Surrey Environment Partnership performance – Q3 2021/22

Introduction

This report provides a summary of the latest waste management performance for the Surrey Environment Partnership (SEP).

Performance is reported quarterly against a number of metrics, all of which look at the most recent quarterly data available, although it should be noted that some of these metrics have a longer time lag than others. Unless otherwise stated, this report looks at performance in the period up to and including Q3 2021/22 (i.e. up to and including the 3-month period Oct-Dec 2021). Note that where space is restricted, the tables in this report show only performance for the latest 8 quarters.

Headline results

The headline results in Q3 are as follows:

- The data presented within this report continues to be influenced by the COVID-19 pandemic. Whilst limited restrictions remained in place during the quarter there was still a large proportion of residents working from home. We now have close to two full years of data which show the long-term impact of the pandemic on waste volumes.
- Overall tonnages decreased across all D&Bs during the quarter compared with the previous quarter.
- Tonnage of dry mixed recycling (DMR) and food waste collected at the kerbside have increased, whilst residual waste has reduced from the last quarter. Garden waste tonnages have dropped significantly compared to the same quarter last year, largely impacted by the suspension of garden waste services across some D&Bs.
- DMR contamination rates remain at the lowest level since pre-2018/19.
- The Districts & Boroughs recycling rate dropped this quarter, by 2.4%, this decrease was seen across all D&Bs. There are various reasons for this including the impact of the garden waste suspensions in some areas and lower volumes of DMR or food waste collected in other areas.
- The amount of material being sent for recycling overseas, outside the EU, remains 6% of total waste disposal and recycling sent overseas within the EU remains at 4%.
- Material sent to UK energy from waste plants had an increase in the latest quarter to 35,411 from 30,208. Material going to energy from waste plants overseas experienced a minor decrease from 143 tonnes to 129 tonnes. Landfill experienced a decrease from 29,030 to 25,507 (19% of total waste disposed).
- Greenhouse gas emission for 2020/21 have decreased compared to the 2019/20 baseline, largely due the reduction in office requirements during the pandemic.

Contents

Tonnages collected

Tonnages are reported here in terms of the amount of material collected from the kerbside for the four main waste streams; dry mixed recycling (DMR), food waste, garden waste and residual waste. Material collected from Community Recycling Centres (CRCs) are reported for garden waste and residual waste.

For DMR, the report also shows the amount of this material which is actually recycled, allowing for material which is contaminated (i.e. which cannot be recycled).

Data has been sourced from the SEP waste data system wherever possible, including for the latest quarter, or otherwise from Defra's *Waste Data Flow* reports. The two data sources are mostly consistent and are close enough for comparisons to be made. Data for recent quarters may be subject to retrospective revisions and should therefore be treated as provisional at this stage. It should be noted that some of the figures which were included in the Q2 report have been updated for this reason. At present, only the four Joint Contract authorities are using the SEP data system to prepare the Defra reports; however, the system is available for all district & borough councils to prepare these reports, should they wish to do so.

The trend is presented here in terms of the *Moving Annual Average (MAA)*. The MAA for any given quarter is the rolling average of the most recent four quarters, including that quarter. This therefore removes any seasonality in the data and enables us to track the trend in performance each quarter on a rolling basis.

The SEP annual programme of work sets out a number of planned interventions across the county aimed at increasing recycling and reducing residual waste. Over the long-term, we would expect to see tonnages responding to these interventions.

The work programme also set out details of a range of county-wide resident communication and engagement activities to run alongside these interventions.

A number of modifications to the work programme were made in response to the impact of COVID-19, and again were impacted by driver shortages during summer 2021. Resources in some areas have been reallocated to the coronavirus response, and the need for social distancing measures has also had an impact on some of the planned front-line activities. Additionally, the likelihood of low resident engagement has resulted in changes to some of the planned county-wide communications during this period.

Table 1 below shows the quarterly tonnages from Q4 2019/20 to Q3 2021/22 for the main kerbside waste collection materials. These results are explored in further detail in the following sections. It should be noted that these results now entirely impacted by the COVID-19 pandemic, although we start to see a return to 'normal', tonnages remain inflated compared to pre-pandemic.

Table 1: Tonnages collected, Q4 2019/20 – Q3 2021/22

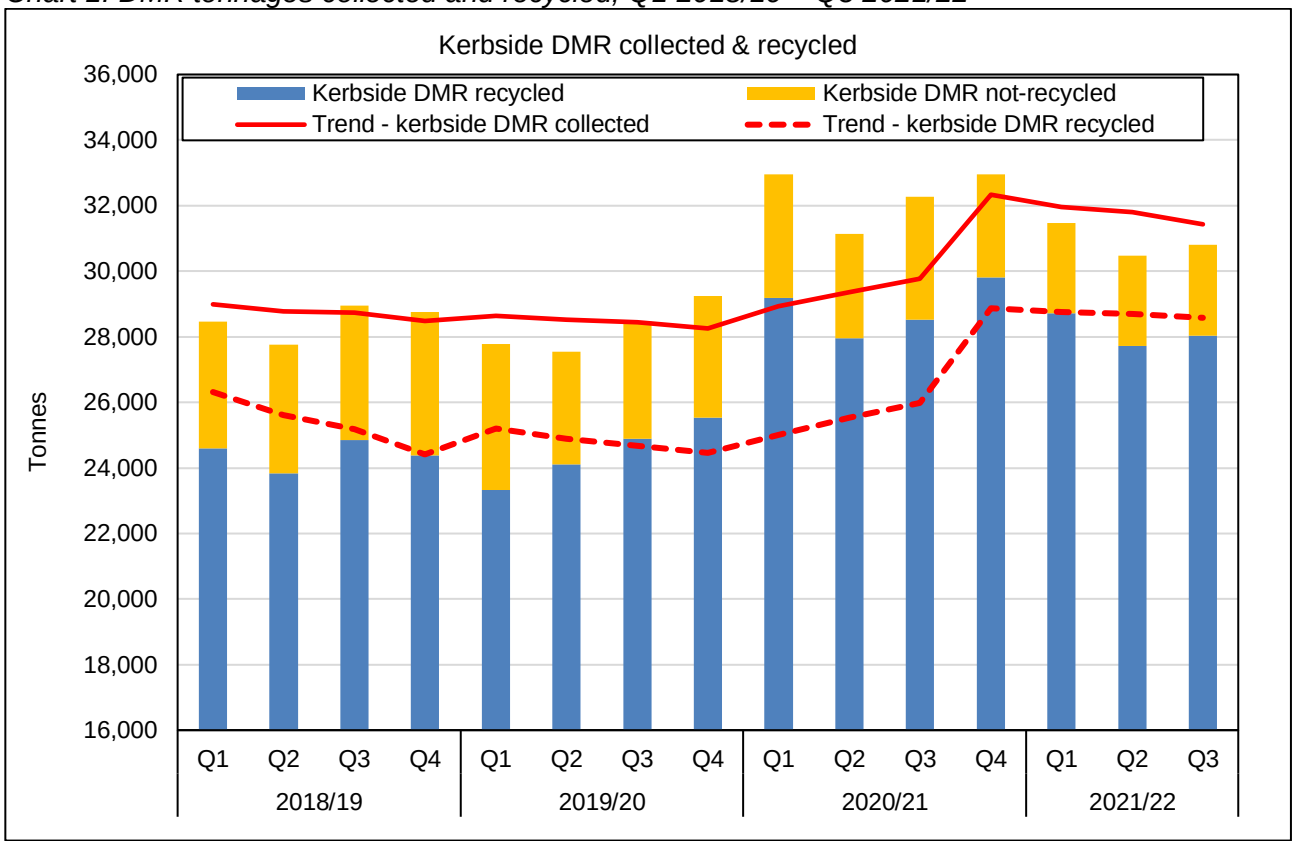
	2019/20	2020/21				2021/22			Trend (MAA)	
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q2	Q3
Dry Mixed Recycling										
Kerbside collected	**29,237**	**32,963**	**31,141**	**32,277**	**32,954**	**31,476**	**30,467**	**30,800**	**31,793**	**31,424**
Kerbside recycled	25,527	29,190	27,949	28,530	29,812	28,712	27,718	28,043	28,693	28,571
% recycled	87.3%	88.6%	89.7%	88.4%	90.5%	91.2%	91.0%	91.0%	90.2%	**90.9%**
Not-recyclable	3,711	3,773	3,192	3,747	3,142	2,764	2,749	2,757	3,101	**2,853**
% not-recycled	12.7%	11.4%	10.3%	11.6%	9.5%	8.8%	9.0%	9.0%	9.8%	**9.1%**
Food waste										
Kerbside	10,122	10,742	10,580	10,780	11,034	10,498	10,123	10,257	10,609	10,478
Garden waste										
Kerbside	12,166	24,349	23,536	20,642	13,485	25,217	23,448	14,421	20,698	19,143
CRC	3,320	4,799	5,496	4,579	3,261	5,023	8,011	6,086	5,218	**5,595**
Total	**15,486**	**29,147**	**29,032**	**25,221**	**16,747**	**30,240**	**31,459**	**20,507**	**25,916**	**24,738**
Residual waste										
Kerbside	43,189	47,388	45,065	45,398	45,774	46,181	44,807	44,066	45,540	**45,207**
CRC	8,179	4,056	11,024	9,130	10,507	9,856	9,017	4,021	9,628	**8,350**
Total	**51,369**	**51,444**	**56,089**	**54,529**	**56,281**	**56,037**	**53,824**	**48,088**	**55,168**	**53,557**

