

Birmingham City Council

# Independent Waste Review – Interim Cabinet Report




## Report for

Darren Share  
Assistant Director - Street Scene  
Birmingham City Council  
6 Margaret Street  
Birmingham  
B3 3BU

## Main contributors

Chris Hudson  
Richard Garfield  
Amie Walley  
Stephanie Briscoe  
Kostas Patapatiou  
Greg Logelain  
Jennifer Allen

## Issued by

pp.   
Chris Hudson

## Approved by

  
Richard Garfield

## Wood

Canon Court  
Abbey Lawn  
Abbey Foregate  
Shrewsbury SY2 5DE  
United Kingdom  
Tel +44 (0) 1743 342 000

Doc Ref. 41760-WOD-FS-XX-RP-OS-0000\_S4\_P03

p:\projects\41760 crp bcc review of waste collection and disposal services\reporting\interim report\2nd draft\birmingham city council - cabinet paper.docx

## Copyright and non-disclosure notice

The contents and layout of this report are subject to copyright owned by Wood (© Wood Environment & Infrastructure Solutions UK Limited 2019) save to the extent that copyright has been legally assigned by us to another party or is used by Wood under licence. To the extent that we own the copyright in this report, it may not be copied or used without our prior written agreement for any purpose other than the purpose indicated in this report. The methodology (if any) contained in this report is provided to you in confidence and must not be disclosed or copied to third parties without the prior written agreement of Wood. Disclosure of that information may constitute an actionable breach of confidence or may otherwise prejudice our commercial interests. Any third party who obtains access to this report by any means will, in any event, be subject to the Third Party Disclaimer set out below.

## Third party disclaimer

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Wood at the instruction of, and for use by, our client named on the front of the report. It does not in any way constitute advice to any third party who is able to access it by any means. Wood excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage howsoever arising from reliance on the contents of this report. We do not however exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability.

## Management systems

This document has been produced by Wood Environment & Infrastructure Solutions UK Limited in full compliance with our management systems, which have been certified to ISO 9001, ISO 14001 and OHSAS 18001 by LRQA.

## Document revisions

No.	Details	Date
P01	Draft Interim cabinet report	29/11/19
P02	Draft Interim cabinet report v2	05/12/19
P03	Interim cabinet report final	29/01/20

# Executive summary

## Purpose of this Report

Wood Environment and Infrastructure Solutions UK Ltd (Wood) has been appointed by Birmingham City Council (the Council) to deliver an independent review of their waste collection services. This report summarises the findings of the initial phases of the project setting out the findings of the data discovery and analysis undertaken by Wood.

## Introduction

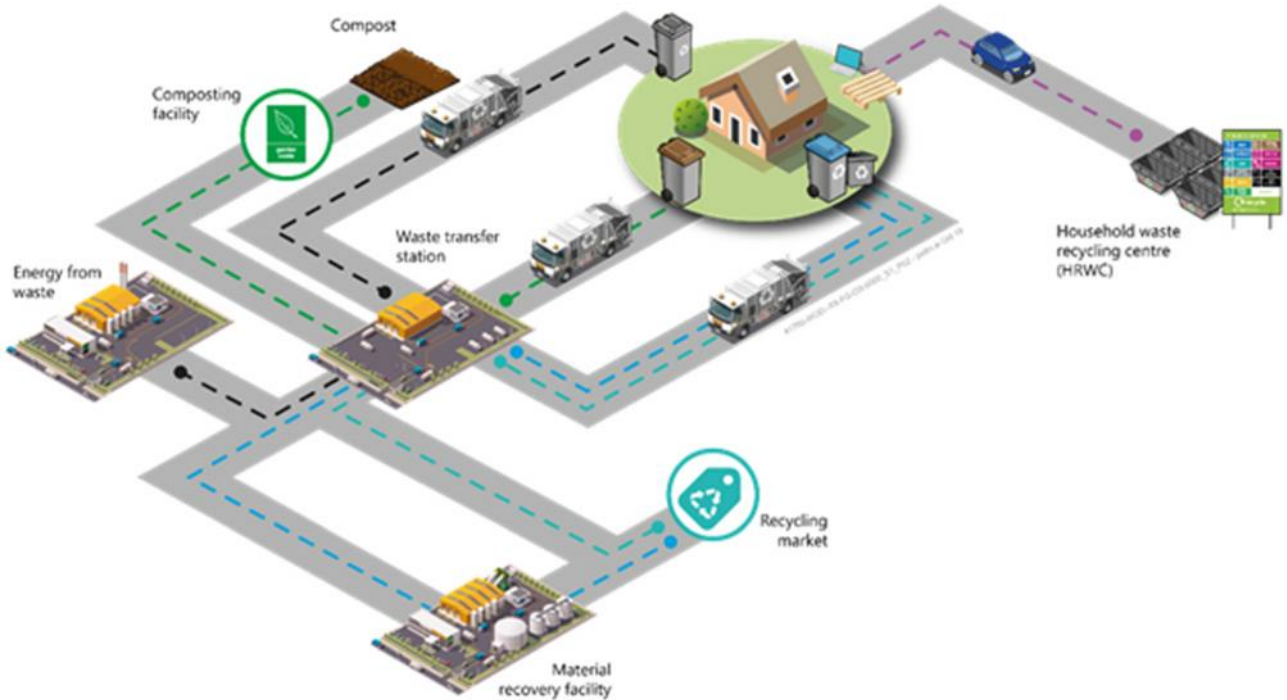
Birmingham is one of the largest local authorities in Europe. The city has a population of just over 1 million and the Council has responsibility for collecting waste from almost 420,000 households across the city. This amounts to just under 250,000 tonnes of collected domestic waste per year. With commercial waste and street cleansing wastes included, the total municipal arisings in 2018/19 were approaching 494,000 tonnes. Birmingham is due to grow by 50,000 properties by 2031 and has considerable ambition for the provision of sustainable services. These services include waste management, which is one of, if not the, largest and most public facing of all services provided by the Council, and one that has suffered from well publicised disputes and service disruption. It is noted that the period of time which has been looked at in this review includes a period of industrial action.

