

WASTE & RECYCLING COLLECTION ROUND REVIEW 2022

Cleaner & Greener Advisory Committee - 19 April 2022

Report of: Deputy Chief Executive & Chief Officer, Finance & Trading

Status: For Endorsement and Support

Key Decision: Yes

Executive Summary: This report updates Cleaner & Greener Advisory Group Members about an operational change to the waste and recycling collection rounds and seeks endorsement and support, for the implementation of a new collection round working model.

The reconfiguration of our rounds aims to maximise efficiencies and reduce fuel and carbon emissions, whilst meeting weekly waste collection needs and delivering exceptional customer service.

This report supports the Key Aim of: Making Sevenoaks District to be a place where people can enjoy clean and high quality urban and rural environments.

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Recommendation to Cleaner & Greener Advisory Committee: That the Waste & Recycling collection round review is endorsed by the Cleaner & Green Advisory Committee, and the committees views be submitted for consideration by Cabinet.

Recommendation to Cabinet: That the Waste & Recycling collection round review as proposed along with any proposals submitted by the Cleaner & Greener Advisory Committee be considered and the proposal is approved.

Reason for recommendation: It is vital that we update and redesign our current waste collection rounds as they have become inefficient, given they are over ten years old. The new collection rounds also take into account future needs regarding changing our existing collection methods for food and glass, reducing carbon emissions, future vehicle needs and protecting our weekly collection service..

Introduction

1. The weekly collection of household waste (residual and recycling) is one of the highest profile and extremely valued services provided by the Council. Household waste is defined in Part II of the Environmental Protection Act 1990, as amended, as waste that originates from private homes and is collected by the Waste Collection Authority (Sevenoaks District Council).
2. Currently, although residents have the same day for waste and recycling weekly collections, they may have different days for other waste services, such as garden, clinical and bulky waste collections.
3. Part of the reason for looking at waste collection rounds is that it is estimated that a more efficient and effective waste collection round will reduce the total amount of vehicles we use, reduce our fuel consumption and overall reduce our carbon footprint by approximately 5%, contributing to the Council's Net Zero Carbon strategy.
4. The Government are currently implementing producer responsibility regulations that cover packaging waste, electrical and electronic equipment (EEE), batteries and end of life vehicles (ELVs). Producer responsibility is about making sure businesses that manufacture, import and sell products are responsible for their end of life environmental impact.
5. The regulations require businesses to: minimise waste arising from products and promote their re-use, ensure the waste products are treated and meet recovery and recycling targets for the waste materials and design products by reducing material use and enhancing reusability and recyclability.
6. The Government has introduced the Environment Act 2021 with an Extended Producer Responsibility (EPR) scheme, which will require producers to bear greater responsibility for the costs of the collection and disposal of their products. A levy will be placed on certain types of packaging, which would then be distributed back to local authorities, although this is still currently being developed.

Background

7. The overall objective of the collection round review is to update and where necessary, redesign the current household weekly collection service so it is more efficient than the current collection round, and is better placed to meet the challenges of a growing and evolving District.
8. The existing waste collection rounds have been audited and digitally mapped, which involved a lengthy staff process, enabling crews to articulate the basic rounds and any anomalies or local arrangements for that particular round to be recorded.