"Trend" is the Moving Annual Average (i.e. the average of the most recent four quarters)
Green indicates a positive change.
Red indicates a negative change which warrants further investigation

Dry mixed recycling – kerbside collections

Chart 1 below shows kerbside DMR tonnages collected and recycled from Q1 2018/19 to Q3 2021/22.

Chart 1: DMR tonnages collected and recycled, Q1 2018/19 – Q3 2021/22



Note: Vertical axis is truncated.

Collected DMR tonnages continue to decrease from their peak in 2020/21. This is likely to be reflecting the continued easing of restrictions that were introduced as part of the response to the COVID-19 pandemic, however tonnages remain higher than pre-pandemic levels. This quarter has seen a slight increase in tonnage from the previous quarter, however, this is a pattern seen in previous years as the Christmas period produces higher volumes of material.

As shown in Table 1 and Chart 1 above, the latest quarterly trend shows a further decrease in the DMR tonnage both collected and recycled for the year to Q3 2021/22. This includes all recycling collected co-mingled and where applicable, separately collected glass and fibre.

All authorities have seen decreases in tonnages collected this quarter, with the exception of Woking who saw a slight increase.

Not all DMR collected at the kerbside is recycled, as some material is rejected on arrival at the Material Recovery Facility (MRF) due an unacceptable level of non-recyclable material, and other material is deemed non-recyclable during the sorting processes and is rejected.. The proportion of material collected as DMR which is not recycled has not changed since the previous quarter and remains at a lower level than pre-pandemic, with the trend showing a decrease in material not recycled.

The *contamination rate* represents the proportion of DMR material which has passed through the MRF but which has not been recycled. This takes into account material which is considered to be "non-target" but which is recycled nevertheless. "Target" materials are those collected by an authority for which the MRF tells the authority that material can be recycled. "Non-target" materials

are materials which are not considered to be acceptable by the MRF, but which can still sometimes be recycled, for example, plastic bags or tetrapaks.

Different MRFs will have different criteria for which materials they consider to be “target” or “non-target”. It is also possible that a single MRF will apply different criteria for different authorities, depending on what has been agreed between the MRF and whoever is managing the material. This may be dependent on historical arrangements around which materials can and cannot be accepted from residents for recycling.

It should be noted that materials which are considered to be contaminants at the MRFs change over time, based on the current conditions of the material markets. Although contamination rates were already increasing prior to this time, since the beginning of 2018 more stringent criteria have been in place at the MRFs which have resulted in an increase in the overall contamination rate. This has at least partly been due to the status of the markets for the material, particularly overseas markets, which have dictated that the quality of material which could be accepted has needed to be of a higher grade. There is no evidence to suggest that any of the increase in contamination has been due to a change in resident behaviour, although this is of course possible.

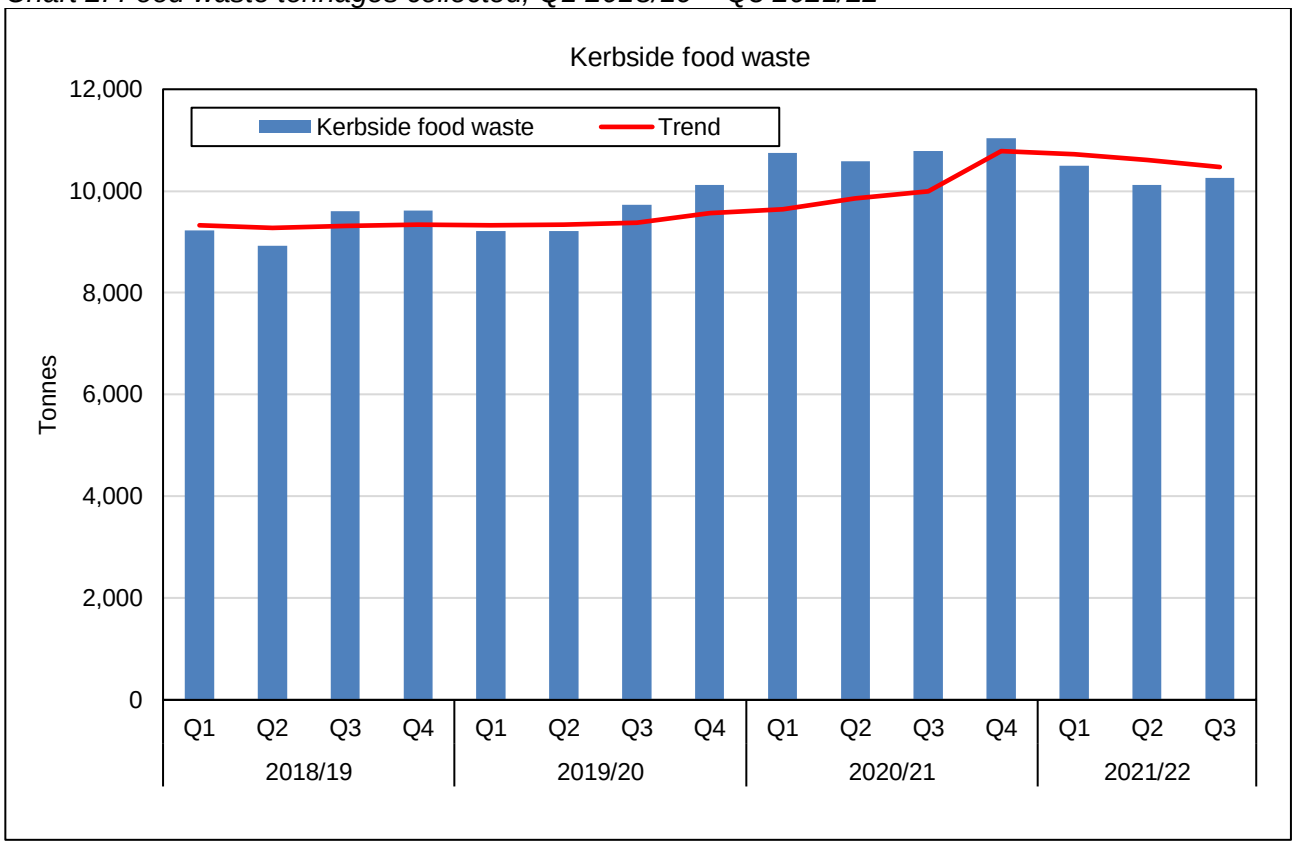
As shown in Table 1 above, the overall material not recycled rate has remained unchanged at 9.0% this quarter. For the last three quarters this rate has been below 10%. In the year to Q3 the annual rate was 9.1% down 0.7 percentage points from 9.8%.