The Council operates a 5-day working structure for the collection of waste and recycling from residents. This working structure has been live since September 2018, when the service was changed from a 4-day structure.

Core kerbside services are split into residual waste collections, recycling collections, and garden waste collections, the last of which are provided as a chargeable service. Containers are provided to households as defined below, with additional recycling containers being provided to households on request. In addition, the Council provides commercial waste collection services and five Household Recycling Centres (HRCs).

Core Household Waste Collection Services

Premises	Street level properties			Properties unsuitable for wheelie bin		
Waste Stream	Residual waste	Recycling	Garden	Residual waste	Recycling	Garden
Container type		  Larger households receive 2 x 240l bins			 Paper/Card  Glass/Cans/ Plastic bottles (mixed materials) Multiple boxes can be provided	 60 sacks provided per year
Collection Frequency	Weekly	Fortnightly		Weekly	Fortnightly	
Materials collected	 household waste	 cardboard  newspapers & magazines  plastic bottles  mixed glass  food tins & drink cans	 garden waste	 household waste	 cardboard  newspapers & magazines  plastic bottles  mixed glass  food tins & drink cans	 garden waste



## Engagement Activities

Wood has undertaken a range of reviews of the services offered by the Council in the production of this report including:

- Reviewing current services and legislation;
- Reviewing the operational waste data held by the Council including collected material weights, round structures and operational round data;
- Reviewing staffing structures and requirements;
- Reviewing the performance of comparable UK local authorities;
- Delivering stakeholder engagement workshops for residents, unions, collection operatives and scrutiny members. This covered face to face engagement with:
  - The Council's Scrutiny Committee;
  - A panel of 25 members of the public, followed by the issuing of a follow up electronic survey which was completed by 32 members of the public;
  - 7 union members representing Unite and Unison; and
  - 26 operational depot-based staff across all 4 depots.
- Issuing an online feedback questionnaire to residents; and
- Issuing a request for feedback to all Councillors, the responses to which were not received in time for inclusion within this interim report.

Some of these activities are still ongoing and will be completed prior to issuing the final report.

## Opportunities for immediate improvement

Wood's initial review of the approach taken by the Council has not identified any significant gaps in the materials collected or the containers or vehicle types associated with their collection that should lead to the current poor recycling rates. Therefore, it can be assumed that the low recycling rates achieved by the Council result from resident participation and engagement issues within the operation of the service.

Through the engagement and review activities undertaken to date, Wood has identified a number of significant areas of concern, detailed within this report, regarding the delivery of the existing service which are leading to poor service performance. We believe these need to be addressed prior to implementing any future service change; without addressing these, any changes delivered will not have the appropriate impact and will lead to ongoing sub-optimal performance. We have categorised these into short term recommendations and longer-term recommendations for the Council to consider.

## Future service development options

Once the issues with the existing service have been addressed, the Council can identify future service developments to increase the recycling and composting performance of the existing services. The government is currently consulting on waste collection consistency and the outcomes of the consultation

may have a significant impact on the way that recycling is collected across the UK; the impacts of these consultations have been considered in drawing up a list of potential future waste management options.

The only material that is currently not collected that would be likely to become mandated under the outcome of the consultation is food waste. The inclusion of food waste into the waste collection service is likely to result in a material improvement in the recycling rate of the Council owing to the quantities of organic waste remaining within the Councils residual waste stream, therefore this has been included within the service options. The other potential outcome of the consultations is that residual collections may have to be undertaken fortnightly at their most frequent. Wood has identified a series of potential future waste collection options that incorporate these potential outcomes as defined within this report.

# Contents

<b>1.</b>	<b>Introduction</b>	<b>8</b>	
1.1	Background	8	
1.2	Engagement Activities	9	
1.3	Current services	9	
<b>2.</b>	<b>Review of legislation, policy and drivers relevant to collection services</b>	<b>12</b>	
	European Legislation	12	
	National Legislation	12	
<b>3.</b>	<b>Identification of immediate improvements and efficiencies</b>	<b>14</b>	
3.1	Gap Analysis.	14	
	Data Analysis	14	
3.2	Recommendations for service improvements	14	
	Staffing and Management Structures	15	
	Communications	16	
	Service/Policy Inconsistency	16	
	Customer Services/ICT systems	17	
	Vehicle Routing/Round Efficiencies	18	
	Vehicle Replacement	18	
	Enforcement/Engagement	18	
	Trust	19	
	Summary of improvement recommendations	19	
<b>4.</b>	<b>Future Options</b>	<b>21</b>	
4.1	WRAP's Consistency Framework	21	
4.2	The Council's Future Options	22	
	Option Design	22	
	Food waste	23	
	Waste Collection Options	23	
	Table 4.1	WRAP consistency Framework collection systems	22
	Table 4.2	Future Collection Initial Options	25
	Figure 1.1	Existing kerbside collection services	10
	Figure 1.2	Collection schematic	10

# 1. Introduction

Wood Environment and Infrastructure Solutions UK Ltd (Wood) has been appointed by Birmingham City Council (the Council) to deliver an independent report into their waste services. This report summarises the outcomes of the initial phases of the project, setting out the findings of the data discovery and analysis undertaken by Wood.

## 1.1 Background

Birmingham City Council ('the Council') has commissioned Wood to undertake an independent review of its waste collection and disposal services. In order to ensure that the most effective and sustainable solution(s) for the reduction, reuse and recycling of waste is achieved this review will include an in depth analysis of the current service, a best practice review of current service delivery options and an options appraisal to ensure that a future service delivery model provides an efficient, cost effective, best in class service to the citizens of Birmingham. Furthermore, an assessment of potential impacts on waste processing and disposal contracts will be made and reported on within the final report.

