



Resource London

COVID-19 commercial waste adaptation

PHASE TWO: Assessment of the future impact of COVID-19 on commercial waste in London

Version 1.0, 20th October 2020



LWARB
London Waste and Recycling Board

Assessment of the future impact of COVID-19 on commercial waste in London (October 2020)

A study predicting the impact of COVID-19, and associated government restrictions and interventions, on commercial waste volumes and composition in London.

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Acknowledgments

The main body of this report was written by Eunomia Research & Consulting Ltd¹ and overseen by LWARB², with LWARB authoring the executive summary.

Content was informed through various interviews with representatives from the following organisations:

- London boroughs of Barnet, Bexley, Hackney, Haringey, Islington and Westminster
- Private waste contractors: Paper Round (BPR Group), Suez and Veolia
- A selection of businesses (names anonymised)

London Waste and Recycling Board

We are a partnership of the Mayor of London and the London boroughs helping London transition to a low-carbon circular economy. We collaborate with business, government, waste authorities, academia, the third sector and the wider London community. We have two programmes: Resource London and Circular London.

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Executive summary

This report presents evidence of the immediate impact of the measures implemented as a result of COVID-19 on the commercial waste sector in London in terms of volume and composition. It then makes informed predictions on the implications of ongoing COVID-19 measures for this sector.

Commissioned by the London Waste and Recycling Board (LWARB), and compiled by Eunomia Research & Consulting Ltd, it was written following the easing of the March 2020 lockdown restrictions. All references and findings are correct at the time of report completion (29th September 2020). It should be noted that between the commission of the report and the completion date, substantial changes were made in England to COVID-19 restrictions and interventions. Many of these are expected to have an impact on commercial waste and have been incorporated where possible. However, the ever-changing situation means that the impact of some of these changes have not been analysed in detail.

The report summarises the predicted ongoing impact that COVID-19 restrictions and interventions are anticipated to have in regard to different business sectors and business sizes. This information is used to estimate how businesses in different parts of the capital may be affected and give insight into business types that may be more resilient to the negative economic impacts of COVID-19.

This report aims to help local authorities in London to understand the longer-term impact of COVID-19 on commercial waste tonnages and composition within their borough, as such findings are tailored for local authorities. It is also aimed at regional and central government to support the development of wider economic recovery strategies.

COVID-19 impacts to date

Evidence was gathered reflecting the economic impact of COVID-19 restrictions on different business sectors. Supermarkets, pharmacists, and food and drink manufacturers have been unaffected or have had increased business activity as a result of COVID-19. At the other end of the scale, businesses that rely on trade from office workers, hotels (of all sizes) and gyms have seen the largest decline in business activity. Customers in certain sectors, such as essential retailers, hospitals and healthcare saw commercial waste volumes remain constant.

Both London local authorities and private waste contractors (PWCs) saw an initial drop of commercial waste volumes of between 60% and 90% in April 2020. As of the beginning of July 2020, local authority commercial waste tonnages had increased, sitting at 20% to 35% lower compared to the same time last year. Similarly, PWCs reported an increase in trade during July, stating that closed roads for outdoor dining and the introduction of 'Eat Out to Help Out' supported this recovery.

Throughout lockdown contract amendments and reduced collections have been widely requested by businesses. Local authorities and PWCs responded by offering flexibility with both collections and invoicing.

Local authorities have reported a decrease in demand for dry mixed recycling (DMR), but an increase in requests for food waste collections. New customers have been gained that were previously serviced by PWCs, where these PWCs were unable to meet customer needs during lockdown. On average, local authorities are forecasting a 15% to 20% reduction in commercial waste revenue for 2020/21 compared to 2019/20.

The months ahead

There is significant uncertainty about the outlook for business recovery with several factors identified that will impact recovery:

- The availability of a vaccine
- A long-term shift towards increased home-working
- Schools returning in September
- Seasonal changes
- Christmas shopping period
- Behaviour change
- Winding down of government support interventions
- Tax payment deadlines
- Rises in unemployment

Sectoral recovery patterns

Some sectors have been more negatively affected by COVID-19 than others, while a small number have seen a positive impact. Sectors in London have been analysed across different categories of impact: long-term positive, little or no impact, 'V shaped' recovery, and long-term reduction.

One of the biggest changes is the rise in homeworking. More than half of all workers (57.2%) in London did some work at home during the pandemic. In 2019, just 5% of workers in the UK did some work at home³. It is likely that homeworking will continue in the future, with 66% of Londoners that are currently working from home planning to continue to do so⁴. This significant change to how the office sector operates will see a direct reduction in paper, as well as having an impact on waste from other sectors such as hospitality and food businesses usually frequented by office workers. It is not yet known how this increase in homeworking has impacted household waste tonnages.

Accommodation and food services has also seen a long-term negative impact, although the 'Eat Out to Help Out' scheme saw a good recovery amongst bars and restaurants that re-opened. New restrictions such as the 'Rule of Six', earlier closing times, and winter weather will likely see a further downturn within food services businesses. In turn this will lead to a reduction in food and glass tonnages. Travel restrictions, alongside the cancellation of major sporting events, has seen hotels remain shut, or having to operate at limited capacity. Residual and food waste volumes are expected to fall as a result.

Non-essential stores were some of the hardest hit businesses during lockdown and, although there was a strong recovery in May and June 2020, sales have not returned to pre-lockdown levels⁵. Many retailers have closed and this number, along with job reductions, may continue to rise over the coming months. Retailers may decide to write off unsold seasonal stock which could lead to an increase in commercial waste tonnages from these businesses.

The arts and leisure sector has seen a long-term negative impact, with most London venues remaining closed as social distancing measures make it commercially unviable to re-open. Theatres and live music venues are deemed 'higher risk'⁶ meaning it is likely they will see increased restrictions if infection rates rise. These businesses generally produce large amounts of plastic waste from single use containers which will no longer be arising.

Food retail has experienced a long-term positive impact, with business peaking in April 2020. Sales dropped following this but remained 5.8% higher in June 2020 than in June 2019. It is likely food sales

³ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/coronavirusandhomeworkingintheuk/april2020#coronavirus-and-homeworking-in-the-uk-data>

⁴ <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/businessimpactofcovid19surveybicsresults>

⁵ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/coronavirusandtheimpactonoutputintheeconomy/may2020>

⁶ <https://www.gov.uk/government/publications/our-plan-to-rebuild-the-uk-governments-covid-19-recovery-strategy>

will remain at an inflated level whilst homeworking continues, and the hospitality sector continues to see restrictions. Cardboard volumes would be higher as a result of inflated sales.

Online retail has also experienced a long-term positive impact, with sales 53.8% higher in June 2020 than in June 2019. It is likely that this growth will slow, but the sector will remain strong overall as consumers who had not previously shopped online become used to online retail. Growth within this sector will see an increase in cardboard and plastic film volumes.

The food and drinks manufacturing sector has recovered to pre-COVID-19 levels following a slight decline in March. The sector as a whole may be broadly unaffected but depending on their customer base, some businesses are likely to have seen a more significant impact. Overall, waste arisings are not expected to be impacted.

Impact on commercial waste arisings

A baseline, utilising existing data estimates, has been developed to estimate the total commercial waste arising in each borough⁷ in 2019/20. To produce a commercial waste forecast for the remainder of 2020/21, future sector-specific and borough-specific COVID-19 impact factors have been applied to this baseline. There are limitations to the data set that informs the baseline, and several assumptions have been made around business numbers by sector. As such, all results should be taken as indicative rather than as precise.

The model applies a waste reduction factor based on economic predictions for each sector. Changes to composition have been provided as commentary rather than modelled as data on impacts of specific waste streams is not available.

Commercial waste tonnage is predicted to fall across all sectors between 2019/20 and 2020/21. The largest tonnage decreases are expected in the 'other services' sector⁸ and within 'accommodation and food services'. The largest tonnage drop by proportion will be in the 'public administration and social work' sector, where commercial waste volumes are expected to fall by more than 50%.

Similarly, tonnages of all commercial waste types will fall in 2020/21 in comparison to 2019/20. The largest reductions will be in food waste and paper/card.

Most outer London boroughs will see less of an impact on commercial waste arisings than inner London ones with the boroughs predicted to have the largest decrease in commercial waste tonnages (over 32%) all being inner London.

Figure 1. Percentage reduction in commercial waste tonnages arising between 2019/20 and 2020/21



⁷ This refers to total commercial waste tonnage produced within a borough, not commercial waste that is collected by the local authority

⁸ Includes many office based staff and smaller independent businesses such as nail bars and estate agents

Since we wrote this report

Several government restrictions have been introduced during the writing of this report including:

- The 'Rule of Six';
- Businesses that sell food and drink must close between 22:00 and 05:00;
- Employees that can work from home should do over the winter; and
- Pilot sporting events due to take place in October have been cancelled.

As these changes came during the finalisation of this report, their impact on commercial waste has therefore not been assessed. These changes will, however, limit the extent to which businesses in London can recover and are therefore expected to have an impact on commercial waste volumes.

Conclusions

The research and analysis presented within this report utilises the best available data to provide reasoned estimates of the impact COVID-19 will have on total commercial waste arisings across London. Local authorities in London will need to interpret the findings and apply them to their own commercial waste portfolios.

It is likely that in 2020/21 there will be a reduction in commercial waste tonnage across London, of between 21% and 42% in comparison to 2019/20. Inner London boroughs with a high number of commuters will be at the top end of that range due to the continued high levels of homeworking.

Sectors that have been most affected by COVID-19 are 'accommodation and food services', 'other services', and 'public and administration work'. These business types typically make up a large amount of local authority commercial waste portfolios. Sectors that are more resilient are 'essential retail', 'online retail and the associated logistics and storage sectors', and 'food and drink manufacturing'. All sectors could see a downturn if there is a substantial increase in unemployment, as is currently predicted.

Sector impacts are likely to lead to changes in commercial waste composition. It is expected that:

- Food and glass will decrease due to a activity decline in the hospitality and food sector;
- A fall in cardboard from non-essential retail may be offset by increased business activity in the essential retail sector;
- Commercial waste portfolios with high numbers of offices, bars and restaurants will see a large reduction in volumes due to a significant drop in paper/cardboard, food and glass; and
- The decrease in food waste may impact on commercial waste income as food is typically a good revenue generator for local authorities.

Across all sectors the volume of PPE that will be disposed of is expected to increase and for many this will be a new type of waste. Despite predicted increases, there is unlikely to be a substantial increase in commercial waste tonnage due to the weight of PPE in comparison to other waste types.

Local authorities are responding to the pandemic by making services changes that have been supported by LWARB's considerations report⁹ and checklist (Appendix 4). Throughout the pandemic, local authorities have had the resources and operational processes to better serve customers than several PWCs, winning new customer contracts as a result.

