ARUP AECOM

Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside

Appendix C - Technical Note: Current issues in the Van Sector

DRAFT FOR APPROVAL

June 2022

1. Introduction

Background

1.1 After the initial OBC submission, a series of technical notes were published setting out the results of analysis and research carried out to better understand the vehicles in scope for the scheme. For vans, this included in particular Technical Note 3: Analysis of the Freight Market, Technical Note 12: Evidence of the impact of a 2021 implementation of a CAZ C (without exemptions), and Technical Note 20: GM Specialist Goods Survey Results Summary1.

1.2 Further notes were produced setting out the development of analytical tools for freight, with the latest published summary of that work provided in T4 Appendix A of the Modelling for Consultation[2]. Research was carried out with vehicle owners potentially in scope for the scheme, including deliberative research[3] and a survey with 800 van owners[4].

1.3 This evidence formed the basis of the development of the Option for Consultation. From March 2020, it became clear that the pandemic would affect the Greater Manchester Clean Air Plan (GM CAP); a programme of work was carried out in 2020/2021 to better understand the possible impacts of the Covid 19 pandemic on the GM CAP, published as the Impacts of Covid Report in June 2021[5]. This evidence, alongside feedback from the Consultation, was used to inform the revised GM CAP as approved by the ten GM local authorities in June/July 2021.

1.4 At that time, GM identified a number of possible risks to the GM CAP, which included concerns about the risk of vehicle price increases and the impact of any further lockdowns in the UK or countries in the supply chain.

1.5 This report, which was originally developed in January 2022, draws a series of findings and conclusions to better understand the circumstances affecting van owners in Spring 2022 (based upon the previous' GM CAP implementation date) and the implications for the GM CAP and surrounding policy framework.

1.6 Since Spring 2022, there have been further dramatic changes to the economic context in the UK which are not explicitly addressed in this report but are set out in **Appendix E**. A range of factors associated with the impact from war in Ukraine, increased costs of energy and fuel, changes to Bank of England base rates and forecasts, global supply chain challenges, and the cost-of-living crisis have combined to create a context of increased financial hardship for businesses and families.

Structure of Note

1.7 The remaining sections of the report are structured as follows:

- Section 2 provides an overview of the van sector in GM;

[1] All available at Technical Documents | Clean Air Greater Manchester (cleanairgm.com)
[2] https://assets.ctfassets.net/tlpgbvy1k6h2/3AKtd1g0fg5OwQFNzc5FlQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf
[3] GM_CAP_Deliberative_Research_ALL_-_Spring_2019.pdf (ctfassets.net)
[4] CCTS Listening Exercise (ctfassets.net)
[5] GM CAP- Impact of COVID Report (ctfassets.net)

- Section 3 describes the national van market trends and vehicle volumes;
- Section 4 describes issues affecting the demand for vans;
- Section 5 describes issues affecting the supply of vans;
- Section 6 sets out the impact of supply and demand on van prices;
- Section 7 considers the impact of supply constraints and price rises on the GM CAP; and
- Section 8 provides a summary of the key findings and recommendations.

1.8 In addition, **Appendix A** provides a list of data used to inform the report and **Appendix B** reviews the recent changes in travel behaviour within GM through the pandemic up until January 2022.

