

	Measurement unit	High	Quantity Central	Low	Note:	Source:
<b>Average estate characteristics</b>						
Households per estate	hh		150		Peabody pilot implemented on estates with 100 to 200 flats	Resource London
Blocks per estate	Blocks		5		Assumption. Need approx. 5 bins per 100 households to reach FRP minimum capacity	Alma assumption
Bin stores per block	Bin stores		1		Assumption. Need approx. 5 bins per 100 households to reach FRP minimum capacity	Alma assumption
Noticeboard per block	Noticeboards		1		Assumption.	Alma assumption
Chutes per bin store	Chutes		1		Assumption.	Alma assumption
Recycling bins per bin store	Bins		2		Assumption. Need approx. 5 bins per 100 households to reach FRP minimum capacity	Alma assumption
Rubbish bins per bin store	Bins		3		Assumption.	Alma assumption
<b>Bin/waste attributes</b>						
Waste % sent to landfill	%		10.4%		Based on 2017/18 split of residual waste between landfill and incineration in London (DEFRA 2019). Note that incineration includes some non efw volumes.	DEFRA (2019)
Waste % sent to efw	%		89.6%		Based on 2017/18 split of residual waste between landfill and incineration in London (DEFRA 2019). Note that incineration includes some non efw volumes.	DEFRA (2019)
Recommended recycling capacity for FRP	litres/hh/wk		60		FRP recommends offering of minimum 60 litres/hh/week	Resource London FRP toolkit
<b>Quantity/time assumptions</b>						
Kg per metric tonne	Kg/tonne		1,000		Assumption.	
Minutes per hour	Minutes		60		Assumption.	
Days per week	Days		7		Assumption.	
Weeks per year	Weeks		52		Assumption.	
Months per year	Months		12		Assumption.	
<b>Staff assumptions</b>						
Hours worked per day	Hours		7		Assumption.	
Days worked per year	Days		220		Assumption.	
London Living Wage	£/hr		11		Assumption.	
<b>Benefit assumptions</b>						
<b>FRP impact assumptions</b>						
		High	Average	Low		
Uplift in dry recyclable waste volume	%	39%	26%	16%	Based on results from the Peabody FRP pilot	Resource London
Reduction in contamination rate from FRP	percentage points	46%	24%	0%	Based on results from the Peabody FRP pilot	Resource London
<b>Emissions assumptions</b>						
Social cost of carbon	£/tonneCO2e		69.3		Non-traded values as estimated by BEIS for 2020 (2018 projection)	BEIS projections 2018
Energy from Waste (EfW)	CO2e emissions intensity (kg / tonne waste)		386		[1]EfW saves 200kg/tonne of CO2e emissions vs landfill	[1] Simply Waste Solutions

Landfill	CO2e emissions intensity (kg / tonne waste)	586	[1] 586.53kg/tonne CO2e (Includes "collection, transportation and landfill emissions ('gate to grave'))	[1] BEIS conversion factors 2018 (for municipal waste)
Mix (London average)	CO2e emissions intensity (kg / tonne waste)	407	Alma calculation. Weighted average emissions intensities based on average split between efw/residual waste in London.	Alma assumption
CO2 emissions - recycling	CO2e emissions intensity (kg / tonne waste)	21	[1] 21.38kg/tonne CO2e (includes transport to an energy recovery or materials reclamation facility only)	[1] BEIS conversion factors 2018 (for municipal waste)

#### Waste disposal costs

Landfill	£/tonne	176	[1] Non-hazardous waste - landfill tax + gate fee. UK top range of £176	[1] WRAP comparing the costs of alternative waste treatment options (2019)
Energy from Waste (EfW)	£/tonne	125	[1] Gate fees only. UK top range of £125	[1] WRAP comparing the costs of alternative waste treatment options (2019)
Mix (London average)	£/tonne	130	Assumption. Weighted average gate fee + landfill tax based on average split between efw/residual waste in London.	Alma assumption
Disposal fees - MRF	£/tonne	18	Median MRF gate fee for London	[1] WRAP comparing the costs of alternative waste treatment options (2019)
Contamination cost (£)	£/tonne	176	Assumed same cost as landfill disposal	Alma assumption

#### Material market values

		Upper range	Average	Lower range	
Market value: Food and drink cans	£/tonne		100		Mixed cans WRAP MRF - approximate average price for past two years
Market value: Mixed glass	£/tonne		10		Mixed glass WRAP MRF - approximate average price for past two years
Market value: Cartons	£/tonne		275		Mixed bottles Letsrecycle price data (average of upper and lower range for 2020 monthly prices)
Market value: Mixed paper	£/tonne		20		Mixed papers WRAP MRF - approximate average price for past two years
Market value: Cardboard	£/tonne		60		Old KLS (cardboard) Letsrecycle price data (average of upper and lower range for 2020 monthly prices)
Market value: Mixed plastics	£/tonne		100		Mixed bottles WRAP MRF - approximate average price for past two years

#### Composition of dry mix recycling (recyclable material)

Waste composition: Food and drink cans	% dry mix recycling	2.9%	Post-intervention dry mix recycling composition for LWARB monitoring data from Peabody project FRP pilot
Waste composition: Mixed glass	% dry mix recycling	22.4%	Post-intervention dry mix recycling composition for LWARB monitoring data from Peabody project FRP pilot
Waste composition: Cartons	% dry mix recycling	0.9%	Post-intervention dry mix recycling composition for LWARB monitoring data from Peabody project FRP pilot
Waste composition: Mixed paper	% dry mix recycling	23.1%	Post-intervention dry mix recycling composition for LWARB monitoring data from Peabody project FRP pilot
Waste composition: Cardboard	% dry mix recycling	17.0%	Post-intervention dry mix recycling composition for LWARB monitoring data from Peabody project FRP pilot
Waste composition: Mixed plastics	% dry mix recycling	7.6%	Post-intervention dry mix recycling composition for LWARB monitoring data from Peabody project FRP pilot