9. The collection round review has been undertaken within the context of significant changes to housing/population growth, road and traffic alterations across the District, and changes to equipment and vehicles. The current waste collection round was designed nearly 10 years ago. The new proposed waste collection round also considers, where possible, any further growth expected in the District over the coming years.
10. The Government's Resources and Waste Strategy, requires significant changes to the standardisation of collected waste and recycling. If these are adopted all local authorities across the UK will be required to collect a standardised list of recycling that includes separate food and glass from the kerb-side. The proposals are to fully integrate these requirements by 2023.
11. The new waste collection rounds need to ensure they are fit for purpose for future waste needs, so that the Council is in the best position possible to evolve our waste and recycling offer to residents in a way that complements how consumers, producers and the retail sector also change habits, materials and recycling offers.
12. The new collection rounds need to better respond to existing localised challenges. For example, the District has numerous residential flats served by communal bins, and the current collection method for these with the drop-fronted bins has led to complaints where the black bags rip during the decanting process, and the crews have no easy means of collecting the loose waste.
13. Route planning and vehicle optimisation is also critical in re-designing waste collection rounds as there are often significant operational issues for the service in relation to road and building access.
14. The newly created waste collection rounds will also enable Supervisors to spend less time dealing with missed collection complaints, giving more time to help, support and supervise waste collection crews working in the district.
15. More efficient waste collection rounds will also enable the service to allot ownership of the rounds to collection crews, and additionally provide time at the end of the collection to de-brief on the days issues with the Supervisors.
16. The waste collection review is not just a technical exercise of redesigning routes, but one that also looks at processes that support the operational work, how we better endorse and involve staff, our interaction with and accountability to residents, and how we can improve service delivery from our existing infrastructure.
17. The review also has been designed to take into account future changing vehicle needs and changes to technology along with a growth in housing needs.

Current waste collection

18. The current rounds were devised 10 years ago using a partial zonal method. The District was split up into 5 main areas with two vehicles placed in each main area, plus a rural round south. As the property numbers have increased and growth has not been a constant in the zones, additional rounds have been created which have been completed by existing teams at the cost of increased mileage and later finish times, making some rounds now impossible to complete within the standard working hours.
19. Additionally, the Commercial Waste rounds are being used uneconomically to help collect domestic waste one day per week. This is because the refuse rounds do not have the capacity to currently complete their rounds. The table below details the current resources being deployed.

Sevenoaks Resources Manpower

Refuse/Recycle

Round ID	Area	Vehicle	HGV	7.5t	Van	LDR
R1a	Sevenoaks	LN70YBO	1	0	0	2
R1b	Sevenoaks	LN70YBP	1	0	0	2
R2a	Edenbridge	ND60DXY	1	0	0	2
R2b	Edenbridge	NA11XTM	1	0	0	2
R3a	Kemsing	GN17VKV	1	0	0	2
R3b	Kemsing	WP17TGX	0	0	1	0
R4	Cowden	GN15DNX	1	0	0	2
R5a	Swanley	NA11XTX	1	0	0	2
R5b	Swanley	GF61VCL	1	0	0	2
R6	Eynsford	FN60TLK	1	0	0	2
R7a	New Ash Green	GL63BZR	1	0	0	2
R7b	New Ash Green	LN70YBM	1	0	0	2
SVa	Narrow Access	VX16ASV	1	0	0	1
SVb	Narrow Access	DV63UFY	1	0	0	1
Narrow Mop Up	Various	VU11HMG	1	0	0	1
Mop Up Cage	Various	PJ63WBY	0	0	1	1
BottleBank1	Various	CN18 VCV	1	0	0	0
BottleBank2	Various	GN60FFL	1	0	0	0
Out Of Door Requirement Total			16	0	2	26

Garden Waste

Round ID	Area	Vehicle	HGV	7.5t	Van	LDR
G1	District	PO63BKN	1	0	0	1
G2	District	VN10DDO	1	0	0	1
G3	District	DX13GPK	1	0	0	1
G4	District	CN11CTF	1	0	0	1
G5	District	GK11OGV	1	0	0	1
Out Of Door Requirement Total			5	0	0	5