Birmingham is one of the largest local authorities in Europe. The city has a population of just over 1 million and the Council has responsibility for collecting waste from almost 420,000 households across the city. This amounts to just under 250,000 tonnes of collected domestic waste per year. With commercial waste and street cleansing wastes included, the total municipal arisings in 2018/19 were approaching 494,000 tonnes. Birmingham is due to grow by 50,000 properties by 2031 and has considerable ambition for the provision of sustainable services. These services include waste management, which is one of, if not the, largest and most public facing of all services provided by the Council, and one that has suffered from well publicised disputes and service disruption.

The Council's ambitions for the management of waste are as follows:

- Birmingham will have a sustainable, localised and integrated city waste solution managing its own energy and resources;
- Birmingham is an aspirational city that avoids the creation of waste and maximises utilisation;
- Birmingham has clean streets free from litter and fly tipped waste; and
- All stakeholders and citizens are involved in maximising shared social, environmental and economic value and minimising waste.

This ambition is supported by the Council's overarching aspirations, aims and values, which are as follows:

- The Council aspires to provide an efficient, cost effective, best in class service to the citizens of Birmingham;
- The Council's aim: Making a positive difference every day to people's lives; and
- The Council's values & behaviours: Putting residents first, acting courageously, being true to our word, and achieving excellence.



## 1.2 Engagement Activities

Wood has undertaken a range of reviews of the services offered by the Council in the production of this report including:

- Reviewing current services and legislation;
- Reviewing the operational waste data held by the Council including collected material weights, round structures and operational round data;
- Reviewing staffing structures;
- Reviewing the performance of comparable UK local authorities;
- Delivering stakeholder engagement workshops for residents, unions, collection operatives and scrutiny members. This covered face to face engagement with:
  - The Council's Scrutiny Committee;
  - A panel of 25 members of the public, followed by the issuing of a follow up electronic survey which was completed by 32 members of the public;
  - 7 union members representing Unite and Unison; and
  - 26 operational depot-based staff across all 4 depots.
- Issuing an online feedback questionnaire to residents; and
- Issuing a request for feedback to all Councillors.

The data gathered from these engagement activities has been analysed to identify common themes in relation to areas of service delivery that are deemed to be in need of improvement, and has therefore been used by Wood to identify the actions proposed to improve the waste collection service and shape the future service options identified in section 4.

## 1.3 Current services

The Council operates a 5-day working structure, whereby collections are undertaken from Monday to Friday each week with staff working a 7 hours and 18 minutes day. This duration is inclusive of a 15-minute break, but exclusive of a 30-minute lunch break. This working structure has been live since September 2018, when the service was changed from a 4-day (9 hours and 15 minutes day) structure.

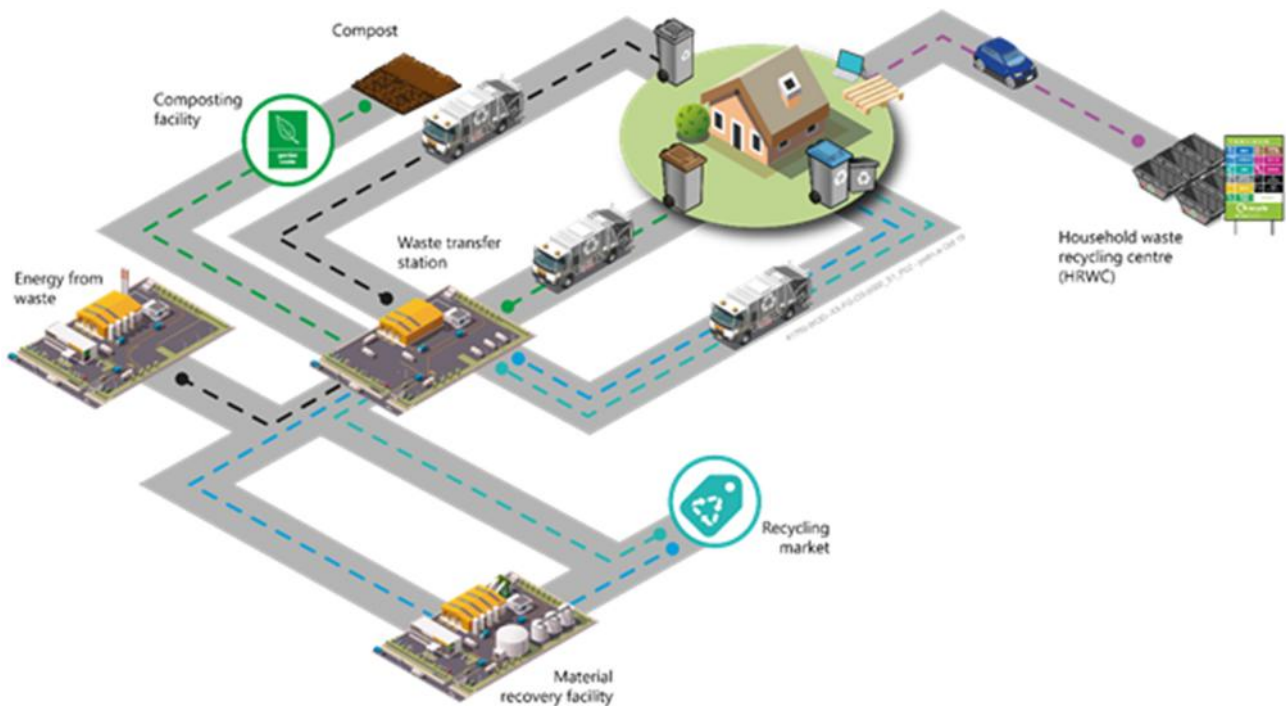
Core kerbside services are split into residual waste collections, recycling collections, and garden waste collections, the last of which are provided as a chargeable service. In addition, the Council provides commercial waste collection services and five Household Recycling Centres (HRCs).

The kerbside services provided to households across Birmingham, detailing containers, frequencies of collection, and materials, are summarised in Figures 1.1 and 1.2 below. It is noted that additional recycling containers are provided to households on request.