We would expect to see a variation in contamination rates by MRF, due to different constraints around the quality of material that is and is not deemed acceptable. For any given MRF however, it is reasonably likely that variations between authorities do represent real differences in the quality of material being collected at the kerbside.

Food waste

Chart 2 below shows total food waste tonnages from Q1 2018/19 to Q3 2021/22.

Chart 2: Food waste tonnages collected, Q1 2018/19 – Q3 2021/22



The long-term trend in food waste recycling, since 2016/17, has shown a gradual increase in food waste, although this did slow between 2018 and 2019. This trend accelerated during the pandemic and peaked in Q4 2020/21. Since then, we have seen a reduction in the amount of food waste collected.

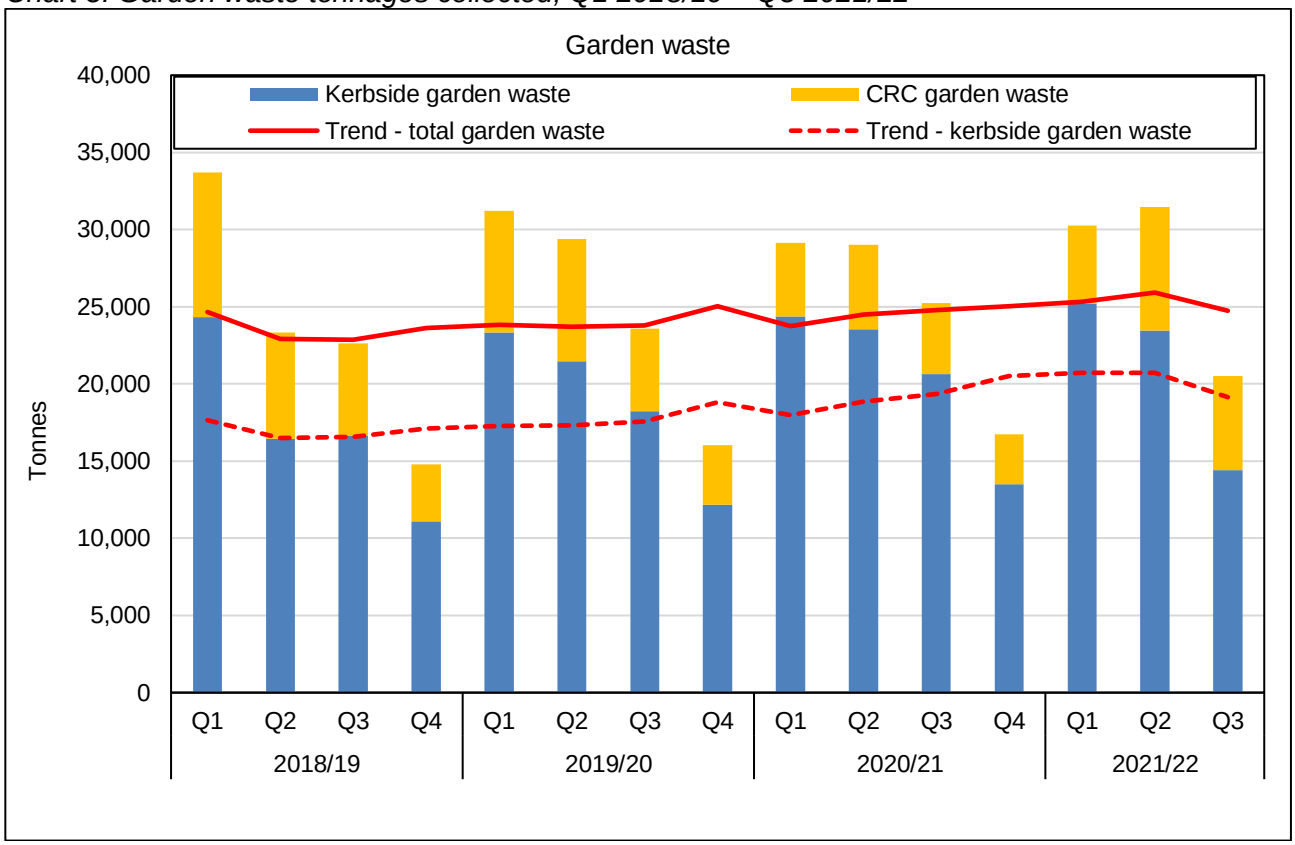
We have collected more than 10,000 tonnes of food waste at the kerbside consistently each quarter for the last two years. However, as with the previous quarter, tonnage in Q3 was similar to pre-pandemic levels, likely due to the easing of restrictions, working from home and re-opening of hospitality.

Epsom & Ewell has seen an increase in their collected tonnage. All other authorities have seen a decrease with Elmbridge, Guildford, Reigate & Banstead, and Waverley seeing the largest decrease.

Garden waste

Chart 3 below shows garden waste tonnages collected, from both the kerbside and the CRCs, from Q1 2018/19 to Q3 2021/22.

Chart 3: Garden waste tonnages collected, Q1 2018/19 – Q3 2021/22



The garden waste tonnages are affected by seasonal variations, with higher tonnages during the spring and summer.