⁹ <https://resourcelondon.org/resources/toolkits/covid-19-commercial-waste-adaptation-toolkit/>

I. BACKGROUND

Commercial waste is an important area for local government to understand. For local authorities that collect commercial waste, it offers the rare opportunity to derive an income that can help to cut overall waste collection costs, and derive better value for money from an authority's waste collection staff and assets. For those that do not, waste from businesses may still affect service delivery, due to the impact of grey waste on the high street.

COVID-19 has had a profound impact on the pattern of business activity and therefore commercial waste arisings. The effects of COVID-19 have been felt particularly in areas of high business concentration, such as London, and this in turn has significantly reduced revenue from commercial waste collections. In the coming months, London local authorities will be looking for opportunities for growth in revenue from commercial waste collections to offset increased costs of operation as a result of COVID-19, such as collecting higher volumes of household waste brought about by more people working from home.

LWARB has already completed work¹⁰ looking at the immediate impacts of COVID-19 on commercial waste, focusing on potential changes to day-to-day local authority services and operations, with the aim of sharing good practice.

This study aims to help local authorities understand the longer-term impact of COVID-19 on:

- Total commercial waste tonnages arising in each borough; and
- Commercial waste composition.

It summarises what is currently anticipated, regarding differential impacts on different types and sizes of businesses, and uses this information to estimate how each borough may be affected and give insight into business types that may be more resilient to the negative economic impacts of COVID-19. Relevant factors are likely to include the profile of:

- Micro, small, medium and large businesses within a borough;
- The sectors of business represented within each borough (e.g. office-based businesses, food service businesses, retailers);
- The extent to which they are affected by changes in working patterns; and
- The different patterns of impact on inner and outer London boroughs.

The aim of this report is to provide local authorities with a basis on which to plan their commercial waste resources, improve collection efficiency and reduce costs, as well as to identify possible opportunities for growth. This report will also help to inform central and regional government in developing its wider economic recovery strategy.

The report draws upon a range of economic data and projections, alongside commercial waste and business population data, to map out the longer-term impacts of COVID-19. The study is based on the assumption that London continues to experience relatively low levels of COVID-19 infections, but that the risk of a greater outbreak of the virus continues. In the event of a larger outbreak – whose likelihood and/or timing this report does not seek to evaluate – fresh restrictions on people's

¹⁰ <https://resourcelondon.org/resources/toolkits/covid-19-commercial-waste-adaptation-toolkit/>

movements might be imposed, and it is likely that there would be a return to lockdown levels of business activity, before any subsequent recovery might resume.

It is also important to acknowledge the limitations of commercial waste data, which can only be estimated based on national estimates. These national estimates draw on Defra waste data and surveys¹¹, national compositional data from WRAP¹² and Office of National Statistics (ONS) data from the business register and employment survey (BRES)¹³, which gives details of businesses types at a high level of geographical resolution.

While we have endeavoured to take account of the best available information on current and projected business activity, and the government's current support schemes, projections regarding future business activity are uncertain and subject to factors other than COVID-19 that are outside the scope of this study (e.g. the end of the Brexit transition period). Equally, government may change its support schemes in response to emerging trends, which may affect how different sectors perform.

Despite these limitations, this study represents the best current state of knowledge regarding COVID-19's impact on commercial waste in London.

¹¹ Jacobs (2010) Commercial and Industrial Waste Survey 2009 Final Report, Report for DEFRA, December 2010

¹² Wrap (2020) National Municipal Waste Composition, England 2017

¹³ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/businessregisterandemploymentsurveybres>

2. COVID-19 IMPACTS TO DATE

2.1. Local authority interviews

In order to understand how commercial waste requirements may change in the coming months we have gathered information, reflecting the position at the time of writing this report. To this end, interviews were conducted with several London local authorities and PWCs to investigate their perceptions of impacts.

Six London local authorities¹⁴ were interviewed (three inner and three outer London¹⁵) for this project. All are estimating a drop of between 60% and 90% in tonnage of commercial waste they collected in April 2020, compared with April 2019¹⁶. Most local authorities estimate that commercial tonnages, by the beginning July 2020, were between 25% and 35% down on pre-COVID levels.

The local authorities that are seeing the slowest recovery are those with a large number of offices, and those with many businesses that rely on trade from workers who commute.

“We are seeing a slow recovery to pre-COVID tonnages as workers are continuing to work from home and businesses that rely on office workers are really struggling”

Although commercial tonnages remain lower than pre-COVID-19 levels, local authorities did not report a significant drop in the number of customers. Many businesses that initially suspended collections during lockdown are gradually reinstating services as they begin trading again. In addition to offices, businesses that are least likely to be reinstating services are those whose activities pose difficulties as regards to social distancing, or which rely on tourism, such as:

- Nail bars
- Tanning shops
- Small independent retailers
- Small independent hospitality sector businesses
- Hotels

While contract cancellations may have been few, many customers have asked for less frequent collections. Local authorities are adapting by changing invoice periods and offering flexible services to accommodate businesses evolving needs.

“We’re having to adapt our services to meet the changing needs of our customers by offering flexible collections and ad hoc services”

¹⁴ Barnet, Bexley, Hackney, Haringey, Islington and Westminster.

¹⁵ As defined by the London Government Act 1963: <https://www.legislation.gov.uk/ukpga/1963/33>

¹⁶ These figures are estimates as local authorities co-collect commercial waste and household waste and therefore do not have exact commercial waste tonnages.

Some local authorities are seeing customers that have suspended their service still putting waste out for collection without being notified a collection is needed, effectively resulting in an increase in fly tipping.

The decrease in demand for DMR collections has reduced more than residual as businesses are reporting that with reduced staff they cannot afford the time to separate material for recycling.

One positive change reported by local authorities has been an increase in requests for separate food collections as lockdown has been eased. Businesses are having to change the way they operate and find savings as they seek to return to operation. This increase in demand for food waste collections may be the result of businesses trying to reduce costs. Some local authorities have found it possible to reduce prices (when compared to pre-COVID-19 costs) for food collection services due to lower anaerobic digestion (AD) gate fees. This is likely to have been brought about by a reduction in demand for treatment as restaurants and other substantial producers of commercial food waste have scaled down activity, while AD operators continue to require food waste to generate gas.

Local authorities are also reporting gaining new customers from PWCs. Some PWCs have been adversely affected and have stopped or reduced their services during the pandemic, leading their customers who remain operational to need to seek services elsewhere.

Some PWCs have alienated customers by continuing to charge while not providing services; a few have sold off their operations (e.g. Giraffe Recycling has been acquired by First Mile) or are facing financial difficulties, suggesting that there may be further consolidation or opportunities to attract new customers in the future. Whilst PWCs had to furlough staff or run operations at a loss, local authorities were able to redirect resources to where demand had increased. In addition, some local authorities are gaining new customers through their direct marketing campaigns.

All respondents said the majority of spare vehicle and crew capacity arising from a reduction in commercial waste is being utilised to meet increased need for household waste collections, emerging third sector requirements (e.g. soup kitchens) and increased parks waste. This allowed the local authorities commercial waste services to continue to be cost effective, even as volumes reduced.

“100% of our resources have been utilised throughout lockdown to collect increased household waste and parks waste”

Even hard-hit sectors are adapting. In the hospitality sector, where local authorities have closed roads to make space for additional outside seating, it is enabling businesses to operate at greater capacity than would otherwise have been the case. However, demand for outside dining will reduce as we move into winter.

“We have pedestrianised 40 roads in our borough to make room for more outside dining”

People are shopping more locally to where they live, which has benefitted boroughs with a higher proportion of residential properties, but boroughs that rely heavily on custom from commuters are seeing a slower recovery in trading.

When compared to the results of an ADEPT¹⁷ survey carried out in July 2020, shown in Table 1, London local authorities have seen a bigger drop in commercial tonnages than a sample of other English local authorities. 73% of responding local authorities highlighted a lower-than-usual level of

¹⁷ The Association of Directors of Environment, Economy, Planning & Transport

collected commercial waste tonnages in the week commencing 20th July. A higher percentage of local authorities (26%) than in previous weeks' report tonnages of commercial waste to be 'about the same as usual'.

Table 1. Local authority commercial waste tonnage change

	+100% increase	50-100% increase	20-50% increase	0-20% increase	No impact	0-20% decrease	20-50% decrease	50-100% decrease
Local authority responses	0%	0%	1%	0%	26%	32%	39%	1%

Source: ADEPT Survey (July 2020)

Local authorities' reduction in revenue from commercial waste was in line with the tonnage reduction, which at the beginning of July remains between 25 and 35% down on the same period last year. On average boroughs are forecasting annual revenue in 2020/21 to be around 15% to 20% down on the previous year.

“Our original revenue budget for 20/21 was over £3m but we are now projecting it to be £500k lower, 15% down on last year”

This loss in revenue from commercial waste is in addition to the reduction in revenue from other council services such as car parks, rents and tourist attractions.

“Our borough’s revenue has been decimated by COVID-19 and our projected revenue from commercial waste this year is down by about 20%”

In summary, the impact of COVID-19 on local authorities' commercial waste revenue has been substantial, and the effect is continuing despite the easing of restrictions.

2.2. Business interviews

To understand how the needs of businesses may change in the coming months a range of business type and size were interviewed, as shown in Table 2. The impact felt by the business is varied depending on business type and location.

Table 2. Businesses interviewed

	Business type	Business size	Location	Inner/Outer London
Business A	Chain Hotel	Large	Kensington and Chelsea	Inner
Business B	Gym	Small	Hounslow	Outer
Business C	Food Manufacturer	Large	Newham	Outer
Business D	Pharmacist	Large	Westminster	Inner
Business E	Supermarket	Large	Barking and Dagenham	Outer
Business F	Food producer	Micro	Southwark	Inner
Business G	Business Support Services	Large	Tower Hamlets	Inner
Business H	Law Firm	Small	Tower Hamlets	Inner

Supermarkets, pharmacists and food and drink manufacturers that were interviewed were either unaffected or have increased business activity as a result of COVID-19. All said their waste arisings have increased as a result of increased PPE, cleaning and hygiene wastes. They believe this is likely to remain the case for the foreseeable future.

Businesses that have seen a big decline in business activity are hotels (large and small), gyms and any businesses that rely on trade from workers especially in inner London.

A law firm (Business H) based in Canary Wharf said:

“We are still encouraging people to work from home and that will remain the case in the coming months. We are looking to reduce the size of our offices or even cease to have an office when our tenancy comes to an end, until there is more certainty about the future.”

A business services company (Business G) with 600 staff based in the Broadgate Estate in the City of London said:

“We are starting to encourage people back in to the office but we only have capacity for 25% of staff with the social distancing measures we have implemented in the office.”

With the exception of increased PPE, hygiene and cleaning wastes, no businesses that were contacted thought that there had been any significant changes to waste composition.

