate weekly collection of food waste, dry recycling continued to be collected fortnightly and a chargeable fortnightly collection of garden waste.
- 1.3.** The change in collection method has seen the FODDC recycling, reuse and composting rate rise from 40% in 2011/12 to 48.9% in 2013/14. In addition the kg per household of residual waste (that which is currently going to landfill) fell from 560kg per household in 2011/12 to 418kg per household in 2013/14. However the 2014/15 period saw the recycling rate level off and an increase in the amount of residual waste, in line with the national trend. It is unlikely that the strategy target of 60% by 2020 is going to be reached with the current collection system.
- 1.4.** Since the waste and recycling service change in 2012 there have also been changes affecting household waste collection including reduced market values for recycle, residual waste growth, changes to legislation and increasing pressure on the Council's budget.
- 1.5.** The JWC needs to consider how best to improve the service and agree how to achieve the following:
 - To meet the JMWMS objectives by reducing amount of waste going to landfill and improve recycling targets
 - Maintain or improve the quality of service delivery
 - Maintain or improve the safe working systems for staff
 - To collect high quality recycle to maximise income from material sales
 - To increase the range of materials collected from the kerbside e.g. plastics, cardboard to meet the requirements of the Waste Directive Framework
 - Compliance with Waste (England and Wales) Regulations 2011 and other statutory requirements
 - To match the requirements of residents and deliver a service of the required quality at the best possible price but acknowledging the financial pressures on the Forest of Dean District Council.
- 1.6.** The Forest of Dean District Council Cabinet will then need to decide how best to deliver the service.

2. WASTE AND RECYCLING SERVICE DESIGN OPTIONS

- 2.1.** Officers carried out a consultation with residents to help shape the future service provision.

- 2.2. The consultation was conducted over an 8-week period, from 7 July to 1 September. A survey was posted out to 2,000 randomly selected households, which equated to every 19th household in the district, and the survey was also available online. 1,023 paper copies were returned (a 51% response rate). A further 1,288 surveys were completed online giving a total of 2,311 responses received. This figure equates to 6% of all Forest of Dean households feeding back.
- 2.3. There were responses from a good cross section of the population. 99% of respondents said that they recycled in some form which demonstrates that people who responded to the consultation are those that are interested in the services and keen to recycle.
- 2.4. 98% rated the collection services as satisfactory or above. The key service improvement that residents would like is the introduction of a wider range of materials from the kerbside, particularly for plastic and cardboard.
- 2.5. Officers also carried out a best practice review and, with reference to the survey results, developed a range of service design options as detailed in Annex A.
- 2.6. The current weekly food waste service, fortnightly residual waste and fortnightly chargeable garden waste service are considered best practice and have been included in all models without change.
- 2.7. The service design options take into account the key variables of collection frequency and recycling collection methodology for dry recycling (i.e. kerbside sort, commingled and two stream commingled) and recycling bank provision.
- 2.8. The consultation process informed that residents want to recycle more materials at the kerbside. As such the kerbside sort options include collecting plastic bottles, cardboard, small WEEE and textiles and the commingled and two stream commingled options include all types of plastic and cardboard.

3. APPRAISAL OF WASTE AND RECYCLING DESIGN OPTIONS

- 3.1. The options were evaluated against a series of criteria including potential recycling and composting performance and diversion of residual waste, compliance with legislation (inc. the Waste (England and Wales) Regulations 2011), quality of recyclate, impact on contamination, ease of use, container requirement and health and safety. Details can be found at Annex A.
- 3.2. It should be noted that the potential recycling and diversion rates are estimates based on experience elsewhere. However they are particularly useful in terms of relative performance ranking purposes.
- 3.3. A financial appraisal was also carried out which took into consideration costs to the FODDC as the collection authority to include collection costs, capital costs for depot provision and containers (where applicable) and income from recycling, recycling credits, food waste supply agreement and garden waste licence sales and costs to GCC as the disposal authority. This is summarised in Annex A.

Commingled Collection

- 3.4. Commingled collection is where all recycling materials including glass, cans, paper cans, mixed plastics and cardboard are collected together in a wheeled bin. These materials are then emptied into one compartment of a vehicle and sent for bulking. The materials are sent on to a Material Recovery Facility (MRF) where they are sorted into single streams, re-bulked and sent to reprocessors. A variation of commingled

collection involves collecting either glass or fibre (paper/card) separately from the remainder of the mix. This is known as “two stream collection” and is described later below.