Paid Services

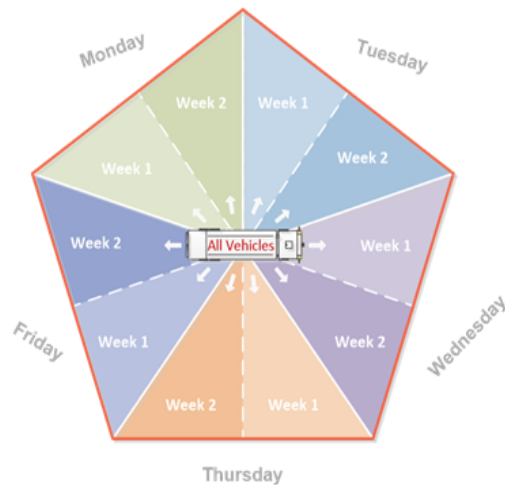
Round ID	Area	Vehicle	HGV	7.5t	Van	LDR
Trade 1	Trade Waste	GL63 BZS	1	0	0	1
Trade 2	Trade Waste	HN63 XUY	1	0	0	1
Cesspool	Cesspools	GN15 OBO	2	0	0	0
Fly Tips	CDSU	DX62 AOU	1	0	0	1
Bulkies	CDSU	NA10 VPL	1	0	0	1
White Goods	CDSU	GN18 RPX	1	0	0	1
Sacks 1	Sack Deliveries	LJ15 XGA	0	0	1	1
Sacks 2	Sack Deliveries	LJ15 XGB	0	0	1	1
Bin Deliveries	Bin Deliveries	GN12 FWA	0	0	1	0
Out Of Door Requirement Total			7	0	3	7
			28	0	5	38

* (Loader = LDR)

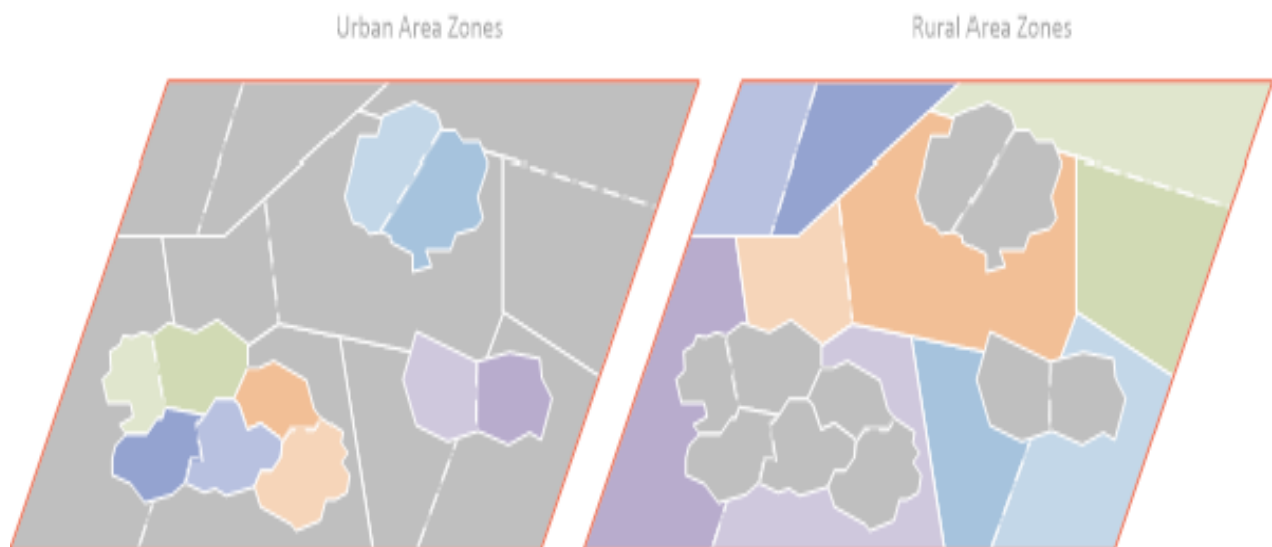
20. Due to the lack of collection capacity within domestic waste rounds it has negative impacts on other service areas such as clinical waste as this is currently collected on a Friday evening and Saturday, which requires overtime. Bulky-waste items are collected on Mondays and Thursdays only, and the capacity of this one round is at its maximum. White goods are collected on Tuesdays and Wednesdays.