The London Borough of Westminster and the City of London have been particularly affected due to the high concentration of businesses, tourist destinations and high number of civil service jobs within the area and the continuing prevalence of working from home amongst this group of workers. No

detailed figures have been given on the proportion working at home, but the government is asking for 80% to be back at least one day per week, with the suggestion being that this might comprise 20% for five days per week, 30% for three days and 30% for two days, with the balance attending only occasionally¹⁸. However, Dave Penman, head of the FDA union which represents senior civil servants, said that while the numbers of civil servants returning to the office are steadily rising, the figure would be unlikely to exceed to 30 or 40% by the year's end¹⁹. Meanwhile, risk assessments on civil service offices have typically found safe occupancy rates to be in the range of 25% to 30%²⁰.

2.3. Private waste contractor interviews

PWCs²¹ were interviewed to seek their perspective on how their businesses have been affected by COVID-19.

The initial drop in commercial waste tonnages seen by PWCs in quarter one of the 2020/21 financial year is in line with that reported by local authorities.

PWCs have attempted to retain customers by:

- Offering flexible collections; and
- Stopping collection charges during service suspensions.

PWCs report that the most affected areas are those with higher business concentration, those that are tourist destinations and those which are more reliant on visitor access via public transport. However, one PWC reported a swift recovery:

"In July we had our highest income to date. The Eat Out to Help Out scheme and businesses spilling out onto pavements and closed roads has really helped."

PWCs reported their education customers had a 60% reduction in footfall prior to the summer holidays, which had a significant impact on tonnages. As education establishments returned in September, contractors are generally predicting a return to previous levels of waste for schools and universities. However, some sites will vary: food waste tonnages are predicted to be down for one university customer, as hygiene concerns have led its caterers to withdraw their self-service food buffet, which had been the source of a significant amount of food waste in the past. In other cases, even where student numbers may be reduced, it is anticipated that the amount of waste per head will rise due to increased PPE and hygiene wastes.

PWCs are reporting that some sectors have been minimally impacted by COVID-19. Waste arisings from essential retailers²², hospitals and healthcare customers have remained constant during the pandemic.

In summary, the patterns reported by PWCs are broadly consistent with those reported by local authorities.

¹⁸ <https://www.lbc.co.uk/news/civil-servants-urged-get-back-offices-quickly/>

¹⁹ <https://www.bbc.co.uk/news/uk-politics-54035770>

²⁰ <https://www.bbc.co.uk/news/uk-politics-53660963>

²¹ BPR Group, Suez, Veolia

²² Retail and wholesale sale of food, beverages, newspapers, household consumer products necessary to maintain the safety and sanitation of residences and businesses, pharmacies and chemists, retail sales of medical and orthopaedic goods in specialised stores, fuel stations and heating fuel providers, health and animal welfare retailers, laundries and dry cleaners, banks, post offices and credit unions, retail sale of safety supply stores.

3. THE MONTHS AHEAD

There is still significant uncertainty about the medium-term outlook, in terms of the speed at which businesses will recover and the degree to which the pandemic will change the world we once knew more permanently. In July 2020, GDP grew by 6.6%²³ since lockdown has been eased, but this growth may be short lived if restrictions are reintroduced.

In order to help predict commercial waste arisings in London over the coming months, we have projected possible scenarios for the recovery of key sectors for London, based on the predictions of economists.

One of the key factors that determines when concerns about COVID-19 may recede is the availability of a vaccine. KPMG's Hard Times report, published in June 2020, predicts the most likely timeline for a COVID-19 vaccine to become available is July 2021²⁴, which appears to reflect a broader consensus on typical development timescales. However, the arrival of a vaccine cannot be predicted with certainty. Even if an effective vaccine becomes available, there is some uncertainty around possible unwillingness in some parts of society to accept vaccination, which may make it more difficult to achieve immunity population-wide²⁵. However, we have assumed that the summer of 2021 is a reasonable estimate for earliest point at which COVID-19 could become less of an issue.

While much of the initial impact of COVID-19 may be a temporary shock, with some business activity trending back towards normality (a trend that is likely to continue, especially once a vaccine is available) it appears that some changes will persist for the longer term and that there will be substantial shifts in economic activity. One example appears to be a big shift towards home working and the decentralisation of commerce and the hospitality sector, which is likely to have a lasting effect on commercial and household waste generation patterns.

There are also a number of predictable events over the next year that could impact on commercial waste arisings. Key milestones include:

- Schools going back in September, which may enable more workers returning to their place of work but may necessitate the return of other restrictions (e.g. on pubs and restaurants) in an attempt to avoid a spike in COVID-19 cases;
- The unwinding of aspects of government support, such as such as the Job Retention Scheme in October;
- The run up to Christmas, which is traditionally a busy time in retail, and may lead to an uptick in business activity, followed by;
- Various tax payment deadlines, which may lead to cashflow difficulties for struggling businesses.

While many sectors are recovering from an enforced pause in their activity during the lockdown, economic predictions in the short term are somewhat bleak. Both the Office for Budget Responsibility and the Bank of England are predicting a substantial rise in unemployment in 2020/21, although these estimates may well take into account factors other than COVID-19. A doubling or

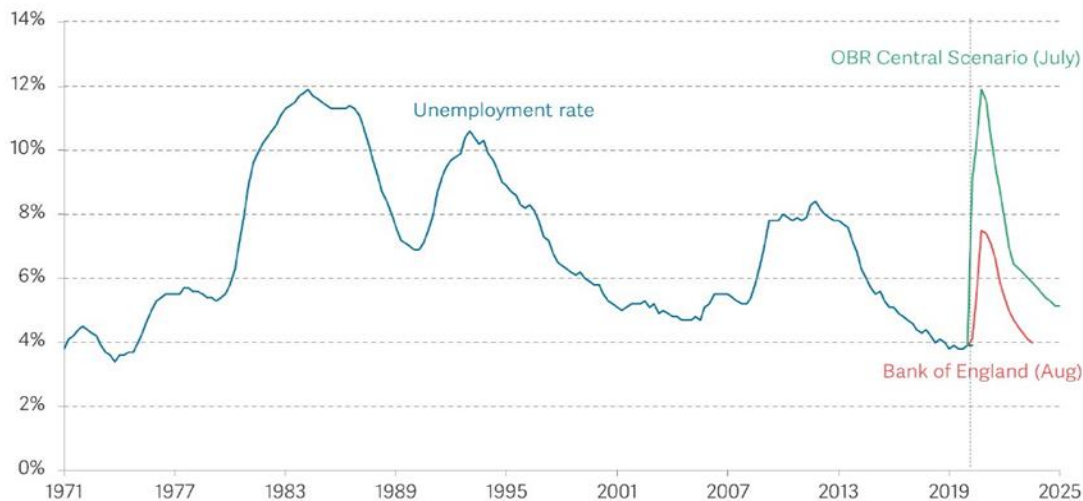
²³ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/july2020>

²⁴ KPMG (2020) Hard Times UK Economic Outlook

²⁵ A recent study by the London School of Hygiene and Tropical Medicine found that more than 25% of Britons stated that they would not, or remained undecided as to whether they would, take a COVID-19 vaccine.

trebling of current unemployment figures would be likely to lead to wider economic effects, although both estimates suggest that the pace at which unemployment will fall back towards more normal levels will be unusually quick (see Figure 2). Greater unemployment will decrease consumer spending and therefore reduce commercial waste arisings.

Figure 2. Unemployment rate and forecasts (ages 16+)



Source: Office for Budget Responsibility, Bank of England

3.1. Future impacts

3.1.1. Key government interventions

The government has taken unprecedented measures to alleviate the immediate impact on businesses, so as to allow a rapid bounce back to occur. These include the furlough scheme²⁶, the Coronavirus Business Interruption Loan Scheme (CBILS), the Bounce Back Loan Scheme (BBLs), the Future Fund²⁷ and the ‘Eat Out to Help Out’ scheme²⁸. Despite these measures, the degree to which businesses recover will depend on how quickly and thoroughly the virus is contained and how long it takes before normality, even in a new sense, is resumed.

3.1.2. Taxes

In order to assist businesses with cashflow, the government implemented a payment holiday for all VAT payments due in the period from 20th March to 30th June 2020. However, businesses must pay the deferred VAT by the end of the 2020/21 tax year, which may create financial problems for businesses that must find extra money at that point in time.

In addition, in order to encourage purchases in sectors that have been particularly affected by COVID-19, VAT on food, accommodation and attractions has been reduced to 5% from 15th July to 12th January 2021. To the extent that this has been effective in encouraging expenditure, the return to normal VAT rates in 2021 may lead to a downturn in sales in these sectors.

The majority of businesses will be due to make Corporation Tax payments in January 2021 for the financial year 2019/20. Only the very last part of that financial year will have been affected by

²⁶ As of August 16th 2020, 9.6 million jobs were furloughed under the job retention scheme <https://www.statista.com/statistics/1116638/uk-number-of-people-on-furlough/#:~:text=As%20of%20August%2016%2C%2020%2C%20approximately%209.6%20million,as%20part%20of%20the%20government%27s%20job%20retention%20scheme.>

²⁷ Over 320 companies have benefitted from £320 million of Future Fund support <https://www.gov.uk/government/news/more-firms-can-now-benefit-from-the-future-fund>

²⁸ The Treasury said restaurants have so far made 130,000 claims worth £522m <https://www.bbc.co.uk/news/business-54015221>

COVID-19, and so many companies will have made a fairly normal level of taxable profit. For businesses that are now struggling, this tax date may present a significant cashflow challenge. It is possible that when Corporation Tax falls due, it may lead to business closures.

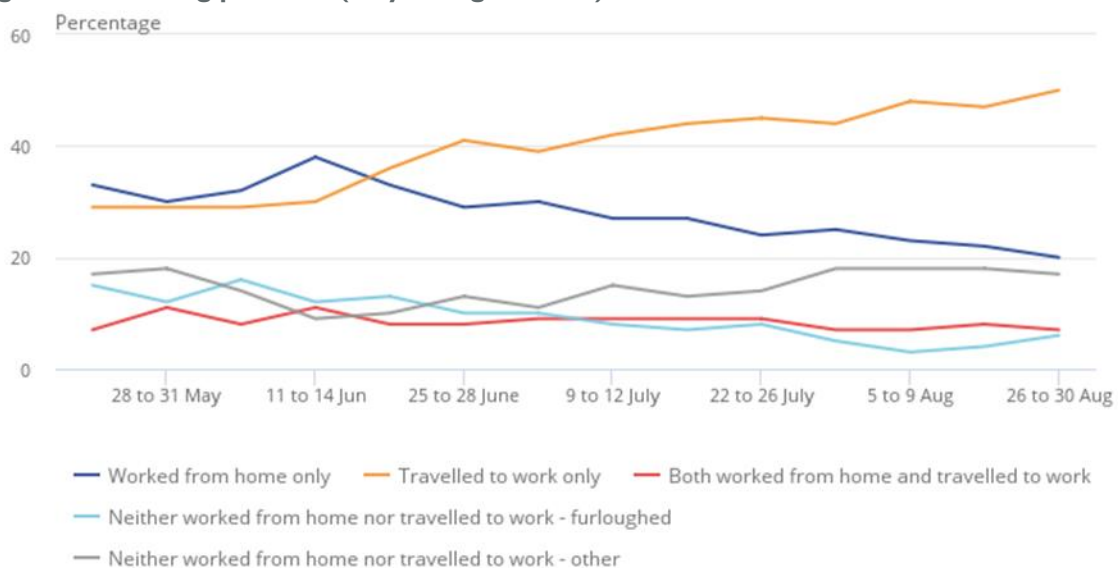
The unwinding of tax payment holidays, combined with scheduled tax payments, are likely to lead to businesses that have been adversely affected by COVID-19, and have not fully recovered, closing down in the first quarter of 2021.