Figure 1.1 Existing kerbside collection services

Premises	Street level properties			Properties unsuitable for wheelie bin		
	Residual waste	Recycling	Garden	Residual waste	Recycling	Garden
Waste Stream						
Container type		  Larger households receive 2 x 240l bins			 Paper/Card  Glass/Cans/ Plastic bottles (mixed materials) Multiple boxes can be provided	 60 sacks provided per year
Collection Frequency	Weekly	Fortnightly		Weekly	Fortnightly	
Materials collected	 household waste	 cardboard  newspapers & magazines  plastic bottles  mixed glass  food tins & drink cans  garden waste	 garden waste	 household waste	 cardboard  newspapers & magazines  plastic bottles  mixed glass  food tins & drink cans  garden waste	 garden waste

Figure 1.2 Collection schematic



Household waste and recycling collection services are operated out of four operational depots:

- ▶ Montague Street Depot, Montague Street, B9 4BA;
- ▶ Lifford Lane Depot, Ebury Road, B30 3JJ;
- ▶ Perry Barr Depot, Holford Drive, B42 2TU; and
- ▶ Redfern Road Depot, Kings Road, B11 2AB.

The Lifford Lane and Perry Barr depots are also used as waste transfer stations where material from all services is tipped and bulked prior to onward transfer to disposal and reprocessing locations.

Residual waste is treated at the Tyseley energy from waste facility, located on James Road, with access via Small Heath Highway (A45) via an unnamed road.

The household dry mixed recycling (glass, cans and plastic) is treated at the Material Recovery Facility (MRF) at Four Ashes in Wolverhampton, outside of the City boundary.

## 2. Review of legislation, policy and drivers relevant to collection services

Within this section we consider the new and forthcoming legislation that may impact on the Council's waste collection services. It does not consider existing established legislation, the impact of which is well understood.

At the time of writing, the national Resources and Waste Strategy for England ('the Strategy') is in a period of consultation and therefore the Council should be aware that the future development of the Strategy following consultation may have a bearing on the design of services. The Strategy makes reference to the provision of a free garden waste collection service to all residents, the collection of a core set of dry recyclable materials, the separation of paper and glass streams, the weekly separate collection of food waste, and the potential for a minimum service level based on the frequency of residual waste collections (fortnightly). Some or all of these provisions may become statutory requirements in the future. In addition, the Strategy suggests that local authorities will be responsible for making decisions on their services in line with local requirements and that future performance may not be based on the traditional measure of recycling rate. The Council should be aware of this changing landscape and ensure that any future service changes are not at risk of contradicting future legislative requirements.

### European Legislation

#### Circular Economy

The European Commission has adopted an ambitious Circular Economy Package (CEP) which aims to help stimulate Europe's transition towards a circular economy, boost global competitiveness, foster sustainable economic growth and generate new jobs by "closing the loop" of product lifecycles through greater recycling and re-use, and bring benefits for both the environment and the economy. The EU (Withdrawal) Act 2018 will ensure existing EU environmental law continues to have effect in UK law after we leave the EU, including any commitments from the CEP in relation to waste and recycling that are part of UK legislation when we leave.

The package sets out new rules for waste management and establishes legally binding targets for recycling, with a focus on conserving resources and the recovery of critical raw materials.

There is potential for the CEP to have a direct impact on: the volume/composition of Local Authority waste; a need for expansion of the types of wastes that need to be collected for recycling at the kerbside, promoting other recycling schemes and facilities to capture more waste packaging for recycling; the operation of waste management facilities; and the cost of transporting, treating and/or disposing of residual wastes and other outputs from waste management facilities.

### National Legislation

#### A Green Future: Our 25 Year Plan to Improve the Environment (policy paper) January 2018

A Green Future sets out the government's approach to safeguarding the environment and future-proofing economic growth. It includes a number of policies concerned with the protection of natural capital in terms of land, the recovery of nature and landscapes, connecting people with their environment, protecting the

seas and the global environment and increasing resource efficiency including the reduction of pollution and waste.

A 25-year goal is to minimise waste, reuse materials as much as possible and manage materials at the end of their life to minimise the impact on the environment. The Plan sets out the following actions for minimising waste:

- An ambition to achieve zero avoidable waste by 2050;
- A target to eliminate avoidable plastic waste by the end of 2042;
- Meeting all existing waste targets – including those on landfill, reuse and recycling – and developing ambitious new future targets and milestones;
- Seeking to eliminate waste crime and illegal waste sites over the lifetime of the Plan, prioritising those of highest risk. Delivering a substantial reduction in litter and littering; and
- Significantly reducing and where possible preventing all kinds of marine plastic pollution – in particular, material that came originally from land.

#### Our Waste, Our Resources: A Strategy for England 2018

Following on from the 25 Year Environment Plan, the draft Waste Strategy released in December 2018 sets out how Government intend to preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. The Strategy makes firm commitments and provides clear longer-term policy direction in line with the 25 Year Environment Plan. The Strategy for England seeks to contribute to the delivery of five strategic ambitions:

- To work towards all plastic packaging placed on the market being recyclable, reusable or compostable by 2025;
- To work towards eliminating food waste to landfill by 2030;
- To eliminate avoidable plastic waste over the lifetime of the 25 Year Environment Plan;
- To double resource productivity by 2050; and
- To eliminate avoidable waste of all kinds by 2050.

The Resources and Waste Strategy is currently in the consultation period. Within this is a proposal to improve recycling from households in England with an aim for greater consistency in household collections. Waste collection authorities will likely have to collect the same core set of dry recyclable materials from households, as well as have a separate weekly food waste collection. The collection of food waste from all households, including flats, is likely to be mandatory by 2023, regardless of treatment route, and local authorities will be properly resourced to meet new net costs, both upfront and ongoing. Whether waste collection authorities should provide a free garden waste collection service for households with gardens is also being consulted on. Minimum Service Standards (MSS) are likely to be established which will include standards for a core set of recyclable materials to be collected, collection receptacle capacity and frequency. The target is for at least 65% of municipal waste by weight to be recycled by 2035, with no more than 10% ending up in landfill.