New Waste Collection Proposal

21. In developing the new route schedules proposed at this stage, we have utilised a trusted waste Industry standard, (Webaspx) which is used by over 180 local authorities countrywide.
22. The routing development process has been undertaken utilising the Webaspx Waste Manager Design software under licence. This approach enables local knowledge held within the Council to be harnessed during the routing phase, which is key to ensuring effective schedules. The process is outlined in Appendix H.
23. Using the Webaspx software we produced indicative collection routes for the weekly residual/recycle waste services, with those routes, which are based and overlaid on the data used by our GIS system, being around 90% accurate. Greater accuracy has been achieved using the local knowledge of the management team and crews to ensure that the assumptions made by the routing model relating to accessibility, travel times etc. are accurate.
24. There are essentially two approaches to the “zoning” of collection services. The first is the more traditional full zonal approach, which in essence sees an area divided in to ten collection zones for bi-weekly or 5 collection zones for a weekly service. Each zone is then assigned a collection day and week, and all vehicles within the collection fleet work within that zone on that particular day as displayed on the indicative graphic shown below.



25. The benefit of the full zonal approach is that with vehicles all working within a small area of the District on any given day, the vehicles and crews can more easily support one another in the event of delays and breakdowns. This in turn helps to engender improved team spirit and thus ultimately improve the quality and efficiency of the services provided. Conversely, the traditional full zonal approach can be viewed negatively by some as they believe that the deployment of the entire collection fleet into an area 1/10th or 1/5th the size of the District on any given day can significantly impact upon traffic flows and congestion.
26. The second approach is the more localised zonal approach which although similar to the more traditional full zonal approach does not simply divide an authority area in to 5 or 10 equally sized zones in which all vehicles work, but instead separates out the urban and rural areas first.
27. Once the urban and rural areas are determined, they are divided into a maximum of 10 or 5 collection zones each (for a fortnightly or weekly collection service respectively.) As such, under the localised zonal approach proposal our District would have up to 10 collection zones for our weekly collection frequency. The image below provides an indicative graphical demonstration of the localised zonal approach.



Localised Zonal Approach		
Monday	Week 1	Week 2
Tuesday	Week 1	Week 2
Wednesday	Week 1	Week 2
Thursday	Week 1	Week 2
Friday	Week 1	Week 2

Localised Zonal Approach (Preferred option)

28. The main benefit of separating out the urban and rural areas before zoning, and thus the main benefit of the more localised approach to collections over the full zonal approach is that different crew sizes and working methods can be used in different areas.
29. Rather than each vehicle providing a varying mix of urban and rural collections on any given day as they would under a full zonal approach, crews can be more easily assigned to predominantly urban work and predominantly rural work across that the course of their working week. What this means is that we can ensure that crews that are deployed as a driver and two operatives have enough work throughout the week to maximise the benefit of being deployed with a crew of such a size. Similarly, we can ensure that in the more rural areas, only driver and one operative crews (rather than driver and two operative crews) are deployed, so as to avoid incurring unproductive loader time.
30. Whilst there are benefits in both zonal approaches, we believe that the localised zonal approach offers the greater benefits in the Sevenoaks District area. A mix of urban and rural properties, coupled with the way in which those properties are dispersed across the authority area means that a consistent mix of crew sizes

(as would be required under the full zonal approach) would result in some crews/operatives being underworked and others being overworked.

31. The mixed crew sizes that can be proposed under the localised zonal approach will negate this issue. As such, in developing our round schedules using the Webaspx Waste Manager Design software (as described earlier) we have zoned the urban and rural areas separately.
32. Whilst of course the use of the localised zonal approach means that the benefits of the full zonal approach cannot be fully realised, the localised zonal approach still adopts zones in which multiple vehicles work, and thus the benefit of inter-crew support will still be evident under the this approach.
33. There will be fewer vehicles to support one another in each zone (as it will only be the urban vehicles or the rural vehicles operating in any zone on any given day, rather than all vehicles). However, it could be argued that this actually generates even further benefits, as the fewer vehicles in an area on any given day will help to lessen the impact on other road users, which as detailed previously, is an argument against the full zonal approach.
34. The proposal with regard to collection schedules and thus our proposal with regard to collection days represents a change from the existing methodology used. As such, we believe that day changes will be required for around 78% of residents. Whilst this is relatively high, we believe such changes would not pose an issue, and are indeed required to ensure that we can realise operational efficiencies and reduce our carbon footprint.