2. Overview of the van sector in GM

Diversity and importance of the Van Sector

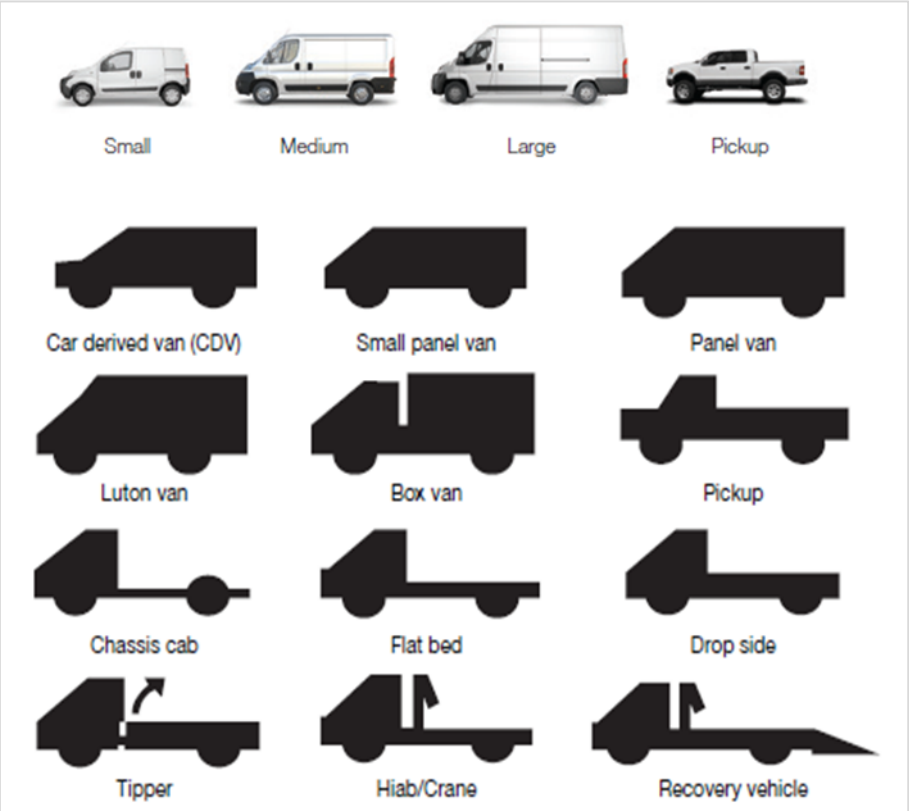
2.1 Vans are vital to the UK economy. Nationally, 3.4 million people use or depend on vans for their work and half a million people drive a van as the main part of their job. In total, vans support 10% of the UK's workforce, delivering a combined wage bill of £56bn or 11% of GDP[6].

2.2 There has been a 56% growth in the van sector since 2000, mainly in the larger van market. This has been driven by an increase in the number of self-employed tradespeople and the rapid rise in online shopping. The pandemic has strengthened the trend towards online shopping, with many (especially older) people shopping online for the first time[7].

2.3 More than three quarters of vans are medium or large, and the van market encompasses a wide range of vehicle types, as shown in **Figure 2-1**. Some vehicles will include refrigeration or other modifications, and many van owners will have fitted out their van interior to include shelving, for example.

2.4 Vans serve a wide range of sectors, as illustrated in **Figure 2-2.** A quarter of GM's vans fleet serves the construction sector (24%), with other major sectors including wholesale & retail (16%), manufacturing (13%), and transport & storage (9%).

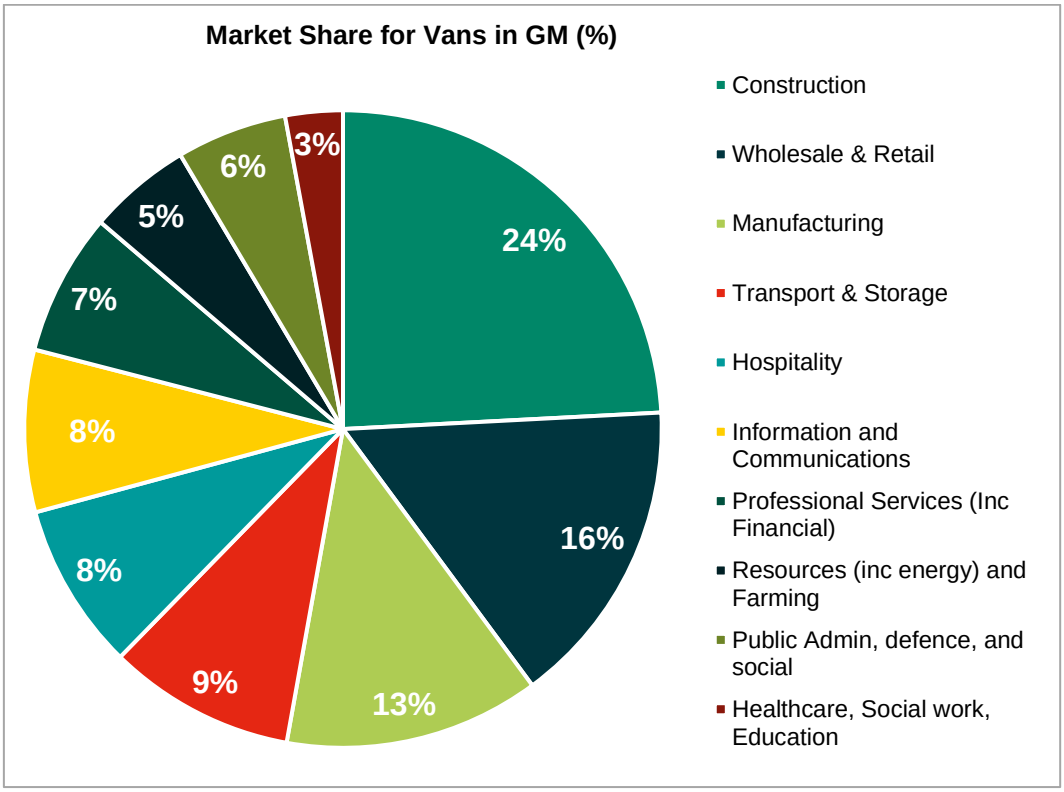
Figure 2-1 Vehicle Types Classified as a Van