3.1.3. Calendar events

At the start of September, many schools have returned to normal operation. As a result, many parents who have needed to take time off, or perhaps work from home, in order to supervise children whose schools have been closed prior to and during the summer holiday may now return to their place of work – this may particularly affect office workers as they are the type of workers who have been able to work from home during school closures (see section 6. Since we wrote this report).

There are some indications of an uptick in public transport usage coinciding with schools reopening²⁹, which may imply an increase in business activity in London, especially in parts of London to which workers typically commute. ONS data shows a steady decline in the number of people who only worked at home from week to week, and an accompanying increase in the proportion who only worked in their workplace. The proportion of people furloughed has also fallen (see Figure 3).

Figure 3. Working patterns (May – August 2020)



Source: ONS – *Opinions and lifestyle survey*

For London in particular, on 8th September BBC London’s Transport and Environment correspondent reported that London tube journeys had returned to 32% of the same time last year, and bus journeys to 55% – both a sharp rise on the previous week³⁰.

However, there are also concerns that a near-simultaneous increase in interactions at schools, universities and workplaces will lead to a spike in cases (see section 6. Since we wrote this report). Again, there are some indications of this happening nationally³¹. A significant increase in cases may

²⁹ <https://www.theguardian.com/uk-news/2020/sep/07/monday-sees-biggest-jump-in-uk-transport-use-since-pandemic-began>

³⁰ <https://twitter.com/BBCTomEdwards/status/1303297137002909697>. Less up to date TFL journey data can be found here: <https://data.london.gov.uk/dataset/public-transport-journeys-type-transport>

³¹ <https://www.theguardian.com/world/2020/sep/07/coronavirus-young-people-urged-to-follow-rules-as-uk-cases-rise>

necessitate the reintroduction of government restrictions, whether at a local or a national level, which would lead to a return in the levels of home working seen during the lockdown.

As winter approaches, it is likely that some of the measures that have helped to maintain business activity in some sectors will become less effective. Colder weather will reduce the demand for outdoor dining, drinking and shopping, and if social distancing requirements remain in place for indoor activities, the result is likely to be a downturn in activity and waste from the hospitality and retail sectors compared with a normal year.

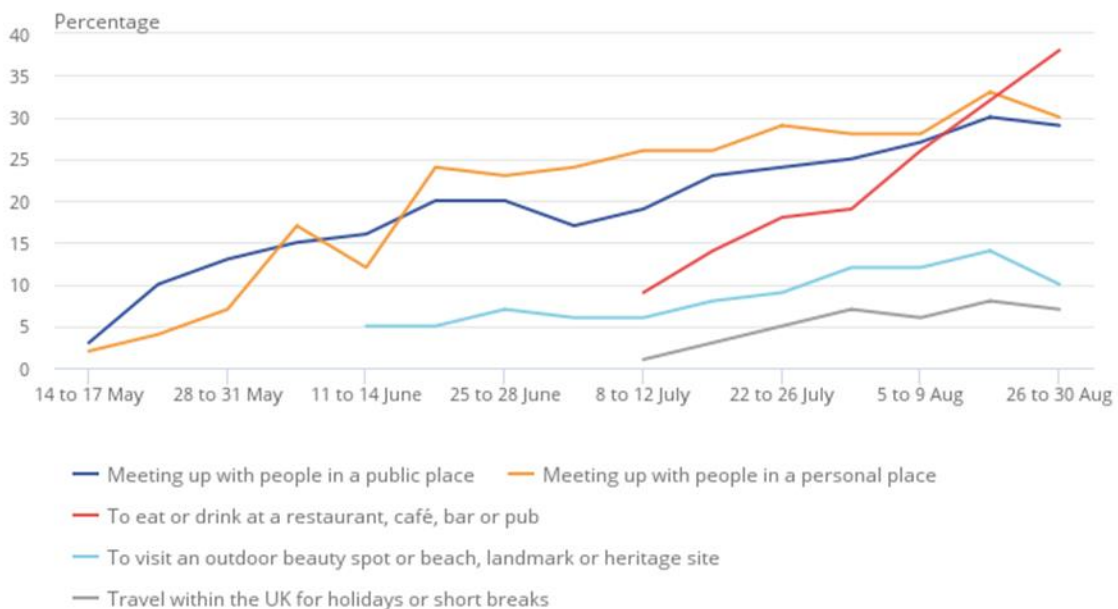
The start of the pre-Christmas “black Friday” period may increase retail activity from November, but with the increased trend in online-sales, the increase in footfall that this would usually bring may be significantly reduced, especially if stores continue to require mask wearing and limit numbers of shoppers to enable social distancing. This may make a trip to the shops less convenient and less appealing.

3.2. Behaviour change

COVID-19 has had a huge impact on public behaviour, with people becoming reluctant to leave home, in line with the government’s restrictions during the lockdown. While restrictions have eased, some people have remained reticent about leaving their home without a good reason.

Figure 4 shows that since July, there has been an increase in some reasons for leaving home, such as eating or drinking in a pub or restaurant or meeting friends and family, whether in a public place or at someone’s home. There has also been an increase in people leaving home to go on holiday or take a short break.

Figure 4. The most common reasons for leaving home (May – August 2020, UK)



Source: ONS – Opinions and lifestyle survey

Despite these increases, the ONS reports that in the last week of August, only 53% of adults reported that they felt either very comfortable or comfortable about leaving home because of COVID-19. If this number does not increase, people are likely to continue to spend more time at home than was the case prior to the pandemic.

4. SECTORAL RECOVERY PATTERNS

Some sectors have been more negatively affected by COVID-19 than others, while a small number have seen a positive impact. In this section we examine the economic sectors in London in four main categories of impact:

- Long-term positive impact;
- Little/no impact;
- V shaped recovery; and
- Long-term reduction.

The impact of COVID-19 has also been varied depending on the size of businesses. According to a survey by Simply Business in June, London's small businesses have reported the highest average loss of income in the UK, and are also the most likely to have permanently shut down, with 7% having done so³². However, London's small businesses also reported the lowest rate of temporary closures – 61% compared to the national average of 67%. In addition, 15% of London's small business owners say they plan to start a new business after COVID-19.

The sectors below have been categorised more broadly for modelling. The modelling categories are given in brackets. To find SIC³³ codes included in each modelling category see Appendix 2.

4.1. Arts and leisure (other services)

The arts and leisure sector has seen a long term negative impact and despite the government's announcement that theatres and live music venues in the UK could reopen from 15th August, most London venues are remaining closed as the social distancing measures make it commercially unviable to begin trading.

While some of the larger venues have received government grants, it seems likely that many small venues will be unable to avoid closing down.

Theatres and live music venues have been highlighted as "higher risk" in the governments COVID-19 Recovery Strategy³⁴ and therefore its likely these businesses will be the first to have restrictions applied if infection rates rise. These venues typically see large proportions of plastic waste from single use cups which will no longer be arising as these venues remain closed.

4.2. Office space (other services)

COVID-19 has had a profound effect on the levels of home working. Over the last five years, the proportion of people who say that they mainly work from home has increased, but has remained relatively low as a proportion of the total workforce. Figure 5 shows in the 12-month period from

³² Simply Business (2020) Small businesses and Covid-19: how has your area been impacted? <https://www.simplybusiness.co.uk/knowledge/articles/2020/06/covid-19-and-small-business-how-has-your-area-been-impacted/>

³³ Standard industrial classification

³⁴ <https://www.gov.uk/government/publications/our-plan-to-rebuild-the-uk-governments-covid-19-recovery-strategy>

January to December 2019, there were an estimated 1.7 million people who said that they work mainly from home; this represents just over 5% of the total workforce³⁵.

Figure 5. Percentage of people in employment who mainly work in their own home (2015 – 2019, UK)



Source: ONS – labour market survey

The ONS Labour Market Survey found that in April 2020, 46.6% of all workers in employment did some work at home³⁶ (see Table 3). Of those who did some work from home, 86% did so as a result of the COVID-19 pandemic. When looking at the regional level, more than half of people living in London (57.2%) did some work at home.

Table 3. Homeworking (April 2020)

Proportion doing any work at home	UK % (April 2020)
All persons	46.6
Region	
London	57.2
North East	49.1
North West	49.4
Yorkshire and The Humber	37.6
East Midlands	45.1
West Midlands	35.3

³⁵ (2019) Coronavirus and homeworking in the UK labour market: 2019 - <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/coronavirusandhomeworkingintheuklabourmarket/2019>

³⁶ Coronavirus and homeworking in the UK: April 2020 <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/coronavirusandhomeworkingintheuk/april2020#coronavirus-and-homeworking-in-the-uk-data>

East	47.3
South East	49.4
South West	45.1
Wales	40.7
Scotland	44.0
N Ireland	40.9
Proportion doing any work at home	
1 Managers, Directors and Senior Officials	67.3
2 Professional Occupations	69.6
3 Associate Professional and Technical Occupations	63.7
4 Administrative and Secretarial Occupations	57.2
5 Skilled Trades Occupations	18.9
6 Caring, Leisure and Other Service Occupations	14.9
7 Sales and Customer Service Occupations	15.9
8 Process, Plant and Machine Operatives	5.4
9 Elementary Occupations	*

Source: ONS – labour market survey

Wave 10 of the ONS Business Impact of COVID-19 Survey (BICS) shows that on average 38% of all businesses currently trading were working remotely during the period of 13th July to 26th July – a period when coronavirus restrictions had been lifted and more individuals were brought back from furlough. However, the level of homeworking varies depending on the sector³⁷.

It seems that the trend of working from home is set to continue into 2021, and perhaps even further into the future. Large companies such as Google have announced that employees can work from home until at least June 2021. Zillow, Twitter and Square have all announced that employees can work from home indefinitely³⁸.

Research by Redfield and Wilton Strategies shows that, despite the government encouraging the public to go back to work if they can, a clear majority (62%) of those working from home have not yet been told by their employer to return to their usual place of work. Over a fifth (21%) of staff that began homeworking as a result of COVID-19, who have been asked to return to their usual place of work, have not returned³⁹.

