

Climate Impact Assessment, Appendix 2, Waste Transformation

Will the decision/proposal impact...	Impact	If an impact or potential impacts are identified:			
		Describe impacts or potential impacts on emissions from the Council and its contractors.	Describe impact or potential impacts on emissions across the Borough as a whole.	Describe any measures to mitigate emission impacts	Outline any monitoring of emission impacts that will be carried out
Emissions from non-domestic buildings?	None				
Emissions from transport?	Decrease	Compared with baseline fuel consumption in RCVs (refuse collection vehicles), route optimisation may be expected to cut annual greenhouse gas emissions from household waste collections by ca. 6% (central estimate). This would translate into a carbon saving of ca. 80 tCO ₂ e, which is the same order of magnitude as anticipated carbon savings from new solar PV installations and decarbonisation works in Council buildings, in the present municipal year.	N/A	Expected carbon savings from route optimisation are based on assumptions about RCVs' fuel efficiency; it is further assumed that the optimised routes will always be taken, whereas there might be operational reasons why an alternative route needs to be followed e.g., in the event of an obstruction. Operational management of household waste collection rounds includes monitoring vehicle movements with Bartec municipal waste software, which will ensure the realisation of benefits from route optimisation.	Greenhouse gas emissions from refuse collection vehicles are within scope of the Council's 'Net Zero by 2030' climate change target and are reported annually alongside the Climate Emergency Annual Report, as emissions from Council fleet vehicles.

Emissions from waste, or the quantity of waste itself?	Unknown	N/A	Greenhouse gas conversion factors for all non-landfilled waste are based on its transport to downstream waste treatment facilities, only: any emissions from sorting, processing and otherwise treating waste are outside the scope of greenhouse gas emissions accounting, as the responsibility of the downstream facility. Cutting fuel consumption by optimising household waste collection routes directly translates into a smaller carbon impact from waste, throughout the Borough.	N/A	To avoid double counting, greenhouse gas emissions from household (and Rotherham Business Waste) collections are monitored and reported as scope 1 emissions from fuel consumed by the Council's vehicle fleet. Scope 3 emissions from downstream waste treatment are monitored separately but will not be affected by route optimisation.
Emissions from housing and domestic buildings?	None				
Emissions from construction and/or development?	None				
Carbon capture (e.g. through trees)?	None				

Identify any emissions impacts associated with this decision which have not been covered by the above fields:

None identified.

Will the proposal affect Council services' resilience to climate change, or the capacity of people living in the Borough to adapt to climate change?

There are no direct 'adaptation impacts' from the route optimisation of household waste collection rounds, although route optimisation is designed to deliver an efficient and effective waste service, which will support the capacity and resilience of the service, over the longer term.

Provide a summary of all impacts and mitigation/monitoring measures:

Route optimisation is expected to cut greenhouse gas emissions from household waste collections by ca. 6% (central estimate): a carbon saving of ca. 80 tCO₂e per annum. This is of the same order of magnitude as anticipated carbon savings from new solar PV installations and decarbonisation works in Council buildings, in the 2025/26 municipal year. Fuel consumption by refuse collection vehicles is within scope of the Council's 'Net Zero by 2030' climate change target: greenhouse gas emissions from the Council's fleet vehicles are reported annually, alongside the Climate Emergency Annual Report.

Supporting information:

Climate Impact Assessment Author	Jim Maguire Interim Waste Project Manager Waste Regeneration and Environment
Please outline any research, data or information used to complete this Climate Impact Assessment.	<ul style="list-style-type: none">• Outputs from network analysis and optimised routes for household waste collections, available from Waste services.• RMBC fuel consumption and greenhouse gas emissions data, 2020 - 2025.
If quantities of emissions are relevant to and have been used in this form please identify which conversion factors have been used to quantify impacts.	Scope 1 and scope 3 government greenhouse gas conversion factors for mineral diesel, FAME biodiesel and HVO biodiesel, available from: https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
Validation	Tracking Reference: CIA 490 Arthur King Principal Climate Change Officer