Source: Ford Commercials

[6] Data throughout this section sourced from Note 3 - GM CAP Analysis of the Freight Market (ctfassets.net)
[7] Statista Accessed 5th January 2022 https://www.statista.com/statistics/1230225/changes-in-online-buying-among-uk-consumers-since-covid-19/

Figure 2-2 Market share by industrial sector for Vans in GM



Source: https://www.smmt.co.uk/wp-content/uploads/sites/2/SMMT-Light-Commercial-Vehicles-Delivering-for-the-UK-economy.pdf

2.5 GM carried out analysis considering how vulnerable different sectors were to the GM CAP. This was carried out before the pandemic in Autumn 2019, and then revisited in Autumn 2020 based on evidence of the impact of Covid on each sector[8]. A summary of that analysis is shown in **Figure 2-3**.

2.6 There is a high proportion of sole traders in the most vulnerable sectors. Van drivers have low average incomes, with analysis suggesting that the cost of the charge could equate to 15% of average income.

2.7 Longer vehicle lifespans are associated with smaller businesses and sole traders most commonly found in sectors such as removals and construction. Companies operating larger fleets, such as those in the food and retail sectors, typically replace vehicles more frequently and are therefore more likely to have CAZ compliant vehicles at present, although some parts of those sectors have been badly affected by the pandemic in terms of extended periods of closure or constrained operations.

2.8 Research conducted by GM in Autumn 2019[9] with 800 sole traders and microbusinesses found that 48% of businesses change their LGVs when they are over 10 years old or no longer fit for purpose, in comparison with 20% who update their vehicles before they are 4 years old[10].

2.9 The largest sector, construction, makes up 24% of the GM market and includes over 21,000 vehicles affected by the GM CAP, 38% of the total overall affected vans. LGVs in the construction sector have the longest lifespans, with an average replacement age of 15 years.

[8] GM CAP- Impact of COVID Report (ctfassets.net)
[9] CCTS Listening Exercise (ctfassets.net)
[10] CCTS Listening Exercise (ctfassets.net)

Figure 2-3 Vulnerability to the GM CAP by van-owning sector

Sectors	Sector Percentage	Vehicle Replacement Age	Non-compliant percentage	Responding to CAP	
				Vulnerability (Pre COVID – 2019)	Vulnerability (Spring 2022)
Construction	24%	15	56%	Very High	Very High
Wholesale, retail & repair of motor vehicles	16%	10	34%	Medium	High
Manufacturing	13%	10	34%	Medium	High
Transport & storage	9%	10	34%	Medium	High
Accommodation & food services	8%	9	27%	Low	Medium
Information & communication	6%	9	27%	Low	Medium
Professional, scientific & technical activities	4%	10	34%	Medium	High
Mining, energy & water supply	4%	10	34%	Medium	High
Public admin. & defence; social security	4%	12	45%	High	Very High
Human health & social work activities	2%	12	45%	High	Very High
Other services	2%	12	45%	High	Very High
Financial & insurance activities	2%	9	27%	Low	Medium
Administrative &support services	2%	12	45%	High	Very High
Agriculture, forestry & fishing	1%	15	56%	Very High	Very High
Real estate activities	1%	9	27%	Low	Medium
Education	1%	10	34%	Medium	High
Royal Mail	1%	9	0%	Very Low	Very Low
Total	**100%**	**-**	**40%**		**-**