Webaspx Methodology

35. The work undertaken using the Webaspx Waste Manager Design software has incorporated an array of details, which are crucial for accurately modelling and optimising waste collection services. This information has been taken into account when the powerful optimisation algorithms are employed to determine optimal service designs. The creation and use of the models within the software has enabled an assessment of the interplay and sensitivity of the designs to changes in particular variables, e.g. in assessing different infrastructure options, working patterns and fleet arrangements.
36. The results of the software modelling are displayed geographically within the software and, performance statistics have been generated to assess the round designs, as per table Appendix F tables one & two
37. It is proposed for the new weekly waste collection rounds in the District to be divided into five main zones and 2 rural zones, as illustrated in Appendix B and C

38. The introduction of zonal working for all waste collections that include residual, recycling, garden, bulky and clinical collections will give residents one collection day for all waste collection services. This will mean easier communications message for bank holidays and other events where the normal collection day is moved.
39. Under the proposal the District will be divided into five main zones, 2 rural zones, and narrow access zones. The refuse crews would work collectively in one zone on a given day, moving to the next the day after. This has the benefit of simplifying the messages to residents in the event of service disruption due, for example due to bad weather. With a number of crews operating in one area at a given time, it also speeds response to missed bins.
40. The five main proposed zones are:
 - Swanley
 - New Ash Green/West Kingsdown
 - Kemsing across to Knockholt
 - Sevenoaks Town,
 - Edenbridge/Westerham.
41. These main zones are based around the five densely populated areas in the district.
42. The Rural proposed zones are:
 - South (Sevenoaks Weald down to Cowden)
 - North (South Darenth down to Well Hill)
43. These two rural zones are not as densely populated and the roads servicing these tend to be country B roads.
44. The Narrow access has been split into 15 rounds based on 18tonne, 2 x 12tonne and a 3.5tonne caged vehicle. These 3 vehicles will work in five zones based around the five main zones, of Swanley, New Ash Green, Kemsing, Sevenoaks and Edenbridge.
45. Flats with communal bins will have its own zone as weekly communal collections will be 3 days refuse 2 days recycle based on weight assumptions.
46. It is proposed that we start domestic clinical collections 5 days a week (current service 2 days a week) based on the residents collection day, so that will be covering 1 main zone, 2 rural zones and the narrow zone. Plus we also propose that bulky item collections be collected in the same manner - 1 main zone and 2 rural zones per day.

47. The introduction of zonal working for clinical waste collections gives the council future opportunities to enhance the commercial offering for this service and to introduce a commercial clinical waste paid-for service for services such as Residential homes, Doctors and Dentist surgeries.
48. In addition, to simplify the message to residents and gain more resident satisfaction, we propose to collect the sacks by clearing each zone before moving on to the next.
49. The zones have been designed in such a way that should a force majeure event occur and collections are not possible in that area, just 1 weekend day would be required to catch it up. Whereas now if the force majeure event is longer, then 3 days of collections are affected. Zonal working eliminates the knock on effect, as there are more resources available in one area to clear all.
50. The tables in Appendix G show the potential saving on fuel and carbon emissions against the existing collections, even though we have 1 extra vehicle on the road because we have routed more vehicles into one area the savings are on tip runs as the work is more evenly spread.
51. The property numbers have increased as we have taken into account new builds in Edenbridge that are not yet fully occupied or are still under construction. We also have spare capacity on zone 3 in Knockholt for the proposed new village of around 650 properties.
52. Rural areas such as Cowden, and Leigh in the south of the District and Horton Kirby, and Crockenhill in the North of the District, will be serviced by 1 vehicle each over five days, to ensure country lanes are not “Clogged” with dustcarts, an illustrative example of which is shown in Appendix C
53. The introduction of an 18tonne narrow access vehicle (Currently 26t) will ensure easier access to roads where parking has caused previous access issues.
54. The introduction of a flats collection round, and exchanging the flat drop-fronted bins to standard bins, will eradicate the loose litter in the bottom of the existing bins.
55. Unfortunately missed collections do occur, however, we propose an improvement to our current system. The new system is designed to ensure that the disruption and inconvenience caused to residents is minimised thereby increasing service user satisfaction.
56. The current policy for the crew that missed the collection in the first instance is to return to collect it. However, this can sometimes lead to the missed waste not being collected until the next day, and we now propose a Mop Up / Hit squad approach that starts 2 hours later than the other crews.