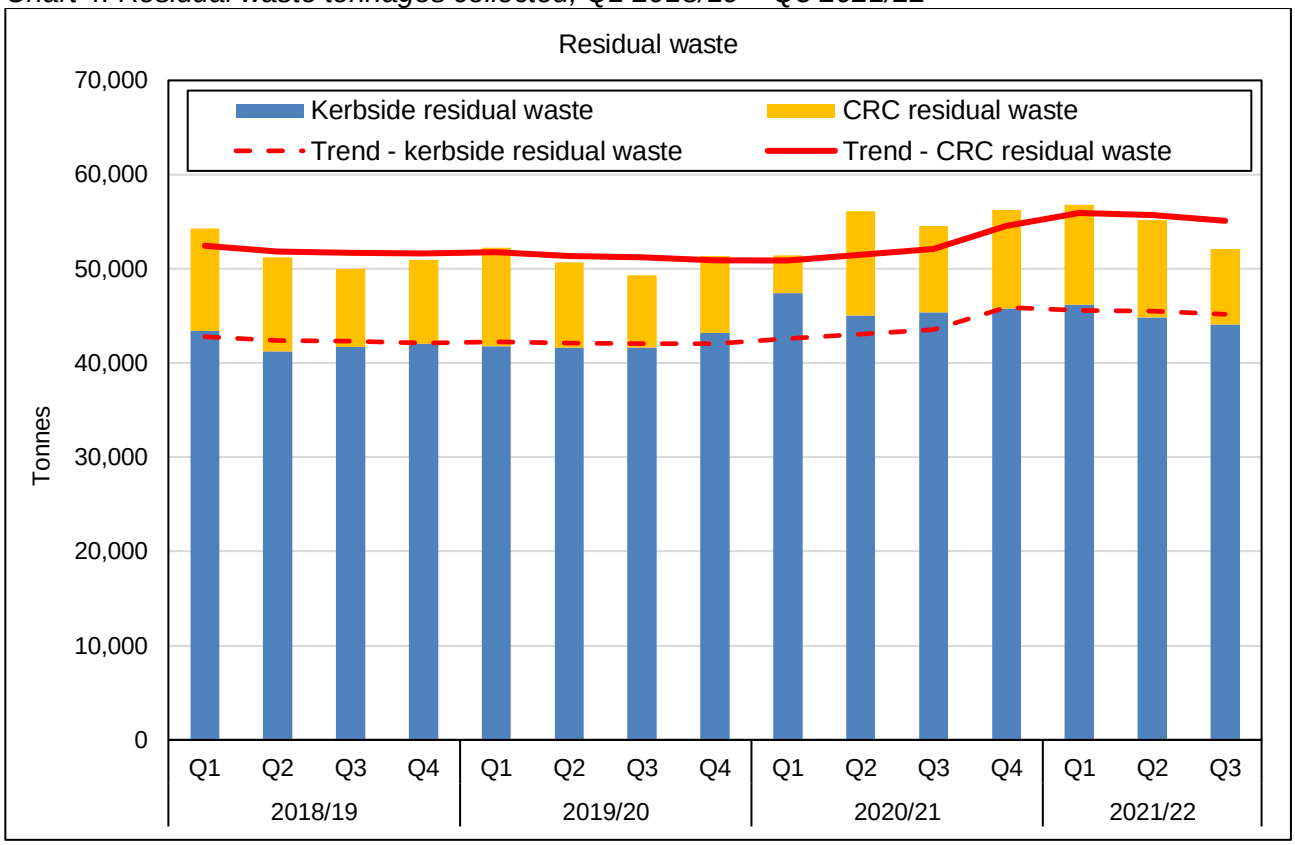
The long-term trend in garden waste recycling since 2016/17 has remained reasonably flat. However, since the beginning of 2019/20, there has been a steady increase in tonnages collected at the kerbside, although this has been balanced out by a decrease in the amount of garden waste recycled at the CRCs.

There has been a deterioration in the overall trend for garden waste as volumes in Q3 have been lower than in previous years. There was reduction in the garden waste collected at the kerbside of 6,000 tonnes, whilst CRC tonnage have increased by over 1,500 tonnes compared to the same quarter in the previous year. The decrease in kerbside tonnage was likely caused by suspension of garden waste services across several boroughs within Surrey. Anecdotal evidence has suggested that due to the lower levels of material collected during the months in which the services were suspended, material will remain in bins for a future collection, meaning that larger volumes may be expected during Q4. However, the chart shows that where there has been a kerbside service suspension we have seen an increase in CRC tonnages.

Residual waste

Chart 4 below shows kerbside residual waste tonnages from Q1 2018/19 to Q3 2021/22.

Chart 4: Residual waste tonnages collected, Q1 2018/19 – Q3 2021/22



The long-term trend in residual waste from 2016/17 to 2019/20 has shown a gradual decrease, however the pandemic created a spike in tonnages. Overall residual waste tonnages have decreased two quarters in a row since the periods of lockdowns. Tonnages collected at the kerbside are decreasing, however most of the overall decrease has resulted from a reduction in the amount of residual waste at the CRCs.

This quarter we have seen a slight reduction in residual waste compared with the previous quarters and the overall trend is no longer increasing. This is in line with other materials mentioned in this report. Overall, we have collected approximately 600 tonnes less waste this quarter compared to Q2.

Tonnages per household have decreased for half of the authorities in Surrey, with the most noticeable decreases in Elmbridge, Guildford, and Woking.

Statutory performance metrics

Under the 2015 *Joint Municipal Waste Strategy*, performance was reported against three of Defra's statutory performance metrics. To provide continuity, and as these particular metrics are likely to continue to be of interest to the wider public, performance against each of these metrics will continue to be included in this report each quarter.

Performance is reported here on a consistent basis across all SEP authorities, meaning that there may be some differences between the figures shown and those taken from any individual authority's *Waste Data Flow* reports. As with tonnages, data for recent quarters may be subject to retrospective revisions, and should therefore be treated as provisional at this stage. Note that some of the figures which were included in the Q2 report have been updated for this reason. The trend is again presented in terms of the *Moving Annual Average (MAA)*. This is the rolling average of the most recent four quarters including that quarter, thereby removing any underlying seasonality in the data, and enabling us to track the trend in performance each quarter.

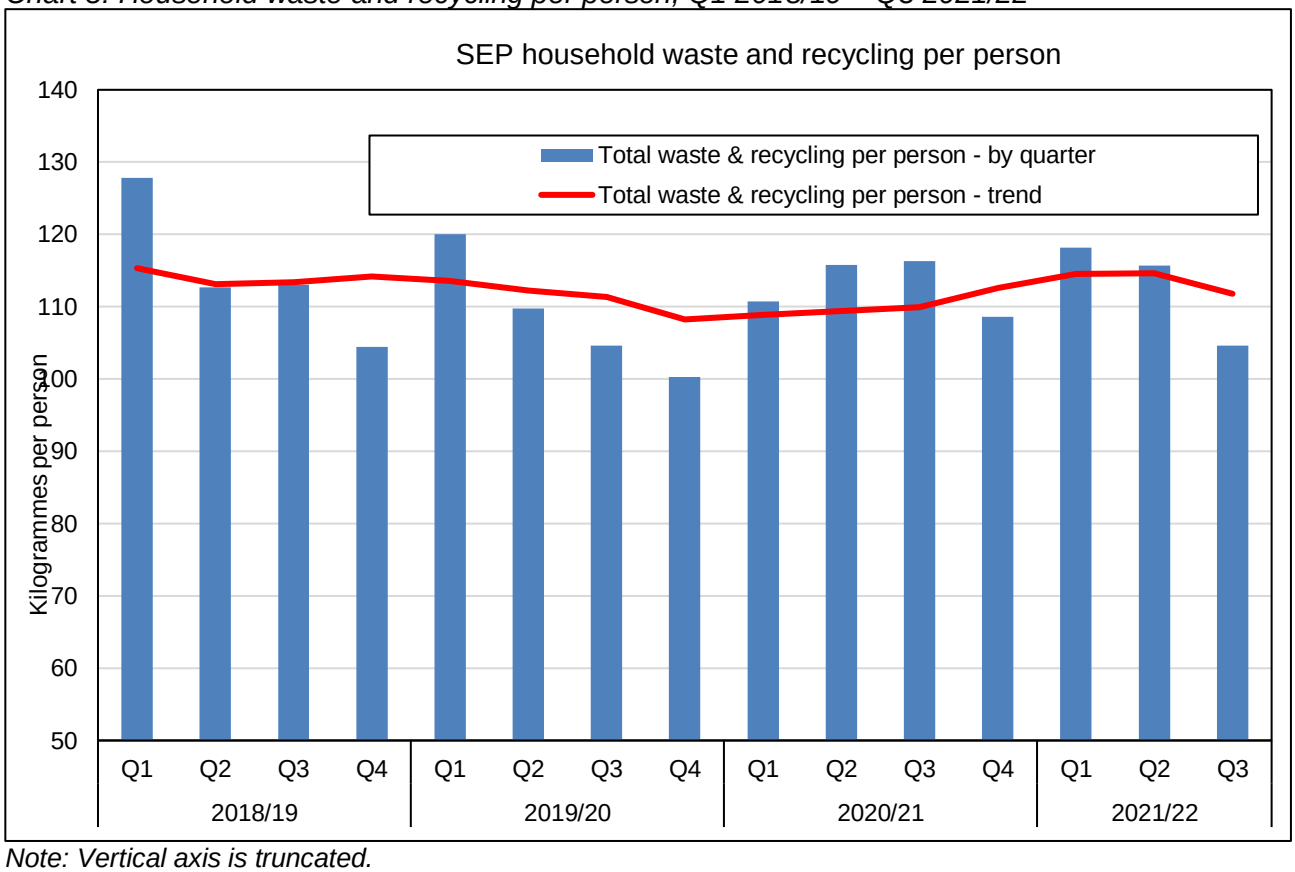
Collected household waste and recycling per person