- 3.5.** The fully commingled system provides (marginally) the highest performance rate with an estimated potential recycling and composting rate of 59% and the lowest kg per household of residual waste at 337kg/hh. This is largely due to the simplicity and ease of use of the scheme which helps encourage participation. However there are some risks and drawbacks associated with this approach.
- 3.6.** One of the disadvantages is that the council receives no income for the recycled materials and has to pay the MRF a processing fee per tonne of material sorted. Recently gate fees have increased due to the growing emphasis on the quality of input material, higher MRF operating costs and the declining value of materials. Current gate fee estimates range from £30 - £80 per tonne. As it is anticipated that 8,000 tonnes would be collected using this system this would equate to between £240k and £640k per annum processing fee. Add to this the loss of income for recycled materials this system presently works out to be the most expensive.
- 3.7.** In addition the quality of recyclate is often poor as the material has been mixed up in the collection process and is often contaminated because residents put more than recyclables in their bin. Analysis across the UK has shown that even the cleanest mixes will have on average around 6% of contamination by weight. This is typically around 3% of clean, but not compliant, material (things people think they should put in for recycling but are outside the range of specified materials) and 3% of black bag type waste. This percentage can rise to over 20% in some – mainly highly urban – rounds. As all material is collected in a bin it is difficult to identify contamination at the point of collection so educating residents to use the system properly is hampered. Contamination removed at the MRF will not be recycled and therefore goes for disposal. In addition some compliant material will end up being sorted into the wrong end product (e.g. flattened cans and plastic end up in with paper or card) and this will need to be removed and disposed of at the point of processing. This can lead to the true recycling rate being overstated and so the projected potential recycling rate should therefore be treated with caution.
- 3.8.** There is also a potential risk to the commingled service design arising from the England Waste (England and Wales) Regulations 2011, as amended in 2012. These transcribe the revised Waste Framework Directive (2008/98/EC) which requires member states to take measures to promote high quality recycling. Part 5 of the Regulations (specifically regulations 12-15) describes duties for waste management and improved use of waste as a resource. Regulation 13 describes a specific requirement by 1 January 2015, for waste collection service providers to set up separate collections of paper, plastic, metal and glass.
- 3.9.** If the council were to introduce a commingled system it would need to demonstrate that separate collection is not necessary to provide high quality recyclate, or that separate collection (kerbside sort) is not technically, environmentally or economically practicable. As FODDC currently provides a kerbside sort system it would be difficult to evidence this - particularly if continuing with kerbside sort can be achieved at lower cost and within the MTFP.
- 3.10.** This option would require residents to have an additional wheeled bin so there would be capital costs for purchase and delivery. As residents already have wheeled bins for

refuse and garden waste some households may have problems storing an additional bin.

- 3.11.** If a fully commingled option was introduced the large bulk banks for cardboard and plastic in the five main towns and the 37 recycling bank sites would have to be removed to reduce costs to enable the service to be delivered within the MTFs.

Two Stream Collection

- 3.12.** Two stream collection is where glass is collected separately using a recycling box and a wheeled bin is provided to collect all other recycling. A variation of this is where (paper/card) is collected separately from the remainder of the mix. This variation has not been modelled in detail but costs can be expected to be broadly similar to a “glass out” two stream scheme.
- 3.13.** The “glass out” system does provide the second highest performance rate with an estimated potential recycling and composting rate of 59% and kg per household of residual waste at 342kg/hh.
- 3.14.** This type of collection should provide higher quality recyclate than fully commingled as the glass/fibre is kept separate but still has the same contamination potential as fully commingled.
- 3.15.** This system would require a MRF for processing the majority of recyclate so the Council would pay a processing fee per tonne for materials collected. The gate fee would potentially be less than fully commingled but would still be a considerable cost and the council would lose the majority of its income for recyclate.
- 3.16.** This option requires either more collection vehicles or multi-compartment vehicles. This would mean higher capital costs of purchase, higher maintenance costs and can result in lower overall operating efficiency as the limiting factor is the compartment that fills up first, and load factors in the other compartment(s) may be sub-optimal.
- 3.17.** This option would require residents to have an additional wheeled bin or other container so there would be capital costs for purchase and delivery. As residents already have wheeled bins for refuse and garden waste some households may have problems storing an additional bin.
- 3.18.** If a two stream collection was introduced the large bulk banks for cardboard and plastic in the five main towns and the 37 recycling bank sites would have to be removed to reduce costs to enable the service to be delivered within the MTFs.