³⁷ (2020) Business Impact of COVID-19 Survey (BICS) results

<https://www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/businessimpactofcovid19surveybicsresults>

³⁸ <https://www.businessinsider.com/companies-asking-employees-to-work-from-home-due-to-coronavirus-2020?r=US&IR=T#rei-the-outdoor-retailer-just-announced-that-it-is-selling-its-brand-new-unused-8-acre-corporate-campus-in-bellevue-washington-in-the-same-august-12-statement-ceo-eric-artz-said-the-company-will-lean-into-remote-working-as-an-engrained-supported-and-normalized-model-for-employees-l>

³⁹ <https://redfieldandwiltonstrategies.com/clear-majority-of-uk-workers-believe-working-from-home-increased-their-productivity/>

In London, roughly two-thirds (66%) of those currently working from home intend to continue doing so fully or partly in the future, while a quarter (25%) do not⁴⁰.

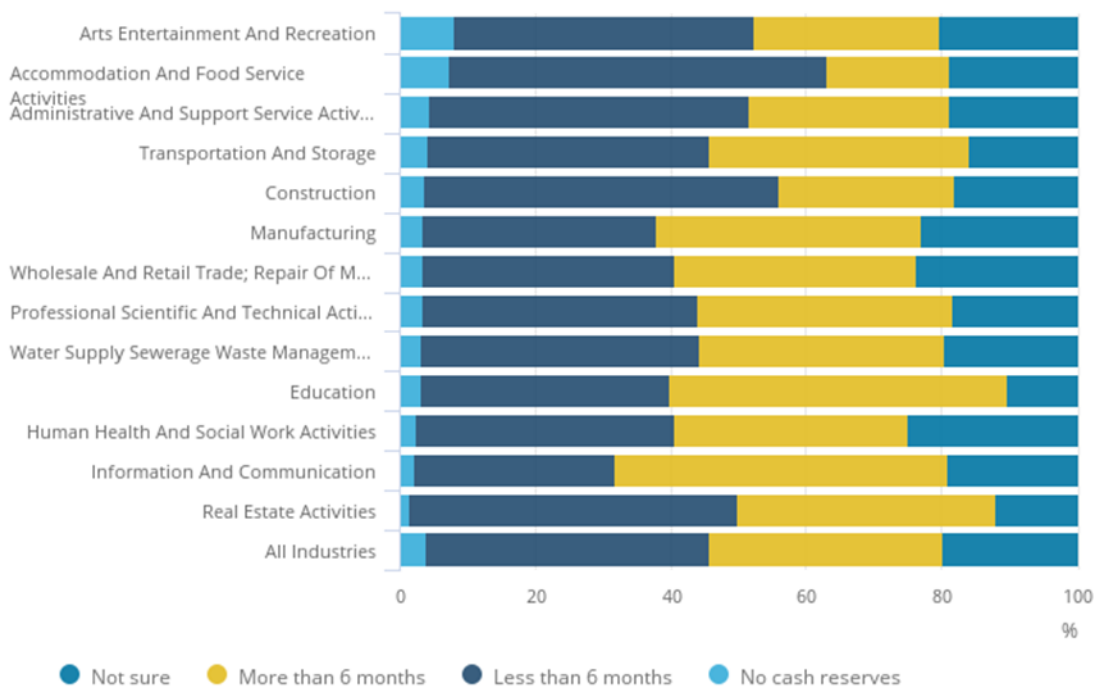
While events such as children returning to school may encourage more employees to return to their place of work, many office-based workers may continue to work from home as the benefits of homeworking have been realised by both employees and employers.

This increase in homeworking has had a big impact on commercial (and household) waste arisings in London. As offices remain closed, or are operating at reduced capacity, local authorities and PWCs are reporting paper waste from office buildings is down and glass and food waste from bars and restaurants visited by office workers is significantly reduced.

4.3. Accommodation and food services

Accommodation and food services is another sector to see a long-term negative impact from COVID-19. 63% of businesses from this sector were reporting to have less than 6 months' worth of cash reserves remaining in July 2020. This is a higher proportion than seen in any other sector.

Figure 6. Business cash reserves



Source: ONS – business impact survey of COVID-19 (July 2020)

Bars and restaurants that have been able to reopen have seen a good recovery throughout July and August due to the governments' 'Eat Out to Help Out' scheme. It is likely that this increase in business will fall from September as the scheme comes to an end, as outside dining becomes less appealing as we move into winter, and the 'Rule of Six' and restrictions on the way they can operate (e.g. closing at 22:00 and table service only) are introduced (see section 6. Since we wrote this report).

Travel restrictions, the cancelation of major sporting events and social distancing measures have had a devastating impact on accommodation businesses. Many London hotels remain closed or are

⁴⁰ <https://redfieldandwiltonstrategies.com/two-thirds-of-londoners-intending-to-work-from-home-in-future/>

operating at limited capacity therefore producing less food and residual waste. Sporting events may not be allowing fans to attend until March 2021⁴¹ which will have a significant negative impact on accommodation and food services (see section 6. Since we wrote this report).

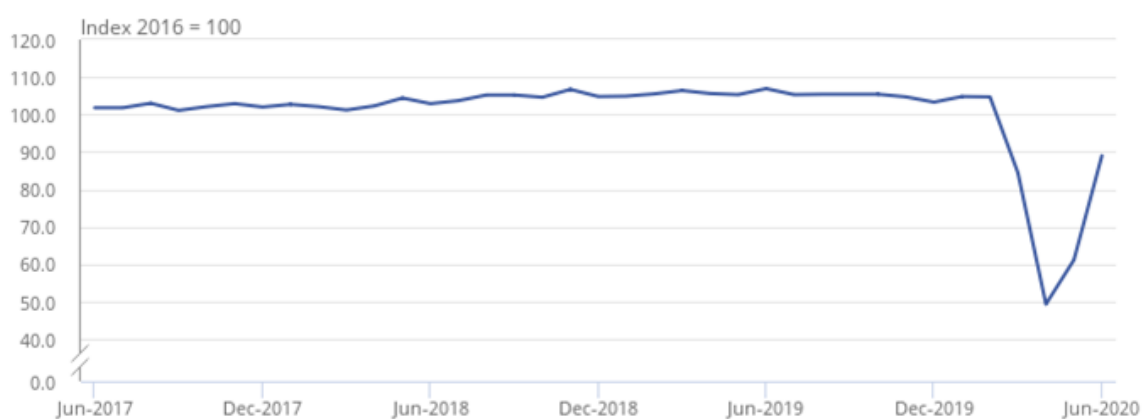
For businesses that do continue to trade, there will be a reduction in the capacity for customers due to social distancing measures. However, there may be an increase in waste arising per customer due to the disposal of PPE, additional cleaning waste and single use waste such as disposable cups and paper menus.

4.4. Non-essential instore retail (retail and wholesale)

Non-essential stores were some of the hardest hit businesses during the pandemic because of many stores falling under the non-essential store types listed by government. While non-essential stores show some recovery with strong growth in May and June 2020⁴², sales have not currently returned to the levels experienced before lockdown.

The strong monthly growth of 45.5% in the volume of sales in June still results in lower than usual levels, showing a partial recovery. Figure 7 provides growth rates for the main stores within the non-food sector until June 2020.

Figure 7. Non-food instore retail sales index



Source: ONS – Monthly business survey, retail sales inquiry

It is unlikely that non-essential, in-store retail will recover to pre-COVID-19 levels as many large retailers, including well-known brands such as TM Lewin and Oasis, have permanently closed all of their stores. Many others have gone into administration, closed some stores, or announced substantial job cuts⁴³.

Some retailers with unsold seasonal stock in their stores may have to write this off and buy in new products which would in turn increase waste volumes. Others may limit their risk by focusing on simply selling off old stock, which would reduce deliveries and therefore reduce cardboard waste.

The trend of store closures and job reductions may increase over the coming months, especially if Christmas trading fails to reach pre-COVID-19 levels. Factors affecting these businesses include the Job Retention Scheme ending in October, corporation tax payments in January and deferred VAT payments in March.

⁴¹ <https://www.bbc.co.uk/sport/54246745>

⁴² (May 2020) Coronavirus and the impact on output in the UK economy: May 2020

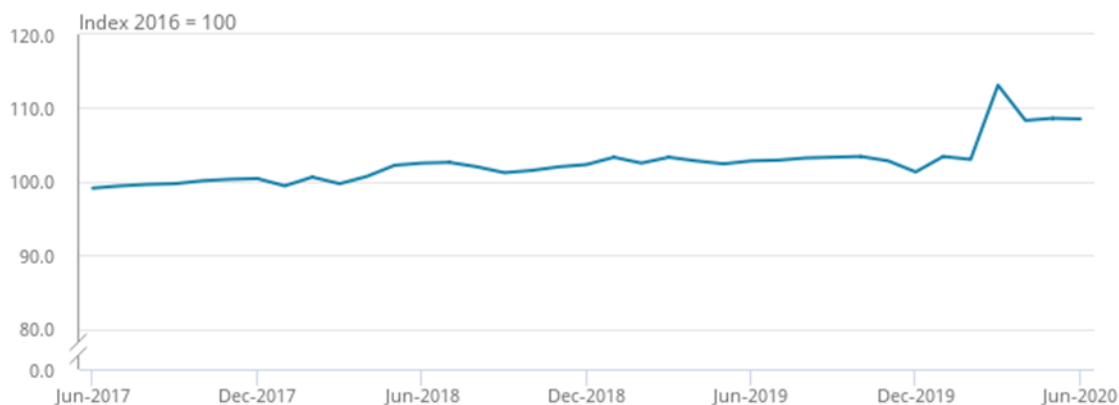
<https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/coronavirusandtheimpactonoutputintheukeconomy/may2020>

⁴³ <https://www.business-live.co.uk/retail-consumer/list-shops-fallen-administration-2020-18177619>

4.5. Food retail (retail and wholesale)

Food retail has experienced a long-term positive impact as food store sales reached new high levels at the beginning of lockdown as stockpiling caused an increase in spending on “household goods and food and drink”. With bar and restaurant closures, consumers spent more time, and prepared more meals, in their homes. Following this peak, sales fell back, but remained at a level higher than before the pandemic. In June 2020, food store sales remained 5.8% higher than in June 2019⁴⁴.

Figure 8. Food retail sales index



Source: ONS – Monthly business survey, retail sales inquiry

As current levels of homeworking will remain high over the short term and bars and restaurants remain at reduced capacity, it is likely that food retail sales over coming months are likely to remain at the inflated June level.

Growth was seen across all business sizes. Small independent shops are benefiting as shoppers are choosing to shop more locally and avoid public transport and this is likely to remain high while social distancing measures remain.

The majority of commercial waste from food retail businesses comes from bulk deliveries therefore it is likely that cardboard volumes from these premises would rise significantly, except in major stores where this material tends to be backhauled.