Table 2 and Chart 5 below show household waste and recycling per person from Q4 2019/20 to Q3 2021/22 and from Q1 2018/19 to Q3 2021/22 respectively.

Table 2: Household waste and recycling per person, Q4 2019/20 – Q3 2021/22

	2019/20	2020/21				2021/22			Trend (MAA)	
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q2	Q3
Waste & recycling per person (kg)	100.3	110.7	115.8	116.3	108.6	118.2	115.7	104.6	114.7	111.8

Chart 5: Household waste and recycling per person, Q1 2018/19 – Q3 2021/22



Note: Vertical axis is truncated.

The long-term trend for this measure indicates that household waste and recycling per person saw very little change throughout 2018/19 and 2019/20. The increasing trend which has been observed throughout 2020/21 and in Q1 2021/22 has slowed slightly. For the year to Q3 2021/22, household waste and recycling per person stood at 108.6 kg on average per quarter, down from 113.6 kg per person in the year to Q2.

All the collection authorities have seen a decrease in waste and recycling per person since Q1. Elmbridge, Mole Valley, Surrey Heath, and Woking saw the largest decreases.

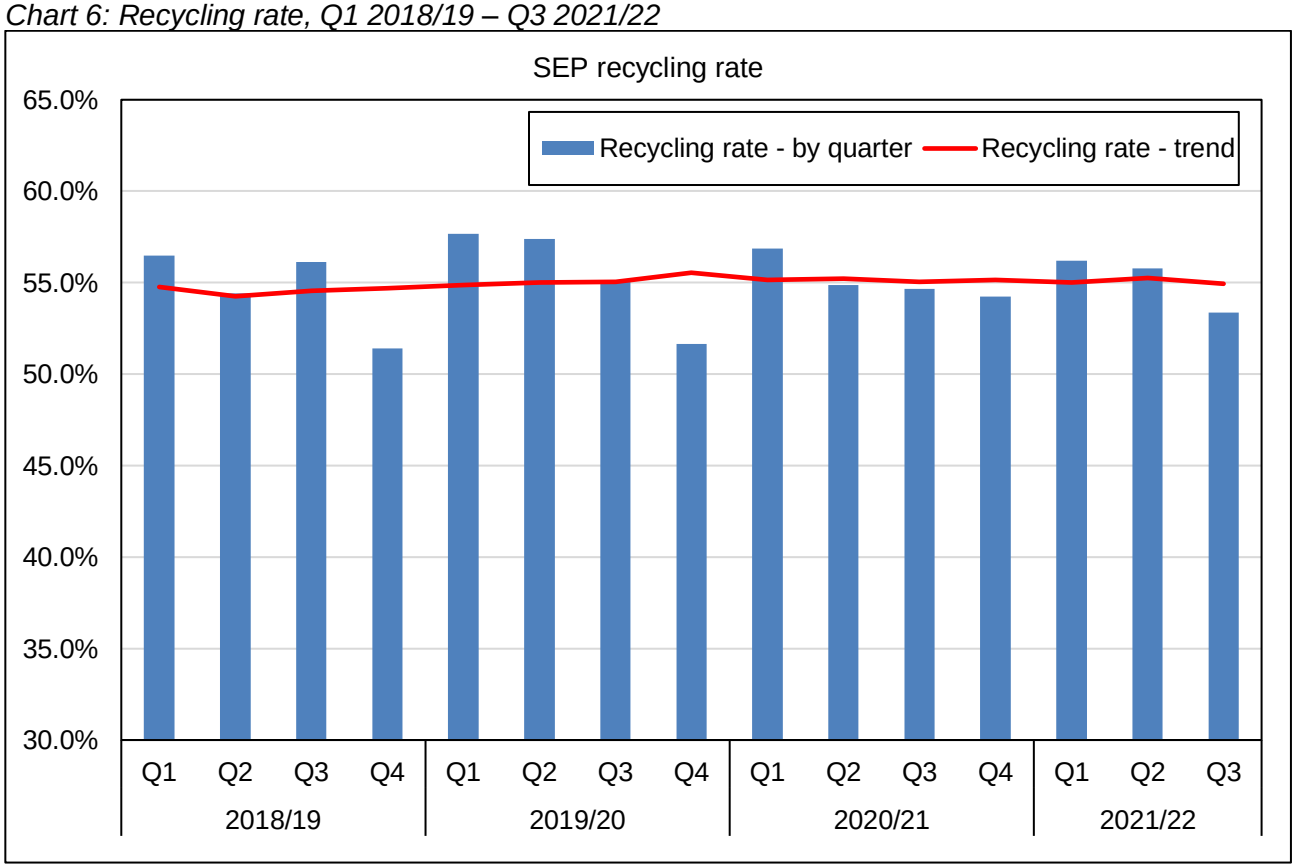
Percentage of household waste sent for reuse, recycling or composting (recycling rate)

Table 3 and Chart 6 below show the recycling rate from Q4 2019/20 to Q3 2021/22 and from Q1 2018/19 to Q3 2021/22 respectively.

Table 3: Recycling rate, Q3 2019/20 – Q4 2021/22

	2019/20	2020/21				2021/22			Trend (MAA)	
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q2	Q3
Recycling rate	51.7%	56.9%	54.9%	54.7%	54.2%	56.2%	55.8%	53.4%	55.2%	55.0%

Chart 6: Recycling rate, Q1 2018/19 – Q3 2021/22



Note: Vertical axis is truncated.

The long-term trend for this measure indicates that there has been little change in the overall recycling rate since 2018/19. Recycling rates across England have become stagnated in recent years.

The recycling rate for the year to Q3 2021/22 stood at 55.0%, this is a 0.2 percentage point deterioration from the previous quarter.

Overall districts and boroughs have seen a reduction in their recycling rates, with Elmbridge, Mole Valley and Surrey Heath seeing the largest. This has been driven by the suspension of the garden waste service.