## 3. Identification of immediate improvements and efficiencies

### 3.1 Gap Analysis.

#### Data Analysis

The assessment of the data has identified several issues associated with the approach the Council takes with the coding of rounds and vehicles within the different datasets. A lack of consistency in the way the Council allocates reference numbers has meant that Wood has been unable to accurately align data from the proposed rounds to the actual round data and information on aspects of individual round performance. This lack of clarity has hampered Wood's ability to undertake detailed assessments of the efficacy of the services, and has meant that the assessment has had to be compartmentalised with inferred linkages between the different aspects based on comparable trends.

If the Council were to adopt a consistent round numbering approach and a measure of recording this round information against all of the collected data it would allow for a comprehensive assessment of the performance of the Councils waste collection systems.

### 3.2 Recommendations for service improvements

From the assessment of the services through the data discovery phase and stakeholder engagement activities undertaken summarised in section 1.2, Wood has identified a number of core themes across all levels of the service that need to be addressed to deliver a coherent and effective service prior to the implementation of any large scale service changes. The consistent themes identified are in relation to:

- Staffing and management structures;
- Communications;
- Service/policy inconsistency;
- Customer Services/ICT systems;
- Vehicle routing and round size;
- Vehicle replacement;
- Enforcement/engagement activities; and
- Trust.

The cost and impacts of delivering improvements against these themes will be incorporated into the enhanced baseline model that Wood will produce to reflect the service operating as effectively as it can. Some of these actions will result in additional costs, however where they result in reduced fly-tipping or side waste, increased recycling or improved service efficiencies there may be an accompanying saving that this can be balanced against.

## Staffing and Management Structures

The first step towards delivering a stable service is to review the staffing and management structures, in particular for the operations element of the service.

### Management Structures

Wood considers that the current management structure does not provide sufficient operational oversight at depot level. We consider that the Council should appoint an "operations director" to sit below the existing assistant director role. The operations director needs to have a detailed operations background preferably from outside of the existing structures to bring alternative views to the delivery of services. The role would have responsibility for the full financial management of the household waste collection services, providing oversight and direction to the depot-based staff, ensuring that collection KPIs are met and managing performance where it is not. The initial remit of the role would be to create, resource and lead an operations transformation team to work behind the scenes, engaging with all stakeholders to identify the delivery structure required to effectively deliver and manage the rollout of service transformation.

Below the operations director we believe that individual "depot managers" are required to ensure that there is an identified individual permanently located at each depot to manage the collections staff. This manager should hold full profit and loss responsibility for the operations of each depot and the performance of the crews located within their depot. The permanently located depot manager will allow the service managers and assistant service managers (ASM) to be more pro-active in managing staff off-site by undertaking round monitoring, staff engagement and situation management with the crews whilst they are undertaking collections.

### Collection Crews

Wood understands the implications of the legally binding Memorandum of Understanding (MOU) in place at the time of preparing this report; the MOU places limitations upon the structure of the staffing levels for waste collection crews. In principal Wood does not consider that the 4-3-2 staffing arrangement on the collection crews should create a fundamental issue and do not propose to change this approach. The grade 3 member of the crew (WRCO) having responsibility for the communications aspects of the rounds appears to be a reasonable approach to resourcing assuming that:

- Any communication undertaken by the WRCO does not lead to the undue delay of the collections;
- The WRCOs report any issues during the rounds in a timely and consistent manner; and
- All collection crews still have appropriate H&S training and are aware that they still retain H&S responsibilities;

Wood does consider that it would be appropriate to clarify the extent of the communication activities expected of the WRCO staff during their rounds. Simple quick communications and responding to immediate issues raised by residents during the round are appropriate for the WRCO to respond to, however, more extensive communications and detailed responses to residents should be raised through the appropriate communication channels for response by either the ASM or the enforcement/engagement staff.

### Enforcement/Engagement Staff

There are currently very limited numbers of staff employed to enforce the Council's collection policies or to engage with residents to support them in increasing their recycling. Wood highly recommends that the Council increases the number of staff from current levels to provide sufficient staff to undertake proactive

engagement targeted on areas of either excessive side waste presentation or low recycling participation. The staff should be responsible for undertaking lengthier resident communications supported where appropriate by the ASMs in the case of issues arising from missed collections. The exact numbers of additional staff required needs to be assessed within the service transformation plan developed by the proposed operations director, however the increased staffing costs need to be considered against the reduced residual waste disposal costs incurred if side waste policies are correctly enforced and recycling rates are improved.

## Communications

Poor communication appears to be a “360°” issue having been identified at every stakeholder engagement session that Wood has facilitated during the data discovery stage. The issue has been identified by residents, collection staff, the unions and members and, although the specific issues vary slightly within each group, there is a running trend that communication has become ineffective. The poor communication appears to be both a cause and symptom of the lack of trust that appears to exist throughout the service.

Communications improvements will need to address:

- Information provided to residents regarding the services (detailing materials accepted, collection dates, etc.);
- Responding to residents regarding operational issues (missed collections, recycling contamination, replacement bins, etc.);
- Communication by the collection crews during rounds to ASMs and the call centre regarding operational issues;
- The provision of confirmation that issues raised by collection crews have been noted and are being addressed;
- Communication with collection operatives regarding service KPIs and expectations;
- Communication between the depots and the directors to raise significant operational issues earlier; and
- Updates from the management team as to how raised issues are being addressed (where appropriate).

Wood recommends that a communications plan should be developed as part of the service transformation plan. The communications plan will require an expectation reset from all parties as to the level of information to be provided. As a minimum the communications plan should commit to:

- Identifying the most appropriate media channels to engage with all residents;
- Identifying a schedule for regular resident communication/engagement; and
- Creating a protocol for undertaking area specific engagement/enforcement activities.

## Service/Policy Inconsistency

A lack of clarity over collection policy was highlighted by residents, the unions and the collection operatives. At its source it appears that a lack of regular communications has led to both residents and collection staff not being clear on how and what material should be presented for collection. The Council’s current collections policy document is 25 pages long and produced in an overly complicated manner which, whilst comprehensive and a reasonable basis for policy decisions, makes it difficult for residents and collection operatives alike to understand. There appears to be a lack of consistency in staff understanding



of what should happen in the event that material is presented incorrectly and how any non-compliance is treated. This is exacerbated by an inconsistent approach to how reports of non-compliance are managed.