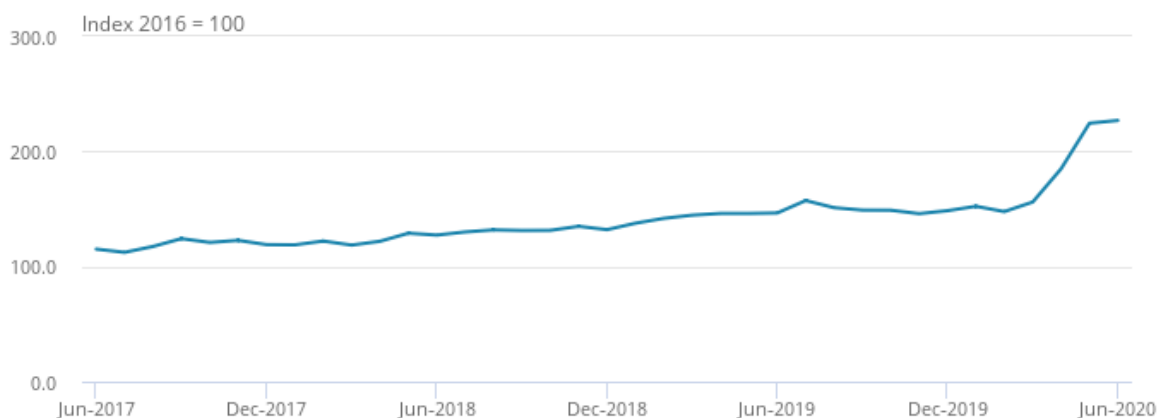
4.6. Online retail and associated businesses such as storage and logistics (retail and wholesale)

Online retail has experienced a long-term positive impact with continued growth during the pandemic and a 53.8% increase in sales volume when compared with June 2019⁴⁵.

Despite a moderate monthly increase of 1.1% in June, this sector has remained at historically high levels, with the benefit of continued trade for many online stores while social distancing measures were in place. While a number of non-online store types have started trading again in June, many consumers appear still to be spending more online than they did prior to the pandemic. This increased trend in online shopping will have a negative impact on commercial waste arising in in-store retail businesses.

⁴⁴ ONS (2020) ONS Data Series on Retail <https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/june2020>

⁴⁵ ONS (2020) ONS Data Series on Retail <https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/june2020>

Figure 9. Online retail sales index


Source: ONS – Monthly business survey, retail sales inquiry

It is likely that this growth in online retail will slow, but these sectors can be expected to remain strong in the medium term as consumers who had not previously shopped online become used to online retail. This sector may therefore give rise to more waste from their premises.

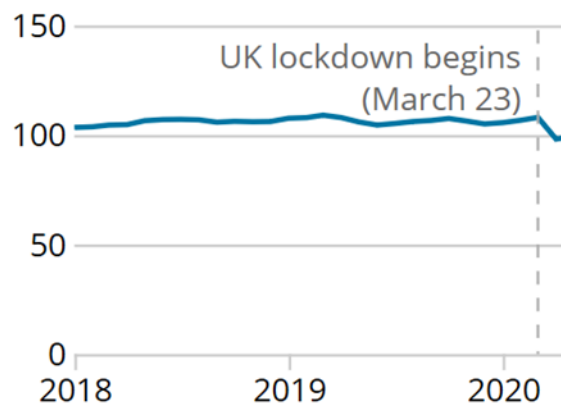
Services industries that are linked to retail activity also had a boost in May 2020. These included freight transport by road, warehousing, and postal- and courier-related activities⁴⁶.

Stock will arrive at warehouses in bulk deliveries therefore it is likely that cardboard and plastic film volumes from these premises would rise significantly.

4.7. Food and drinks manufacturing

The food and drinks manufacturing sector saw a slight decline in March but has recovered well to around pre-COVID-19 levels. It is unlikely the levels of waste arising from these businesses will increase as business activity is largely unaffected but due to increased PPE, hygiene and cleaning waste overall is likely to have increased.

While the sector as a whole may be broadly unaffected, there may be differential impacts on particular businesses. Companies that prepare food for office lunches, or to supply in canteens, may find their business is slow to recover; while those preparing food for sale in supermarkets or local stores may see their business grow.

Figure 10. Index for food manufacturing industries


Source: ONS: Coronavirus and the impact on output in the UK economy, July 2020

⁴⁶ (May2020) Coronavirus and the impact on output in the UK economy: May 2020
<https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/coronavirusandtheimpactonoutputintheukeconomy/may2020>

5. IMPACT ON COMMERCIAL WASTE ARISING

5.1. Baseline

The modelling undertaken for this study develops estimates of the impact of COVID-19 on commercial waste – waste that is similar to the types of waste that are generated by households, and local authorities will typically collect.

A baseline estimate of total commercial waste arising in each borough in 2019/20 (prior to COVID-19) will be the basis on which to model the predicted sectoral impacts.

There is limited information on commercial waste generation. In order to understand the likely impacts of COVID-19 on commercial waste, we used a previously developed technique to produce borough-by-borough estimates of normal levels of arisings and waste compositions. These national estimates draw on Defra waste data and surveys⁴⁷, national compositional data from WRAP⁴⁸ and ONS data from the BRES survey⁴⁹, which gives details of businesses types at a high level of geographical resolution.

The baseline provides a starting point from which the impact on waste arisings of changes in business activity can be quantified. Future sector-specific and borough-specific COVID-19 impact factors have been applied to this baseline to produce a commercial waste forecast for London for the remainder of 2020/21.

5.1.1. Baseline limitations and assumptions

While the method used in this study is reasonable and consistent with what little data is available, it has limitations.

One limitation of this approach is the vast majority of businesses are microbusinesses, even amongst those registered for VAT and/or PAYE. A substantial share of microbusinesses do not occupy their own, discrete commercial premises. Therefore, ONS' UK Business Counts data tends to overstate the actual number of premises so far as "locations that manage their own waste" is concerned.

The UK Business Counts data shows around 523,000 local units or "workplaces" in London in 2019, of which c.394k (75%) are reported to have 0-4 employees.

Many such businesses, which are likely to include personal service companies, will not have business premises at all, but will be run from home, will operate primarily on the premises of clients (e.g. small building firms, mobile hairdressers, self-employed professional services providers). This means that the number of premises from which waste needs to be collected will be substantially lower than the BEIS data suggests. For this reason, all businesses with 0-4 employees (which in any case produce very small amounts of waste per site), regardless of their sector, have been removed from the

⁴⁷ Jacobs (2010) *Commercial and Industrial Waste Survey 2009 Final Report*, Report for DEFRA, December 2010

⁴⁸ Wrap (2020) National Municipal Waste Composition, England 2017

⁴⁹ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/businessregisterandemploymentsurveybres>

baseline model. They produce insignificant amounts of waste in relation to London's total commercial waste volumes and would therefore disproportionately effect the modelling results.

In addition, BEIS's longitudinal survey of SMEs⁵⁰ suggests in 2018, 25% of SMEs were operating from home and therefore a reduction of 25% has been applied to waste arising from SMEs with 5-9 employees.

Many small businesses occupy premises such as serviced offices, shared working spaces, shared workshops or shopping centres where the landlord consolidates the waste from all of the individual companies into a single set of bins⁵¹. The number of businesses reported in our modelling will therefore likely to exceed the number of premises that are available as potential customers for commercial waste collectors.

Further limitations include:

- Reliance on Defra's UK Statistics on Waste for England-wide data on total commercial and industrial waste arisings for different sectors.
 - Defra has made substantial adjustments to its methodology, and the resulting totals, in recent years;
 - Commercial waste that is co-collected alongside household waste is only an estimate;
 - The Defra data reports a range of specialist wastes such as industrial sludges that do not form part of the municipal waste stream, and streams such as metals, only some of which will be municipal waste. Assumptions are therefore used to adjust the data to remove non-municipal waste; and
 - The Defra data categorises a great deal of waste as "household like" or "mixed", necessitating assumptions being used to estimate its composition.
- Reliance on Defra survey data that is nearly a decade old for estimates of the proportion of waste arising from businesses of different sizes.

As a result of these limitations and assumptions, the results produced by this method should be taken as indicative, rather than as a precise estimate of tonnages.

5.1.2. Forecast model limitations and assumptions

The forecast produces an estimate of 2020/21 commercial waste arisings in London by applying waste adjustment factors to the baseline, based on sectoral economic predictions. The model assumes there is no significant change to the composition of waste in each sector. Instead, it applies a waste reduction factor (based on sectoral economic predictions) to all waste types as arising within a sector. Although we have provided commentary on possible changes in composition, no data exists to apply specific impacts to individual waste streams.

The model also assumes the impact of change in economic activity is linear to the impact on waste arisings. The model does not, therefore, account specifically for any increases in waste or changing waste streams such as PPE and additional cleaning wastes – although these wastes are unlikely to be very substantial in terms of weight, for business premises, in comparison with other waste streams.

⁵⁰ Department for Business, Energy & Industrial Strategy (2019) Longitudinal Small Business Survey: SME Employers (Businesses with 1-249 Employees) – UK, 2018, May 2019, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/803645/LSBS_2018_employers.pdf

⁵¹ The Instant Group (2018) UK Market Summary - The Evolution of Flexible Workspace, 2018, <https://www.theinstantgroup.com/media/1914/uk-market-summary-2018.pdf>

5.2. Baseline and forecast modelling results

The following modelling results show a summary of the reduction in commercial waste arisings for London by material and sector from the baseline year (2019/20) to the forecast year (2020/21).

The projected impact for individual boroughs, showing baseline and forecast tonnages and composition broken down by sector and business size, can be found in Appendix 3.

Figure 11 shows the baseline and projected commercial waste arising for every sector. The greatest decreases by tonnage will be in the 'other services' sector (which includes many office-based staff and smaller independent businesses such as nail bars and estate agents) and in 'accommodation and food services'. The biggest reduction by proportion will be in the 'public administration and social work sector', which is estimated to shrink to less than half.