Surrey County Council have seen an increase in their recycling rate trend which has improved from 54% to 55.3%. This is partly caused by the closure and restriction of materials at many CRCs last year which was captured in the previous rolling rate.

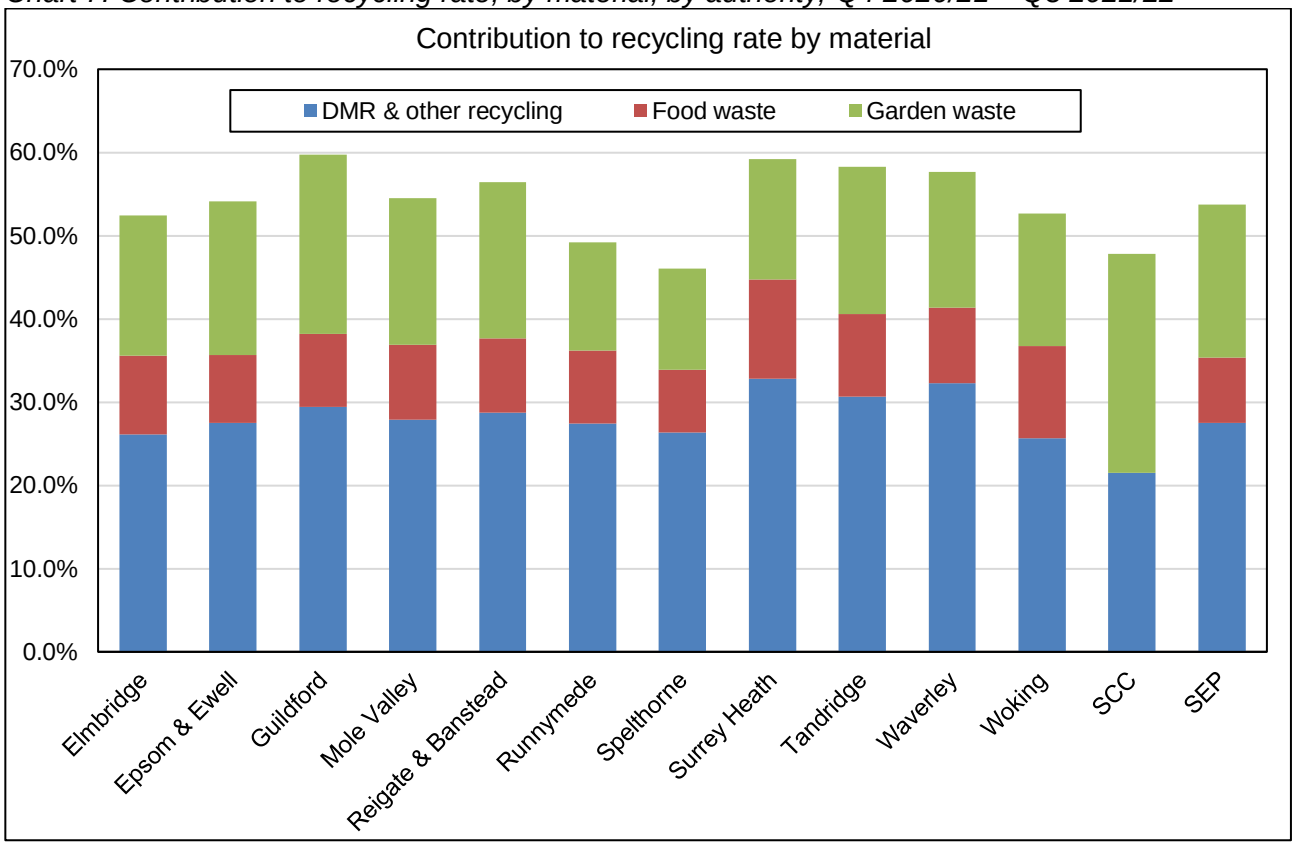
Please note that that the overall SEP recycling rate incorporates an estimated tonnage for waste recovered by SCC from the residual waste stream at the disposal stage.

Recycling rate – breakdown by material

The recycling rate represents the amount of waste material which is recycled as a proportion of the total amount of material which is collected. This includes garden waste, tonnages of which can be highly weather dependent; when growing conditions are good, tonnages will be high, but when conditions are not good, tonnages will be lower. These impacts will be overlaid on top of the known seasonal patterns in these tonnages, with significantly higher tonnages tending to be recycled in the spring. The inclusion of garden waste in the overall recycling rate can therefore sometimes mask any underlying trends in recycling of other materials, over which the Partnership can have a greater influence.

Chart 7 below shows the contribution to the recycling rate from each of the main kerbside materials by authority for the year to Q3 2021/22.

Chart 7: Contribution to recycling rate, by material, by authority, Q4 2020/21 – Q3 2021/22



The graph shows that DMR and other recycling contributes between 21 and 33 percentage points (pp) to an authority's recycling rate. Of the collection authorities, the highest being Surrey Heath, Waverley and Tandridge (more than 30pp). Meanwhile the lowest are Woking, Elmbridge and Spelthorne (less than 27pp).

Food waste contributes between 7 and 12 percentage points to an authority's recycling rate, Surrey Heath and Woking being the highest (more than 10pp). Spelthorne are the lowest (less than or equal to 8pp). Recent composition analysis shows that food waste continues to make up a significant proportion of residual waste bins collected across Surrey.

Garden waste contributes between 12 and 22 percentage points to an authority's recycling rate (collection authorities only). Guildford, Epsom & Ewell and Reigate & Banstead being the highest (more than 18pp). Meanwhile garden waste contributes considerably less to the Runnymede and Spelthorne recycling rate (less than or equal to 13pp). The amount of garden waste that can be collected is largely attributed to the number and size of gardens in an area.