Kerbside Sort Collection

- 3.19.** Kerbside sort is the current collection method where materials are placed in a box at the kerbside and sorted by loaders into separate compartments on the collection vehicle. The materials are taken to the bulking facility at the Biffa depot and tipped into material specific bays, bulked and sold on to reprocessors. While FODDC pays a small handling fee for the bulking facility under this system FODDC receives revenue for the materials collected.
- 3.20.** There is also an environmental benefit in that the materials collected are high quality as they are kept separate and there is less potential for wastage as described for commingled systems. Further, the kerbside sort type of collection system provides less scope for legal challenge around non-compliance with the Waste Regulations 2011 as amended in 2012.

- 3.21.** Weekly and fortnightly kerbside sort collections have been modelled with additional materials to include plastic bottles, cardboard, small WEEE and textiles as well as the current glass, cans, paper, aerosols and batteries.
- 3.22.** The kerbside sort options have been modelled with two variants: removal of recycling banks and retaining the recycling banks.
- 3.23.** Weekly dry recycling with retaining recycling banks provides the third highest performance rate with an estimated potential recycling and composting rate of 58% and kg per household of residual waste at 349kg/hh. Removing the recycling banks reduces estimated performance to 57% recycling and composting rate and 357kg/hh residual waste.
- 3.24.** A benefit of a weekly service is that residents would not necessarily require additional containers and would have less recycling to store as collections are more frequent.
- 3.25.** This option can be delivered with one multi-compartment collection vehicle used to collect both food waste and dry recycling which would reduce vehicle movements and maximise efficiencies. Such vehicles are less costly than standard refuse collection vehicles but have lower payloads and pass rates so more are required. A key limiting factor is the compartment that fills up first, and load factors in the other compartments may be sub-optimal. However the cost of running more vehicles is balanced by not requiring the use of a MRF and consequent loss of material value.
- 3.26.** Fortnightly dry recycling with recycling banks reduces the estimated performance rate to 54% recycling and composting rate and 386 kg per hh of residual waste. Removing the recycling banks reduces estimated performance further to 52% recycling and composting rate and 394kg/hh of residual waste.
- 3.27.** If a fortnightly service was maintained all households would require an additional recycling box as the extra materials of plastic and cardboard are bulky.
- 3.28.** In order to deliver the service within the MTFs the large bulk banks for cardboard and plastic in the five main towns would need to be removed but as these materials would be collected at kerbside the impact on residents would be minimal.
- 3.29.** The Council could also consider removing the 37 recycling bank sites across the district but this would lower performance as some people are not able to recycle at home because of storage issues, collection points, location of property e.g. flats on high streets and properties down forest tracks. In addition recycling may be coming from outside the district or from trade premises.
- 3.30.** The results of the survey show that between a quarter and a fifth (22%) of respondents would like or felt strongly that the recycling bank sites should remain. In an ideal world it would be best to implement cardboard and plastic collections from the kerbside and then monitor usage of the bank sites so a clearer understanding of the impact of removal could be ascertained.

4. RECOMMENDED WASTE COLLECTION SERVICE DESIGN OPTION

- 4.1.** The service design option of weekly food waste collection, weekly kerbside sort dry recycling collection, fortnightly residual waste and chargeable garden waste with removal of large cardboard and plastic bring banks and continuation of mini bring bank sites will enable the Forest of Dean District Council to satisfy residents' wishes to recycle more materials at the kerbside including plastic bottles, cardboard, small WEEE and textiles.

- 4.2. This option will allow the Council to make progress towards improving the overall recycling and composting rate from 48% to an estimated 58% and to divert waste from landfill with residual waste reducing from 433kg per household in 2014/15 to an estimated 349kg per household.
- 4.3. This option also provides high quality and increased quantity of recycled material with the least contamination and has the lowest risk of challenge around meeting the requirements of the Waste (England and Wales) Regulations 2011.
- 4.4. It is anticipated that this option can be implemented with the current budget, and can deliver savings to FODDC contributing to the MTFs. In addition the change in service will give annual savings to Gloucestershire County Council as the disposal authority of £240k.

5. PROCUREMENT OPTIONS

- 5.1. There are three delivery options available to the Council in providing the Refuse Collection, Recycling and Mechanical Sweeping service when the current contract expires on 30 July 2018.