Figure 11. Estimated annual commercial waste arisings (tonnes) in London by sector (2019/20 and 2020/21)

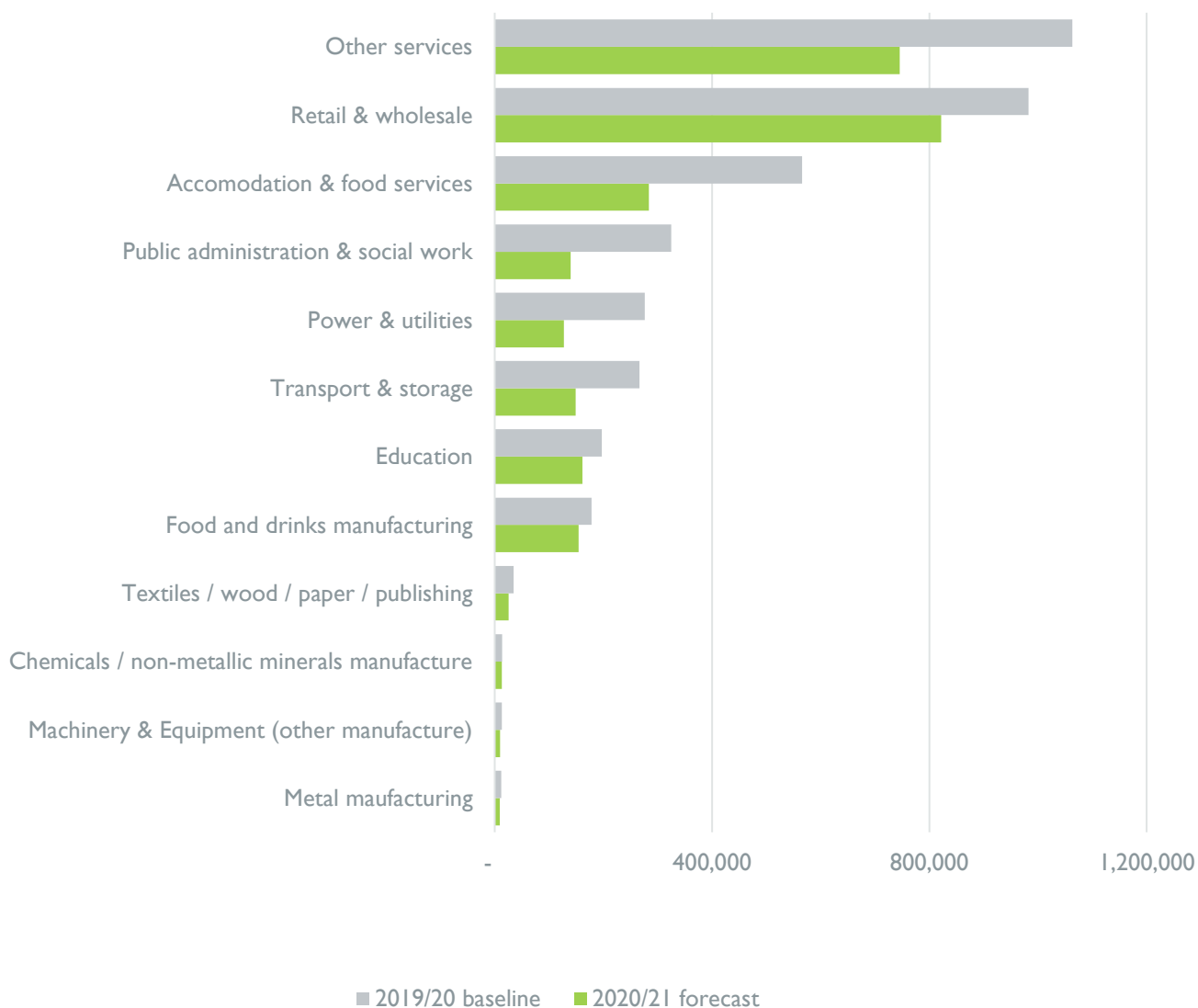
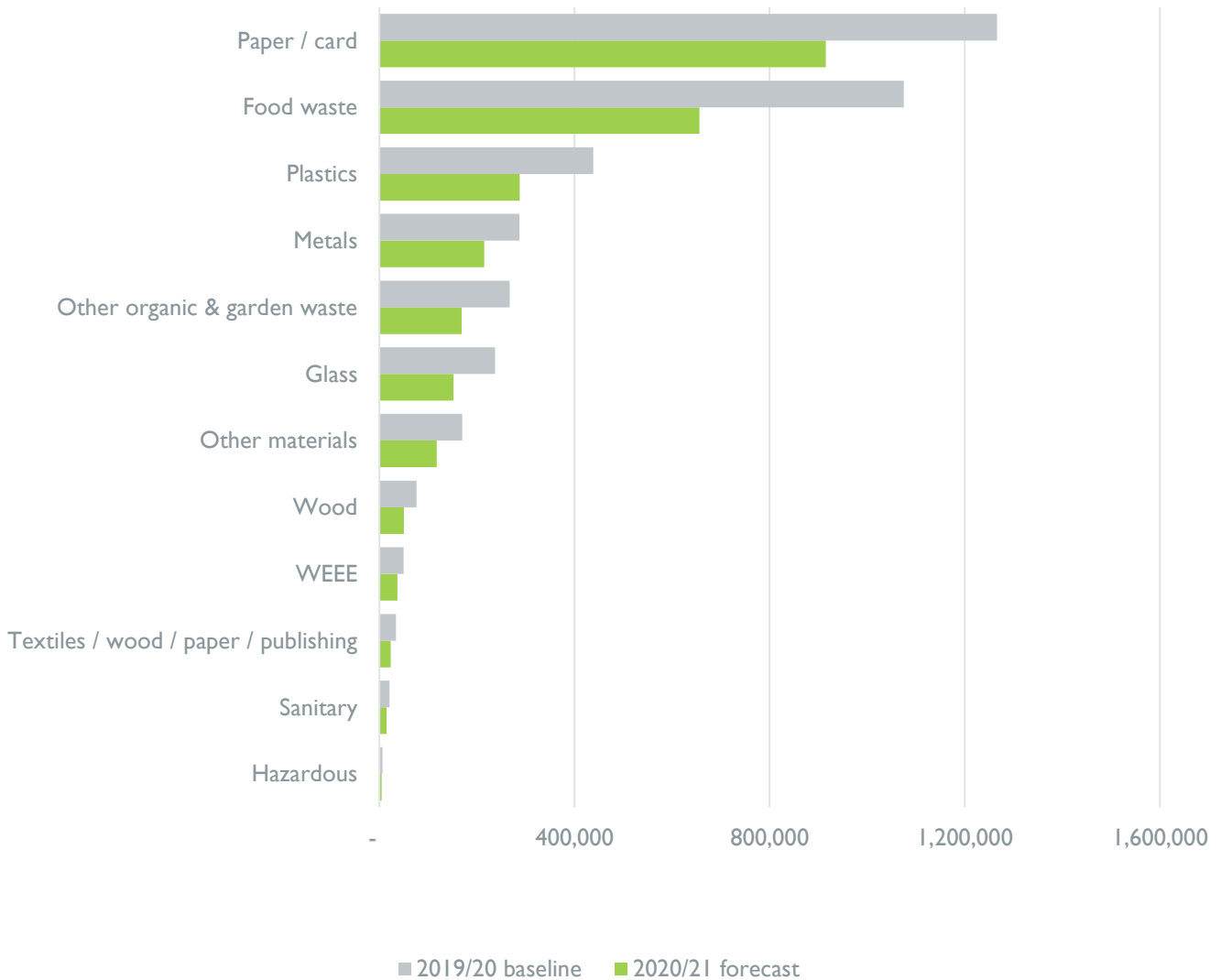


Figure 12 shows a decrease in arisings for all waste types from the baseline year to the forecast for 2020/21. The estimate indicates that the biggest reductions in arisings, will be in food waste and paper / card⁵².

Figure 12. Estimated overall commercial waste arisings (tonnes) in London by waste type (2019/20 and 2020/21)⁵³



⁵² Figure 12 details the composition of materials combined across all commercial waste collection streams and not as segregated services, e.g. Paper / card may be found in dry mixed recycling collections, residual collections or segregated paper and card collections.
⁵³ 'Other Organic and Garden Waste' category is mainly arising from the food and drink manufacturing sector e.g. plant based waste generated during food manufacturing.

Figure 13 shows the model suggests the majority of outer London boroughs will see less of an impact on their waste arisings than inner London boroughs. Additionally, the boroughs that will see the biggest decreases in commercial waste (over 32% reduction) are all inner London boroughs. Eight of the top ten largest decreases in arisings are forecast to take place in inner London boroughs; all but one of the top ten smallest increases are forecast to take place in outer London (see Appendix I for individual borough results on commercial waste reduction).

Figure 13. Percentage reduction in commercial waste tonnages arising between 2019/20 and 2020/21



6. SINCE WE WROTE THIS REPORT

During writing this report, additional government restrictions have been put in place as cases have begun to rise. This has brought about the governments 'Rule of Six'⁵⁴ restriction in September 2020. This will have an impact on socialising and therefore business activity in bars, restaurants and arts and leisure as group sizes must not exceed six people, while the restriction applies. The government's announcement on the 22nd September will have a significant impact on business activity in London. The key restrictions are;

- Businesses that sell food and drink must close between 22:00 and 05:00;
- Employees that can work from home should do so over the winter; and
- Pilot sporting events due to take place in October have been cancelled⁵⁵.

These measures will limit the extent to which businesses in London can recover to pre-COVID-19 levels and the government has said they are likely to be in place for six months.

These government announcements came during the finalisation of this report and therefore their full impact on commercial waste has not been assessed. They have been included as they are likely to lead to further changes across commercial waste in London.

⁵⁴ <https://www.gov.uk/government/news/rule-of-six-comes-into-effect-to-tackle-coronavirus>

⁵⁵ <https://www.gov.uk/government/news/coronavirus-covid-19-what-has-changed-22-september>

7. CONCLUSIONS

There are numerous challenges in producing estimates of commercial waste arisings, which are multiplied when attempting to assess the unprecedented impacts of the COVID-19 pandemic on businesses in London. However, the research and analysis presented in this report draws on the best available data to provide reasoned estimates of the impact the pandemic will have on total commercial waste arisings in each London borough. Individual local authorities will, of course, need to interpret the findings and apply them to their own commercial waste portfolios.

All boroughs are likely to experience reductions in waste arisings in 2020/21, ranging from 21% to 42%. Inner London authorities, especially those to which people would normally commute for work, are likely to see reductions towards the top of this range, due to the continuing prevalence of working at home. Businesses frequented by commuters are likely to be the most affected, alongside the premises where they would formerly have worked.

The reduction in commercial waste arisings in inner London boroughs was greater than outer London boroughs, and the recovery to post COVID-19 levels of commercial waste is proving slower for inner London boroughs. This is likely to be reflected in a greater reduction in waste in inner London boroughs. While many businesses have now reopened, few are producing as much waste as they did prior to the pandemic.

Some sectors have been more affected by COVID-19 than others. The most affected sectors are:

- Accommodation and food services
- Other services; and
- Public administration and social work.

These heavily effected sectors, make up a large proportion of local authority commercial waste customer bases. 'Other services' include businesses such as nail bars, hairdressers, estate agents, banking and insurance services, computer and I.T services.

Local authorities are supporting businesses by making changes to allow them to operate with more capacity for social distancing, such as closing off roads for outside dining. However, the hospitality and food sector is likely to see a further dip in arisings as winter approaches and people are less willing to sit outdoors.

Examples of businesses that are more resilient to the negative impacts of COVID-19 are;

- Essential retail;
- Online retail and the associated logistics and storage sectors;
- Food and drink manufacturing;

In the event that predictions of substantial, if relatively short-term, increases in unemployment prove accurate, all sectors may see a further downturn in activity. Sectors such as non-essential in-store retail and accommodation and food services are likely to be the most affected in such a downturn.