Wood proposes that a rationalised collections policy document is produced to form the basis of the operational agreement with staff and that this is provided to the collections operatives and service management staff along with the call centre staff as part of toolbox talks. A simplified version of the document in an easy to understand format should be produced for residents and provided as part of the improved communications approach identified in the sub-chapter above. This information should be regularly re-issued through a variety of media routes as identified within the communications plan to ensure that it remains clearly understood by residents. In particular, there should be a focus on ensuring new residents receive this information in a timely manner; this could be linked to Council tax registrations.

Enforcement of the new approach needs to be undertaken consistently across all rounds. Staff should only collect material in accordance with the policy document and where they report issues of side waste, incorrect / non-presentation of bins or contaminated recycling this should be supported by the Council with residents who fail to correctly present having to wait for their next scheduled collection. Equally where there is no record of a missed collection recorded by crews then the collection should be rearranged and completed within a defined time period. Consistent enforcement of the policies will allow for targeted engagement activities to take place in areas with poor compliance, support improved staff morale by ensuring that they feel they are being supported and provide savings through reduced residual waste arisings and reduced incidents of vehicles having to revisit properties.

### Customer Services/ICT systems

To support the improved communications and the enforcement of the collection policies the Council needs to ensure that the ICT systems are operating effectively to allow timely communications of issues from the rounds to the service managers and call centre operatives. The Council currently operates a “slab in the cab” system and phones for the WRCO staff but these do not appear to be part of a fully linked CRM system reporting to all of the relevant parties.

A fully integrated CRM / work flow system that ensures consistency between the routing system and operational delivery system and incorporates the slab and the WRCO phones will allow the crews to more efficiently report issues on the rounds (contamination, bins not presented, damaged bins, missed streets and reasons) which can then be seen in real time by the service managers and the call centre staff. The service managers can use the information to monitor rounds and identify where there is potential for “struggling rounds” to be supported to ensure scheduled properties are collected on the correct day and use the longer term picture obtained from the reporting to identify structural changes to rounds to drive further efficiencies or improve operational risk assessments.

The customer service team can use the information to ensure that residents are properly informed of any reasons why bins have not been collected and ensure that appropriate actions are identified, including informing residents that they are not complying with collection policy requirements and not rescheduling collections. The system must allow the collection staff to be kept abreast of the implications of their reports to allow them to effectively communicate with residents in the event that they are engaged during their rounds. This will ensure that staff see the benefits and implications of recording incidents which should encourage them to do this more often. By allowing staff to see the issues raised and identify the actions taken for any calls logged relating to a particular property then they can communicate effectively with residents where appropriate.

Accumulated data could also be utilised to identify areas with low recycling participation rates, regular contamination issues or regular issues with side waste, allowing the Council to undertake targeted engagement or enforcement actions, ensuring that either ASMs are present during collections to support crews in these areas or that engagement staff are deployed to these areas to provide specific

communications to the residents. Through the use of targeted communications reacting to specific identified issues, the effectiveness of communications spend can be maximised.

### Vehicle Routing / Round Efficiencies

Wood's assessment of the rounds and tip tickets suggests that there are efficiencies to be obtained through ensuring that the collection crews are productively engaged for the entire duration of their employed daily hours. There appears to be an operational shortfall of approximately 1.5 hours per round per day; without any change in pass rate this could lead to a theoretical reduction of up to 25 rounds<sup>1</sup>.

It is also noted that loads are often light and that vehicles are seen to be tipping twice per day without utilising the full capacity of the vehicle. As rounds were developed on the basis of a single tip per day it is recommended that crews are instructed to maximise the capacity of vehicles where rounds allow, and that a single tip per day is made unless the vehicle reaches capacity part way through the round.

Wood recommends that a working group is set up to develop revised rounds led by the operations director incorporating collections staff representation to agree a set of operational parameters (lift rate, tip times, vehicle travelling speed, etc) to revise the round structures based on a full working day. Any revised round structures identified by this working group should be subjected to trial prior to full implementation to ensure that they are robust and that all parties agree that they are operationally appropriate.

### Vehicle Replacement

During engagement sessions at the depots it was raised by staff and noted by Wood that a number of the vehicles within the collection fleet appear to be older than would be expected given the nature of the collections. It was also reported that a number of the vehicles being used are hired in from external suppliers. The use of older vehicles is likely to result in higher fuel consumption, greater emissions and increased maintenance costs. The use of hired vehicles would therefore be expected to result in increased costs compared to vehicles the Council owns and operates.

Wood recommends developing a vehicle specification that identifies the requirements for any new vehicles to be purchased and developing a vehicle replacement schedule which will allow the Council to identify those vehicles that are due to be replaced and build an appropriate allowance into the Councils forward budgets. With the number of vehicles the Council operates, and with a replacement schedule, it may be possible for the Council to procure a framework agreement and potentially lower the unit cost of the vehicles.

### Enforcement / Engagement

There appears to be minimal enforcement or engagement activities undertaken by the Council where properties or areas within the City demonstrate poor compliance with the collection schemes. The recruitment of additional enforcement / engagement staff and the consistent application of policies has been covered previously, however the Council needs to develop an engagement / enforcement plan and escalation procedure to identify how the staff are utilised.

Wood recommends that a balanced approach is taken in the split between enforcement and engagement at a property level with staff initially delivering guidance and support where properties are identified as not

---

<sup>1</sup> The exact number of rounds that could be reduced would need to be considered against round designs taking into account the implications of additional tipping requirements and day of collection constraints.

complying with the waste presentation requirements, with a step by step escalation potentially leading to a removal of service or action being taken. A typical approach may involve:

- Letters / one-to-one discussions;
- Property visits to identify the potential need for additional capacity;
- Bin audits to support waste separation;
- Formal notification of non-compliance;
- Notice before action;
- Removal of containers (in the event of repeated contamination); and
- Legal prosecution.

The Council needs to ensure that all officers and Councillors are aware of the implication of pursuing comprehensive enforcement activities and the potential for negative press which it may generate.