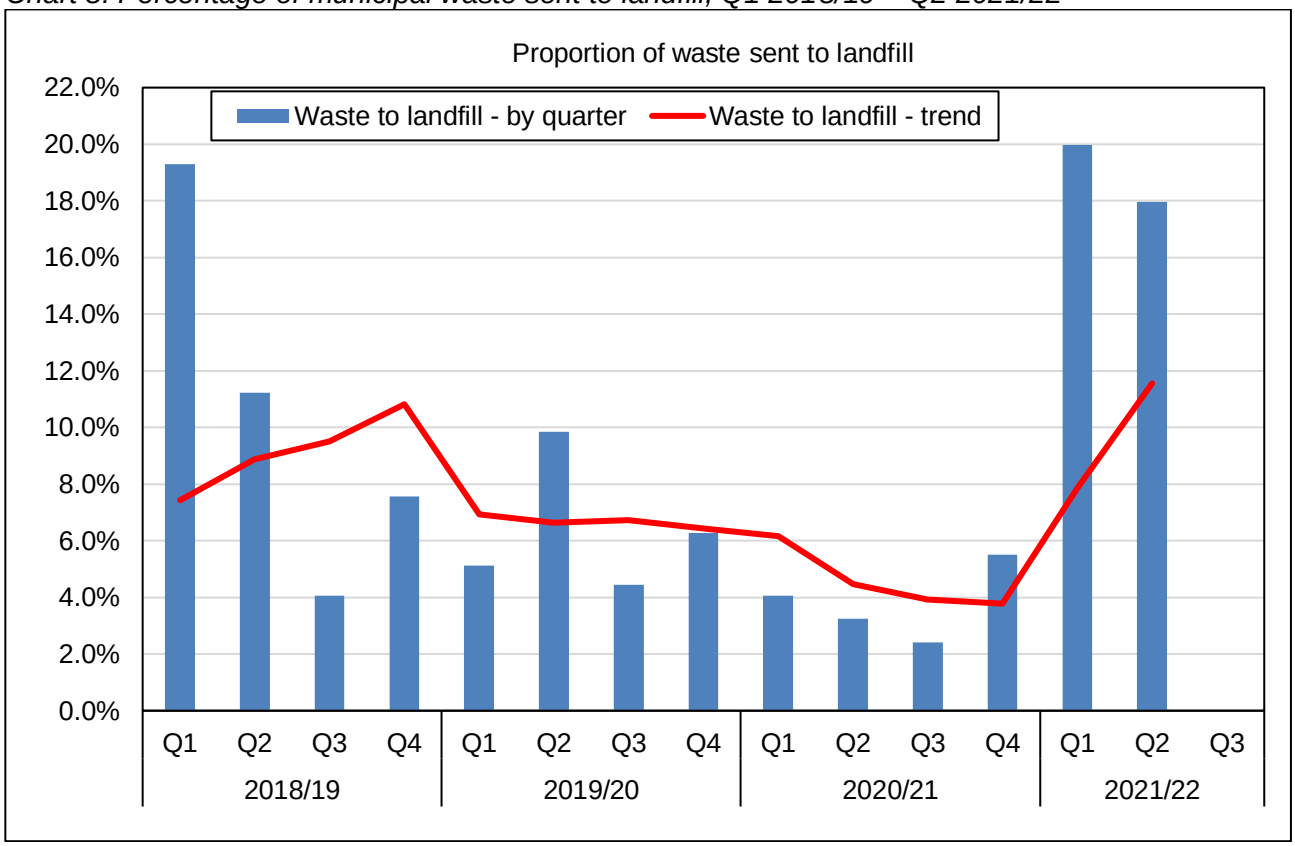
Percentage of municipal waste sent to landfill

Table 4 and Chart 8 below show the percentage of municipal waste sent to landfill from Q3 2019/20 to Q2 2021/22 and from Q1 2018/19 to Q2 2021/22 respectively. In both cases, data have been sourced from *Waste Data Flow*, which does not yet hold data for the latest quarter.

Table 4: Percentage of municipal waste sent to landfill, Q3 2019/20 – Q2 2021/22

	2019/20			2020/21				2021/22		Trend (MAA)	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
Waste to landfill	9.9%	4.5%	6.3%	4.1%	3.3%	2.4%	5.5%	20.0%	18.0%	7.9%	11.6%

Chart 8: Percentage of municipal waste sent to landfill, Q1 2018/19 – Q2 2021/22



The trend and in quarter values for this measure are liable to fluctuate dependant on national capacity for alternative disposal. From Q1 2019/20 to Q1 2020/21 we saw a period of stability in the trend. In both Q2 and Q3 of 2020/21 we saw a decrease in the volume of material being sent to landfill, while Q4 saw an increase in municipal waste being sent to landfill.

In Q2, 18% of municipal waste was sent to landfill. In the year to Q2 2021/22, 11.6% of Surrey's waste was sent to landfill, up 3.7 percentage points from the previous quarter. This was due to low availability with the incinerators and gasifiers that our waste is taken to. Further detail of this is provided in the following sections.

Waste disposal

Table 5 and Chart 9 below show the tonnages managed by SCC through treatment and disposal processes (i.e. recycling, energy from waste (EfW), landfill) from Q3 2019/20 to Q2 2021/22, and where these materials were processed. The data is sourced from Defra's *Waste Data Flow* reports, which does not yet hold data for the latest quarter, therefore data is reported for the previous quarter. Note that re-use tonnages are not included in these figures.

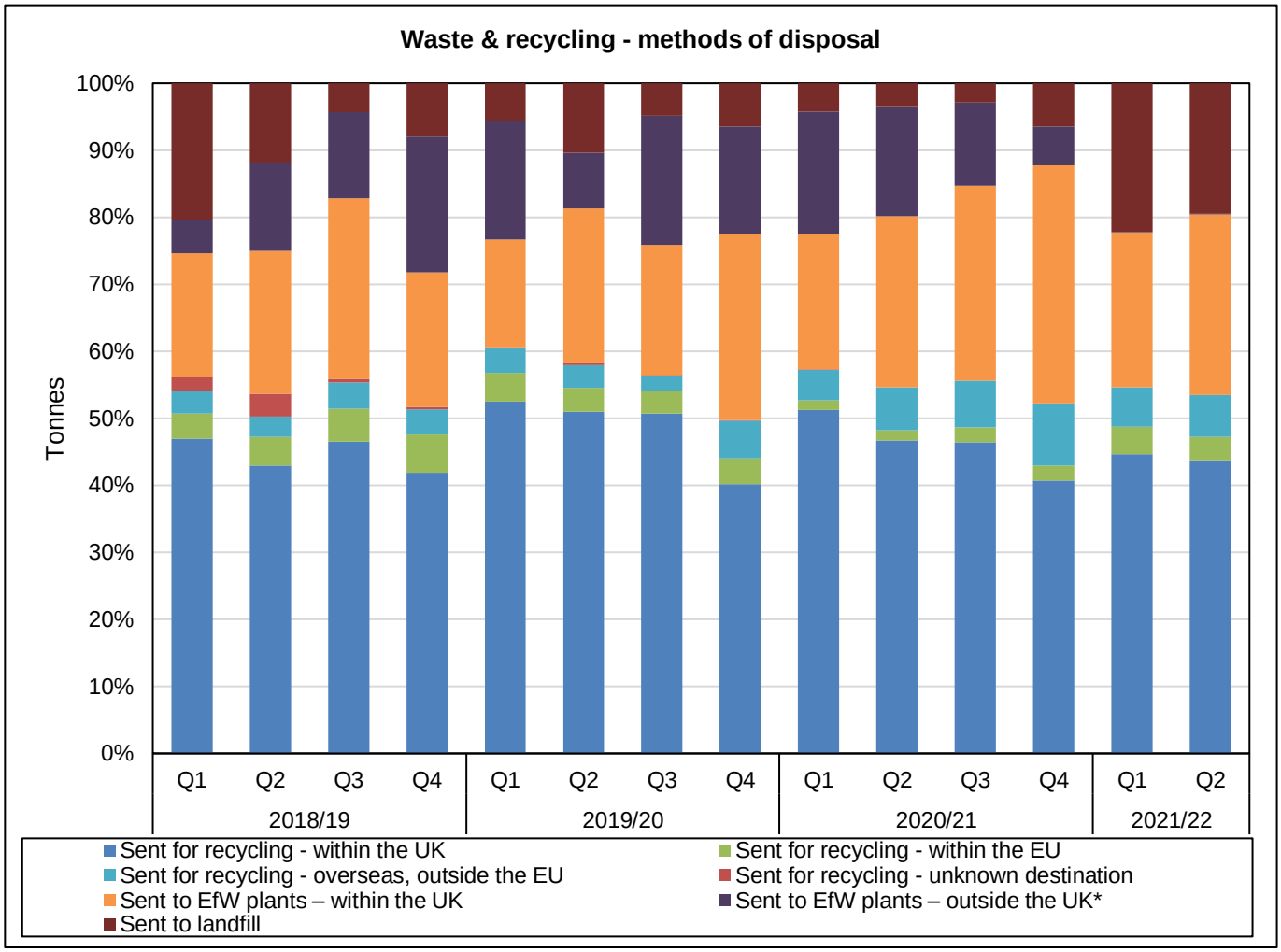
The amount of material that is recovered as recycling from residual waste by SCC in Q2 2021/22 was 2,535 and decrease from 4,260 in Q1, shown at the top of Table 5. This could be a variety of materials, including DMR material separated from black-bag waste at the reprocessing stage, compost-like material that can be used for landfill cover, or mattresses for example. This is included within the tonnages sent for recycling.