While it is difficult to give accurate estimates of waste composition, or of the scale of likely changes, some observations can be made:

- The decline in activity in the hospitality and food sector is leading to a substantial decrease in food waste and glass arisings in areas of high business concentration;
- Reduced business activity in high-street, non-essential in-store retail are reducing arisings of cardboard, although this is offset to some degree by increased activity in the “essential” retail sector, especially in food sales;
- Paper, food and glass is expected to have the largest reductions in volumes therefore local authorities who service a large number of pubs, bars, restaurants and offices should expect this waste stream to be significantly impacted; and
- Food waste is expected to decrease by 39% (see Figure 12), with low AD disposal costs food can be a good revenue generator for local authorities. If there are significant reductions in volumes this may impact revenue more severely.

The difficulties that local authorities are facing are also being experienced by PWCs, some of which are not well placed to weather a long-term downturn in income. Local authorities are adapting by undertaking increased marketing, offering flexible arrangements to customers and many are well placed to capture more of the commercial waste market than they have had in the past, due to the difficulties faced by PWCs.

8. USEFUL INFORMATION SOURCES

In this section, we highlight some additional reading and sources of information that officers may wish to examine to understand more about expected patterns in commercial sector recovery.

Economic Impacts of COVID-19:

- KPMG's [Economic Insights](#) page includes a number of studies that examine COVID-19 impacts.
- The ONS [subnational data set](#) provides advice for those analysing the impact of COVID-19.

Public Attitudes to COVID-19 Issues:

- ONS produces regular public attitude and behaviour [surveys](#).

General Economic Statistics:

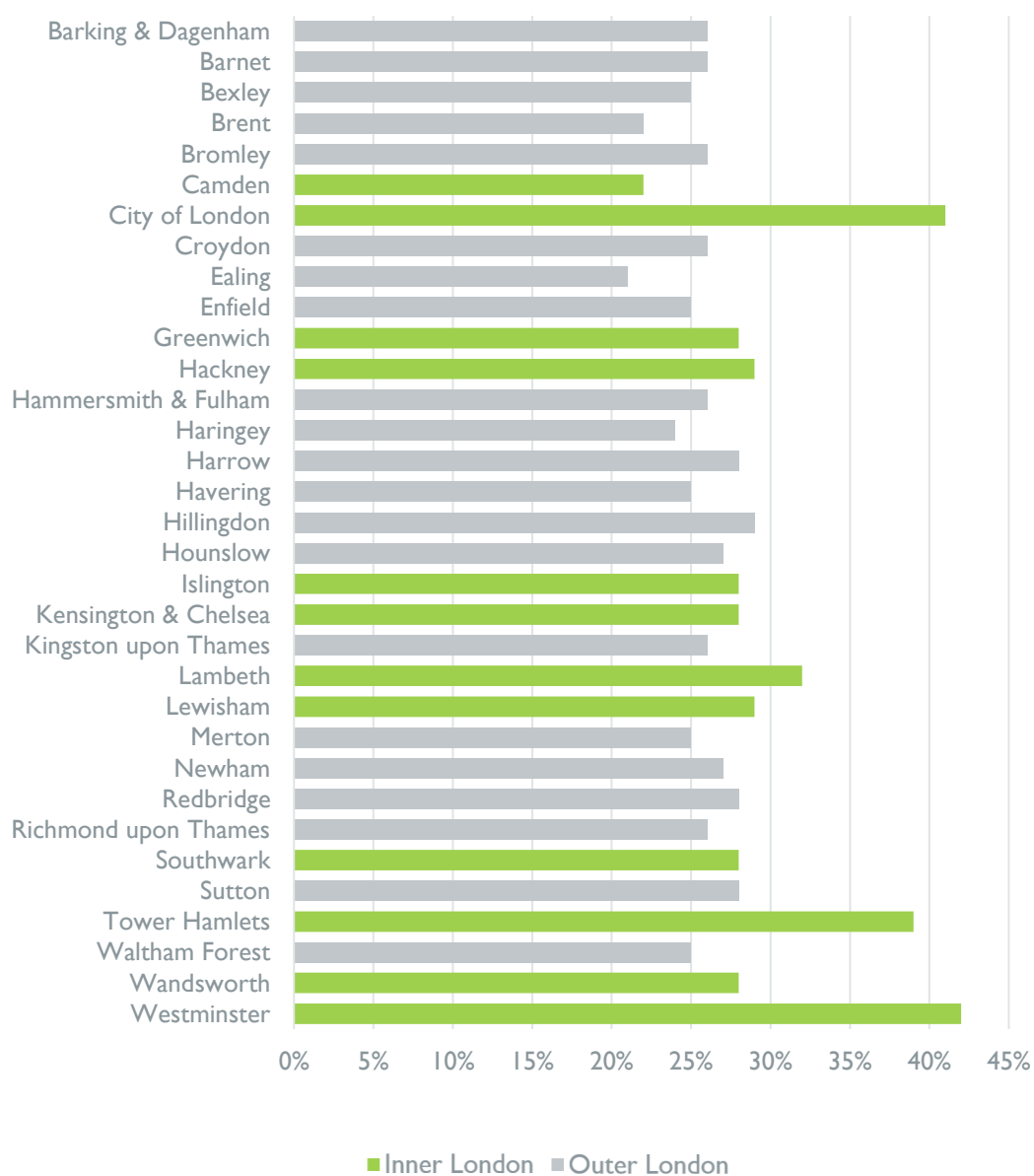
- The ONS provides local [labour market statistics](#) through the NOMIS portal

9. APPENDICES

9.1. Appendix I

LONDON MODELLING – RESULTS SUMMARY

Figure 14. Percentage reduction in total municipal commercial waste arisings by London borough (2019/20 to 2020/21)



9.2. Appendix 2

SIC CODE DESCRIPTIONS INCLUDED IN MODELLING SECTOR CATEGORIES AND SECTORAL RECOVERY PATTERNS

Modelling sector category	SIC code description	Sectors in section 4 (Sectoral recovery patterns)
Accommodation and food services	Accommodation and food services	Accommodation and food services
Chemicals / non-metallic minerals manufacture	Manufacturing	n/a
Education	Education	n/a
Food and drinks manufacturing	Manufacturing	Food and drink manufacturing
Machinery & equipment (other manufacture)	Manufacturing	n/a
Metal manufacturing	Manufacturing	n/a
Other services	Other service activities Finance and insurance activities real estate activities Professional, scientific and technical activities Arts, entertainment and recreation Administrative and support service activities	Arts and leisure Office space
Power & utilities	Electricity, gas, steam and air conditioning supply	n/a
Public administration & social work	Public administration and defence Compulsory social security	n/a
Retail & wholesale	Wholesale and retail	Food retail Non-essential in-store retail Online retail
Textiles / wood / paper / publishing	Information and communication	n/a
Transport & storage	Transport and storage	Storage and logistics

SIC code sector categories can be found on Companies House website⁵⁶.

⁵⁶ <http://resources.companieshouse.gov.uk/sic/>

9.3. Appendix 3

BOROUGH MODELLING OF COMMERCIAL WASTE ARISING BY BUSINESS TYPE, SIZE AND WASTE COMPOSITION

Individual borough data sets have been redacted from this report due to data confidentiality.

9.4. Appendix 4

COVID-19 ADAPTATION CHECKLIST⁵⁷

ACTION	COMPLETE
Existing resource and capacity	
Monitor staff absence levels, across the whole waste service, not just commercial, as track and trace develops	
Review waste volumes across the whole service, not just commercial, monitoring how commercial waste volumes are increasing and any decreases to household waste	
Review the efficiency of your routes as businesses open at different times across the borough	
Contract and payment flexibility	
Establish a process to allow customers the option to downgrade or suspend services	
Offer flexibility to customers enabling them to change both the waste stream they have collected and the frequency of collections	
Set up a change request form to avoid having to amend full contracts and terms	
Establish a process to allow customers to switch from a container service to a sack one as an interim measure	
Consider whether you are able to change collection times for container customers if their operating times and/or days change	
Offer to change the minimum order for sack services if you have one, considering that many customers will produce less waste and may have reduced cash flow	
Review whether you can offer payment flexibility for invoiced customers such as delaying invoices or changing payment frequency	
Sales	
Promote recycling services as a way for businesses to reduce overheads	
Review the potential to offer discounts on certain services, particularly those that have a strong sale price	
Review recycling services that are not currently offered and determine if there is any opportunity to introduce these as a way to help businesses reduce costs	
Set up processes to allow sales officers to use contact methods other than face-to-face such as phone and email	
Ensure sales officers still spend time out in the borough to be aware of businesses that re-open (both customers and non-customers) to allow for follow up service and sales calls	
Contact existing customers by phone to check they are happy with their current service provision, reminding them of any contract flexibility, promotions and new services that are on offer	
Contact all potential new sales opportunities, emphasising the reliability of the service and flexibility the council has offered its customers during lockdown	

⁵⁷ <https://resourcelondon.org/resources/toolkits/covid-19-commercial-waste-adaptation-toolkit/>

Collections	
Determine what changes need to be made when operatives collect from inside a customer premises to ensure social distancing can be complied with	
If operatives will not be issued PPE (e.g. masks) as standard, speak with customers to ensure this meets their own operating criteria	
If operatives cannot comply with social distancing requirements when collecting from inside a customer premises, speak with the customer to arrange collections at a quieter time	
Implement an easy report-back and monitoring system for operatives to raise any social distancing or COVID-19 concerns from any customer locations	
Make crews aware of the higher presence of pedestrians in terms of both vehicle movement and when collecting sacks	
If you co-collect and calculate your commercial-domestic apportionment using a set figure each quarter, consider revising this to ensure your calculations reflect the drop in commercial waste and increase in domestic waste	
Contamination	
Communicate clearly to businesses that disposable PPE cannot be recycled	
If your crews clear easy-to-remove contamination from containers, review this policy in light of handling waste that may be PPE or COVID-19 infected	
COVID-19 infected waste	
Deliver clear messaging to all businesses as they re-open that the waste of any employee that becomes ill with COVID-19 symptoms should be double bagged and stored for 72 hours before being placed out for collection	
Fly-tipping and enforcement	
Take up sales opportunities where private waste companies have been unable to perform collections but waste is still being presented	
Ensure businesses understand the financial impact of not having a commercial waste service in place	
Increase education on duty of care through both enforcement and sales officers	
Engage your enforcement team to ensure businesses are still compliant	
Communications	
Communicate to all businesses that your services are still operating and they have flexibility	
Communicate the financial savings that can be obtained by recycling, educating them on what can and cannot be recycled and your contamination policy	
Communicate to businesses the financial risk if they do not comply with duty of care	
Communicate how new waste materials should be handled (including PPE and waste that may be infected with COVID-19)	
Financial analysis and forecast	
Stay alert to any businesses that are closing down to reduce the potential risk for non-payment	
Review any service losses as a whole, considering reduced operating or disposal costs	

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