In addition to the household level activities, the enforcement / engagement officers could be utilised in developing community relationships, undertaking community group and schools engagement sessions and acting as the public face of waste and recycling to the City. This could be reinforced through them championing waste reduction measures.

## Trust

Throughout the engagement sessions that Wood have undertaken it is apparent that there is a lack of trust between the different levels of the collections service and between the residents and the Council. The residents do not trust the Council to provide an appropriate service, the staff do not trust the residents not to "game the system" to ensure they get a collection or that the customer services team have properly assessed whether bins have been missed. The unions do not trust the Council's intentions with regards to privatisation of the service and the senior levels of the Council do not trust the unions not to take the staff on strike if they attempt to make service changes.

Rebuilding trust is critical to ensuring that the service can be delivered effectively. Through the measures identified within this section Wood believes that it should be possible for all parties to move towards improving the levels of trust however this may not be entirely possible.

Wood recommends that as part of the development of the service transformation plan a series of "review and reconciliation" sessions are held whereby staff are able to bring forward issues without fear of incrimination or censure. By undertaking these sessions, the Council will be able to identify the drivers behind some of the actions that are and have been undertaken and enable them to take steps to address these within the plan. Without the removal of the fear of recriminations, it may not be possible for any party to identify all of the issues to be fully identified, and it will not be possible to provide the full reset to the delivery of the service.

## Summary of improvement recommendations

Wood recommends that the Council considers the following short- and longer-term service improvements:

- Short-term recommendations
  - Development of a service transformation plan, covering all areas of improvement, identifying responsible persons, and defining timescales for change;
  - A review of staff structures and the appointment of a new operations director;

- Confirmation of role responsibilities to all staff;
  - Improved communications between all members of staff;
  - Revisions to the Councils collection policy and subsequent communication to staff and residents;
  - A full review of the end to end ICT solutions in place to identify any gaps or failures;
  - Creation of an operational working group to plan, devise and implement revised collection rounds and identify other service delivery improvements; and
  - Development of a vehicle replacement strategy in line with existing and potential future services.
- Longer-term recommendations
    - Improvements to ownership, accountability and performance management at depot level, supported by an improved management structure identified within the short-term recommendations;
    - An increase in enforcement and engagement staff to support revised Council policies and procedures;
    - Improved communication with residents, supported by the development of a communications plan; and
    - ICT system updates as identified through the systems review, and the implementation of regular refresher training to staff on how the ICT solution is to be used. ICT use to be monitored and reported on, with collated data used to support targeted communications and enforcement activities.

## 4. Future Options

In addition to improving the current waste collection service, the Council needs to consider how they wish to deliver the waste collection service in future to meet their needs, the needs of the residents of Birmingham, and to comply with legislation. Wood will be undertaking an options modelling exercise, considering a number of waste collection service options, the output from which will be detailed within the final report.

### 4.1 WRAP's Consistency Framework

In identifying best practice for future collection options Wood has considered *WRAPs consistency framework*<sup>2</sup> as a leading guidance document on collection options local authorities should look to implement. The consistency framework sets out eight material types that make up around 60% of waste (residual and recyclables) collected from households: plastic bottles, plastic packaging (pots, tubs and trays), metal packaging (cans, aerosols and foil), glass bottles and jars, paper, card, food and drink cartons and food waste.

The fewer collection and sorting systems that householders are subject to can offer a number of key benefits as the approach is more standardised and consistent. Three collection systems have been devised as part of the consistency framework with key factors considered being cost and performance, material quality and householder satisfaction and engagement, as well as compliance with legal requirements. The systems can be adapted for both low rise (kerbside collected) and flat properties but each system varies in its performance against the key factors outlined. All of the three systems have food waste collected weekly and separate from both residual and garden waste; evidence indicates that more food waste is captured when it is collected separately on a weekly basis in comparison to mixed food and garden waste collections. The three systems are shown in Table 4.1.

---

<sup>2</sup> WRAP, 2016 A framework for greater consistency in household recycling in England  
[http://static.wrap.org.uk/consistency/Read more about the framework.pdf](http://static.wrap.org.uk/consistency/Read%20more%20about%20the%20framework.pdf)

Table 4.1 WRAP consistency framework collection systems

Container	Multi-stream with separate food	Two-stream (fibres separate) with separate food	Comingled with separate food
<b>Container 1</b>	Residual waste	Residual waste	Residual waste
<b>Container 2</b>	Household plastic packaging, metals (cans, aerosols and foil) and cartons	Household plastic packaging, metals (cans, aerosols and foil) and cartons	Household plastic packaging, metals (cans, aerosols and foil), cartons, glass, paper and card
<b>Container 3</b>	Glass and card*	Paper and card	Food waste
<b>Container 4</b>	Paper	Food waste	
<b>Container 5</b>	Food waste		

\*Suggestion that glass and card would be presented in the same box but separated into different compartments on the vehicle. In flattened properties card and paper could be collected together. Glass would be collected as a separate stream.

Local circumstances and housing types need to be considered when looking at the frequency of recycling and residual waste collections, the containers provided (bin, boxes or sacks) and their capacity. WRAP recommends that dry recycling capacity should be equivalent to 120 litres per week, as well as residual waste capacity as evidence has shown that this has a positive impact on the performance of the recycling service and is more cost effective. The framework also states that fortnightly residual waste collections are more cost effective than weekly collections.

## 4.2 The Council's Future Options

### Option Design

#### Frequency of residual collections

The collections consistency framework appears to be moving towards residual collections being undertaken fortnightly at the most frequent and in any case, weekly residual capacity should not exceed 120L. Less frequent residual collections provide a more cost effective approach and as such Wood has recommended a series of options with varying residual waste collection frequencies. The majority of Councils currently operate a fortnightly residual waste collection, with an increasing trend to move towards even less frequent collections, typically three-weekly, which have led to improved recycling rates<sup>3</sup>.