Table 5: Waste & recycling tonnages by method of disposal, Q3 2019/20 – Q2 2021/22

	2019/20		2020/21				2021/22	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Collection - tonnages								
Collected as residual – recycled	7,359	4,681	3,697	2,550	6,178	5,679	4,260	2,535
Disposal - tonnages								
Sent for recycling - within the UK	62,834	49,664	66,957	63,860	63,508	47,348	58,412	57,387
Sent for recycling - within the EU	4,054	4,733	1,967	2,035	3,098	2,668	5,341	4,596
Sent for recycling - overseas, outside the EU	2,984	6,921	5,948	8,818	9,473	10,709	7,755	8,149
Sent for recycling - unknown destination	16	85	35	0	0	0	0	0
Sent to EfW plants – within the UK	24,121	34,335	26,393	34,780	39,900	41,422	30,208	35,411
Sent to EfW plants – outside the UK(1)	23,947	19,871	23,955	22,508	16,966	6,727	143	129
Sent to landfill	5,952	7,911	5,483	4,639	3,923	7,479	29,030	25,507
Total disposal	**123,907**	**123,520**	**130,738**	**136,640**	**136,868**	**116,353**	**130,888**	**131,179**
Disposal - percentages								
Sent for recycling - within the UK	51%	40%	51%	47%	46%	41%	45%	44%
Sent for recycling - within the EU	3%	4%	2%	1%	2%	2%	4%	4%
Sent for recycling - overseas, outside the EU	2%	6%	5%	6%	7%	9%	6%	6%
Sent for recycling - unknown destination	0%	0%	0%	0%	0%	0%	0%	0%
Sent to EfW plants – within the UK	19%	28%	20%	25%	29%	36%	23%	27%
Sent to EfW plants – outside the UK	19%	16%	18%	16%	12%	6%	0%	0%
Sent to landfill	5%	6%	4%	3%	3%	6%	22%	19%
Total disposal	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

(1) "Sent to EfW plants – outside the UK" includes some material with unknown destination.

Chart 9: Waste & recycling tonnages by method of disposal, Q1 2018/19 – Q2 2021/22



(*) "Sent to EfW plants – outside the UK" includes some material with unknown destination.

There continues to be a fluctuation in the volume of material being sent to EfW, both within the UK and outside of the UK (within Europe). Since Q1 2021/22 there has been a significant increase in the volume of material being sent to landfill, with minimal tonnages being sent to EfW outside of the UK. This is largely due to continued capacity restrictions at the incinerators used by Suez.

Material sent for recycling continues to largely remain within the UK, with about 10% – 15% being sent to the EU or outside of the EU.

Recycling

The amount of material being processed as recycling at UK facilities remained stable during this quarter at 44% of the total disposal tonnage. However, this is a lower proportion compared to the same quarter in the previous year at 47%.

Most recycling has continued to stay within the UK this quarter, with a small percentage being sent to facilities either within the EU or elsewhere overseas, outside the EU, 4% and 6% respectively, remaining steady with the previous quarter. Overall there was a small decrease in tonnages being sent overseas.

Energy from Waste (EfW) and Landfill

Disposal tonnages sent to EfW plants or landfill have fluctuated significantly continuously depending on capacity over recent years. SCC has decreased its use of landfill over the last 10 years, sending just 3.7% of waste to landfill in 2020/21, this has been accompanied by an increase in the amount of material being sent to EfW plants. However, in this quarter tonnages sent to landfill are significantly higher than previous years, due to unavailability of EfW capacity. The tonnages sent to landfill have however, decreased by 3% since the last quarter.

Tonnages sent to UK EfW plants increased in Q2, to 35,411 tonnes; this was 27% of total waste disposal, an increase from 23% in Q1, and the 3rd highest quarter in the previous 2 years. The amount of material being sent to EfW plants outside the UK has continued to remain low in Q2. This represented 0.1% of all disposal tonnages, putting pressure on EfW capacity within the UK. Previously up to 15% of disposal tonnages have been sent to EfW outside the UK.

The amount of material sent to landfill is directly linked to EfW capacity. Where it is not possible to source this capacity within the UK or overseas, material will be sent to landfill. The reduction in material sent to EfW outside of the UK has led to an increased in tonnage sent to landfill, however with additional capacity within UK EfW during Q2 there was a decrease in tonnages sent to landfill. In Q2, 25,507 tonnes were sent to landfill, representing19% of total waste disposal, a decrease from 22% in Q1.

Greenhouse gas emissions

Greenhouse gas emissions have been reported previously for 2019/20, this report provides an updated baseline for 2019/20 and 2020/21 emissions. Emissions have been calculated in line with the principles underlying company reporting of greenhouse gas emissions, guidance on which is published by the Department for Business, Energy and Industrial Strategy (BEIS).

Table 6 and 7 provide a summary for 2019/20 and 2020/21 emissions for all waste collection and waste disposal activities across Surrey.

Table 6: 2019/20 Updated baseline emissions from waste management (kg CO2 equivalent)

Emissions source	Premises energy consumption	Premises water consumption	Vehicle fuel consumption	Waste disposal (including transportation)	Total estimated emissions (kg CO2e)
Waste collection	682,321	18,654	9,902,695	-	**10,603,514**
Waste disposal	-	13,303	1,761,410	13,906,107	**15,680,820**
Central office functions	11,323	88	-	-	**11,411**
Total	**693,645**	**32,045**	**11,664,105**	**13,906,107**	**26,295,745**

Table 7: 2020/21 Emissions from waste management (kg CO2 equivalent)

Emissions source	Premises energy consumption	Premises water consumption	Vehicle fuel consumption	Waste disposal (including transportation)	Total estimated emissions (kg CO2e)
Waste collection	663,132	33,277	10,251,727	-	**10,948,136**
Waste disposal	-	11,883	1,574,060	8,199,962	**9,785,905**
Central office functions	5,339	27	-	-	**5,366**
Total	**668,472**	**45,187**	**11,825,787**	**8,199,962**	**20,739,407**

There has been a decrease in the overall estimated emission across waste management in Surrey. This is largely due to the significant decrease of 5 million kg CO2e in waste disposal, which has come from a reduction in the proportion of waste which was sent to landfill during 2020/21. As explained earlier in this report, during 2021/22 there has been an increase in waste sent to landfill which will have an impact on the current emissions.

Other factors such as energy, water and vehicle fuel consumption have remained similar during this period for most D&Bs, which is to be expected as operational factors such as fleet size and office requirements remain static for longer periods of time. It should be noted that there was an increase in reported water usage in Guildford, which has resulted in a larger waste consumption during 2020/21.

During the pandemic SCC and JWS moved to home working, resulting in a reduction in energy & water consumption, however D&Bs continued to operate depots as business as usual, which meant that there is limited reduction in energy consumption in these areas.

There remains to be small elements of data missing for some D&BS, largely associated with water consumption. Work continues to identify the data source or estimates for these values. Individual D&B estimated emissions are set out in Appendix 8.