Extending the Current Contract with Biffa Waste Services (Option 1)

- 5.2. The current Refuse Collection, Recycling and Mechanical Street Sweeping Contract 2006 with Biffa Waste Services provides an option to extend for a further 6 years until 30 July 2024. The option to extend can only be exercised if the Council serves written notice no later than 30 July 2017. There is an ability to vary the services provided (Schedule 4 Variation Procedures) but changes must not be in breach of the Public Contract Regulations 2015. This essentially means that there is a greater risk of challenge if the service provided under an extension is a major departure from the current methodology.

Commissioning the Local Authority Owned Company Ubico (Option 2)

- 5.3. Ubico Ltd, a local authority owned company, is a separate legal body in which the Council is an equal shareholder and has a voting Director on its Board. As a shareholder the Council could award the contract to Ubico without going through the European procurement process.
- 5.4. However, if the Council was to award the contract to Ubico, the lack of local depot provision would need to be resolved before any transfer of services could take place. The Council would need to locate and purchase a depot site, manage the planning process and build a depot in time for mobilisation of the contract on 31 July 2018 in order to maintain service provision. While potentially achievable this process would introduce significant financial and operational risk. The Joint Waste Team and Ubico would also need to carry out a procurement process for vehicles.
- 5.5. If this option was pursued the staff of the current provider would TUPE transfer to Ubico and the Council would need to commission HR support to manage the TUPE transfer process.
- 5.6. This option is potentially attractive as it could give the Council enhanced flexibility to make changes to services and give greater transparency. The Council would receive any savings that were generated but would bear the risk that any overspend would fall to the authority. However delivering a service change and a provider change simultaneously may be challenging.

Reprocurement of the Service via OJEU procurement (Option 3)

- 5.7.** The third option available is to go to the market to re-procure the service. This option would involve setting up a project team to deliver a procurement which would involve legal, technical and financial advice. Any procurement would need to be via an Official Journal of the European Union route and would take at least 12 months to deliver and 12 months for implementation. There would also be a cost to carry out the procurement process which is estimated to be £50k to include officer time and external legal advice.
- 5.8.** The market for delivering Waste and Recycling collection services is not wide although it is probable that the procurement would attract some competition. In 2006 the procurement attracted 5 tenders. Market research shows that re procurement on the open market in the current climate is likely to increase costs. If this option was pursued Ubico has advised that the company would not tender for the services.

Recommendations

- 5.9.** Following consideration of these options (summarised in Annex A), officers have recommended that FoDDC pursue service design option 4 and procurement options 1 and 2. An offer has been made by Biffa in relation to service design option 4. In addition, costs were sought from Ubico for the full range of service design options.
- 5.10.** Final choice of service provider is a matter for FoDDC and therefore this report does not identify which company has provided the highest ranked bid financially but seeks endorsement of, and feedback on, the approach and the preferred service methodology.

Annex A – Waste and Recycling Service Design Options

Option	Service Design	Estimated Recycling and Composting Rate	Estimated Residual Waste (Kg per hh)	Performance Ranking	Compliance with waste regulations (High/ Medium/ Low)	Additional Container Requirement	Financial Ranking
Option 1	Weekly – Food, Fortnightly – Residual (wheeled bin), Commingled (wheeled bin), Garden	59%	337	1 st	Medium/ Low	240 Ltr Wheeled Bin	6 th
Option 2	Weekly – Food, Fortnightly – Residual (wheeled bin), Two stream Commingled (wheeled bin - paper, plastics, card,) Kerbside Box (glass), Garden	59%	342	2 nd	Medium	240 Ltr Wheeled Bin	5 th
Option 3	Weekly - Food, Weekly kerbside sort with plastic, cardboard and small WEEE, Fortnightly - Residual with textiles and Garden Waste. Mini Banks	58%	349	3 rd	High	None	2 nd
Option 4	Weekly - Food, Weekly kerbside sort with plastic, cardboard and small WEEE, Fortnightly - Residual with textiles and Garden Waste. No Banks	57%	357	4 th	High	None	1 st
Option 5	Weekly – Food, Fortnightly – Residual (wheeled bin), Kerbside sort with plastic, cardboard and textiles, Garden and 32 bank sites	54%	386	5 th	High	55ltr recycling box	4 th
Option 6	Weekly – Food, Fortnightly – Residual (wheeled bin), Kerbside sort with plastic, cardboard and textiles, Garden. Bank sites for cardboard only	52%	394	6 th	High	55ltr recycling box	3 rd
AS IS	Weekly – Food, Fortnightly – Residual (wheeled bin), Kerbside sort (box), Garden and 32 bank sites	48%	433	7 th	Medium	N/A	N/A