57. The introduction of a second 12tone narrow RCV will ensure there are no issues with mixing waste for the smaller narrow round, as one will collect refuse and the other recycle.
58. Effective utilisation of in-cab technology on the paid for service rounds to enhance customer satisfaction, and reduce administrative processes in absorbing new customers into existing rounds will improve efficiency and service delivery.
59. End of Day (Debrief) Reports; the introduction of end of day reports for each round, to be completed by the supervisor to ensure quality of information provided for streets that crews have been unable to collect bins from that day are actually included on the report and sent to customer solutions enabling faster communication.

Communications Plan

60. In advance of the changes, we will execute a comprehensive communications plan targeting residents, staff, Members and partners.

The key messages of the Plan are:

- Residents will continue to have their waste collected every week, but it may be on a different day
 - Residents should put their waste out at 7am on their collection day, even if their collection day remains the same
 - Nothing else will change.
61. The plan includes direct communication with every property to inform of their collection day from 5 September 2022. This will be supplemented by digital and other traditional communications.
 62. The revised waste collection days will be available on our website shortly before the new arrangements begin.

Key Implications

Financial

The preferred collection proposal would generate the following estimated financial savings;

- Reduced staffing costs of £969.78 per week (based on the current hourly rate and reduced National Insurance).
- Reduced Fuel usage of £1,558.46 per week
- Total weekly saving of £2,528.24, giving an estimated annual saving of £126,412.13

The estimated one-off costs for this preferred proposal on vehicle purchasing would be one extra vehicle (to cover the 3rd small vehicle round) at a cost of £145,500.

The Communications Plan will cost in the region of £25,000.

Legal Implications and Risk Assessment Statement

The Environmental Protection Act 1994, as amended places a statutory duty on Sevenoaks District Council as the Litter Collection Authority and Waste Collection Authority. Duties placed upon the Council include, the removal of waste and litter and the enforcement of the offence of litter across the district.

The Environment Bill 2020 currently indicates that legislation will be brought forward to amend existing statutory responsibilities with primary and secondary legislation, which as the local collection authority the Council will be required lawfully required to implement by 2023.

Equality Assessment

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

Net Zero Implications

Members are reminded of the Council's stated ambition to be Net Zero with regards to carbon emissions by 2030. The decisions recommended in this paper directly impact on this ambition. The impact has been reviewed and there will be a decrease on carbon emissions produced in the district because of this decision.

The modernisation of waste and recycling collection rounds will be more efficient and effective and will reduce the total amount of vehicles we use, reduce our fuel consumption and overall reduce our carbon footprint by approximately 5%, contributing to the Council's Net Zero Carbon strategy.

Appendix 1

- A - The National Resources and Waste Strategy Summary
- B - District Zones
- C - Rural Routes
- D - Staffing Levels
- E - Existing Resources tables one and two
- F - New Resource tables one and two
- G - New v Old table
- H - Process stages for route optimisation

Appendix 2 - Communications Plan

Background Papers

None

Adrian Rowbotham

Deputy Chief Executive and Chief Officer - Finance & Trading