<sup>3</sup> Doherty, J. (2019) 'Wigan hits target after three-weekly switch' *Lets Recycle* [Online] Available at: <https://www.letsrecycle.com/news/latest-news/wigan-hails-three-weekly-switch/> (Accessed: October 2019)

## Recycling collection options

The configuration of recyclates collected (i.e. comingled, two-stream, multi-stream) is ultimately dependant on the local waste management infrastructure and the contracts that the Council currently has in place. The Resources and Waste Strategy respects this and does not advocate the use of one collection method.

Comingled recycling schemes are perceived to be easier for residents to participate in and this aids increased participation rates and total collected recycling yields but there can be an impact on the quality of the recyclate collected, with higher levels of rejects which could be perceived to outweigh the advantages. Higher levels of contamination from non-target materials within the comingled recyclates can increase costs of collection and sorting and reduce the overall value of secondary materials. The level of rejects from recycling has increased over the last 10 years. The Resources and Waste Strategy consultation document states that comingled collections should generally only be considered where separate collection is not technically, environmentally or economically practicable or not appropriate to meet necessary quality standards for relevant recycling sectors.

Reprocessors have highlighted the importance of separating glass and paper, as a minimum, and this should be considered within the new collection service. Fine shards of glass can become embedded in paper and card and lead to significant disruption at later processing stages, as well as affecting the quality of the paper collected. Maintaining a separation of the paper and glass streams should benefit local authorities in the long term as better quality material accepted by reprocessors should result in greater revenues. A two-stream approach is therefore the better alternative to co-mingled with regards to material quality when multi-stream collections are not practicable. As the Council currently offers a two-stream service it may be advantageous to retain this type of service from a cost perspective.

Full separation of materials will require internal and external space for separation of materials and presentation of containers. In heavily urbanised areas with small properties this may present practicality issues which are difficult to adequately address. However, the quality of materials should be high with the possibility of providing high quality raw materials to UK industries.

The public engagement activity found that people are not in favour of the existing paper / card 'pod' as they often find it too small for the amount of paper and card waste generated; there was support for further segregation of waste with separate bins for paper/card and containers. The assessment of the existing container stream also identified issues with the cross contamination of the stream with paper and card potentially due to containment failure. In the majority of proposed options, Wood has recommended that the pod is removed from the wheeled bin but recognises the need to keep the paper/card clean and dry.

## Food waste

In order to meet the requirements of the Resources and Waste Strategy, the Council will likely have to implement a separate weekly food waste collection, and this is common across all of the proposed options. This would involve issuing residents with an internal and external food caddy and liners (with provision of liners as this is known to increase participation uptake).

## Waste Collection Options

Based on the recommendations within the WRAP consistency framework and mandates in the Resource and Waste Strategy, as well as other guiding information Wood has identified four key options for the collection of the recyclates with sub-options based on the frequency of the collection of the residual waste as shown in Table 4.2. These options will be considered within the options appraisal process and are as follows:

- Option 1 is as per the current service ('baseline') with the addition of a separate food waste collection;
- Option 2 sees the introduction of alternate weekly collections for two-stream dry recycling; one week a 240L wheeled bin for plastic, cans and glass is collected, and the following week a 180L wheeled bin for paper and card is collected. The sub-options are:
  - ▶ 2a - Weekly residual waste collections;
  - ▶ 2b - Fortnightly residual waste collections; and
  - ▶ 2c - Three weekly residual waste collections.
- Option 3 is a comingled dry recycling collection with one 240L bin provided for recyclables. The sub-options are:
  - ▶ 3a - Weekly residual waste collections;
  - ▶ 3b - Fortnightly residual waste collections (alternating); and
  - ▶ 3c - Three weekly residual waste collections.
- Option 4 is a multi-stream dry recycling system with full separation of materials through kerbside sort methodologies. This would involve boxes and weekly collections. The sub-options are:
  - ▶ 4a - Fortnightly residual waste collections; and
  - ▶ 4b - Three-weekly residual waste collections.

Sensitivities include considering the impact of a Deposit Return Scheme (DRS) on dry recycling collections as this may see the reduction in drinks containers within the recyclable materials collected at the kerbside.



Table 4.2 Future Collection Initial Options

Option	Residual waste	Dry recycling		Garden waste	Food waste
Current (Baseline)	Weekly via 180 litre wheeled bin (6-8 residents 1 x 240l, 9+ residents 1 x 360l)	Fortnightly 240l wheeled bin for plastic, metal and glass	Fortnightly paper/card collection 55l insert pod (within 240l bin)	Fortnightly charged for collection via 240 litre wheeled bin	None
1	As current	As current	As current	As current	Separate weekly
2a	Weekly via 120 litre bin	AWC 240l wheeled bin for plastic, metal and glass	AWC 180l paper/card wheeled bins*	As current	Separate weekly
2b	Fortnightly via 240 litre bin	AWC 240l wheeled bin for plastic, metal and glass	AWC 180l paper/card wheeled bins*	As current	Separate weekly
2c	Three weekly via 240l bin	AWC 240l wheeled bin for plastic, metal and glass	AWC 180l paper/card wheeled bins*	As current	Separate weekly
3a	Weekly via 120 litre bin	Fortnightly fully comingled 240l wheeled bin		As current	Separate weekly
3b	Fortnightly via 240 litre bin (AWC)	Fortnightly fully comingled 240l wheeled bin (AWC)		As current	Separate weekly
3c	Three weekly via 240l bin	Fortnightly fully comingled 240l wheeled bin		As current	Separate weekly
4a	Fortnightly via 240 litre bin	Weekly multi-stream (full separation) boxes		As current	Separate weekly
4b	Three weekly via 240l bin	Weekly multi-stream (full separation) boxes		As current	Separate weekly
<b>Variant</b>					
v1	As per preferred option	As per preferred option		Free fortnightly collection of garden waste	As per preferred option
<b>Sensitivities</b>					
To include impact of Deposit Return Scheme on Dry recycling collections					

\*AWC (Alternate Weekly Collection) different recyclable materials are collected on alternate weeks, e.g. plastic, metal and glass collected one week, with paper and card collected the next week

**wood.**