Vulnerability Criteria	
10% and below	Very Low
11-20%	Low
21-30%	Medium
31-40%	High
40% and above	Very High

Compliance of the van fleet serving Greater Manchester

2.10 Based on ANPR data and DfT Statistics, GM estimates that there are around 278,000 vans serving the region, of which around 136,000 are thought to be located within the GM boundary.

2.11 **Table 2-1** presents the number of LGVs estimated to be serving Greater Manchester in 2019, including splits by compliant and non-compliant vehicles which failed to meet Euro VI standards at that point.

Table 2-1 Number of vans in GM by compliance – 2019

	GM Based	Non-GM Based	Total
Compliant	27,290 (20%)	74,147 (52%)	101,437 (37%)
Non-Compliant	108,456 (80%)	67,535 (48%)	175,991 (63%)
Total	**135,746**	**141,682**	**277,428**

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates

2.12 In 2019, there were 277,400 LGVs serving Greater Manchester[11] with 37% deemed compliant and 63% non-compliant. Vehicles based in GM had a lower level of compliance than those based outside GM, with only 20% of LGVs deemed compliant and 80% non-compliant (compared to 52% compliance for LGVs based outside of GM). Overall, there were slightly more LGVs serving GM that were not based in GM (141,700) in comparison with LGVs based in the city region (135,700).

2.13 The large proportion of LGVs which are non-compliant is in part due to relatively long vehicle lifespans, typically ranging between 9-15 years depending on the industrial sector in question, and due to the fact that compliant vans did not come onto the market until 2015, with the Euro 6 standard coming into force for vans in 2016.

2.14 A proportion of the vans in the fleet would normally be upgraded each year, with the oldest vehicles being scrapped out of the fleet. GM's forecasting suggests that the number of non-compliant vans based in GM will have reduced from 108,500 in 2019 to 75,400 by 2023. This means that around 31,100 vans would have been upgraded from a non-compliant to compliant vehicle as a result of business-as-usual purchases prior to the COVID-19 Pandemic.

2.15 The anticipated rate of upgrade for vans was revised in 2021 based on evidence that the Covid-19 pandemic had delayed vehicle purchases, such that the fleet was estimated to be around 3 months older than previously forecast. The rationale and methodology for this change is set out in the report "GM's proposed approach to representing the impact of Covid 19 in core modelling scenarios"[12]. This had the effect of reducing the number of GM-based vans expected to make a business-as-usual upgrade between 2019 and 2023 by 1,4000.

2.16 **Table 2-2** sets out the number of vans estimated to be serving GM in 2023, by whether they are expected to be compliant without the GM CAP being introduced.

[11] Based upon 2019 ANPR splits

[12] https://assets.ctfassets.net/tlpgbvy1k6h2/2ZMJ3DJXiv7p3xOeZu4CYQ/247196ef60e33ac89f7f8938e1e16418/Appendix_6D_____GM_proposed_approach_to_representing_the_impact_of_Covid-19_in_core_modelling_scenarios.pdf

Table 2-2 Number of vans in GM by compliance – 2023

	GM Based	Non-GM Based	Total
Compliant	58,935 (43%)	86,122 (61%)	145,056 (52%)
Non-Compliant	76,811 (57%)	55,560 (39%)	132,371 (48%)
Total	**135,746**	**141,682**	**277,428**

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates

Impact of the GM CAP on Van Upgrades

2.17 As set out above, it is anticipated that 76,800 GM-based vans will be non-compliant in 2023 and will therefore need to upgrade their vehicle or pay the charge in response to the GM CAP until compliance with the Government Direction has been achieved.

2.18 Of these, it is estimated that up to 59,000 may be in scope[13] for support from the Clean Commercial Vehicle Fund. This Fund provides financial support of up to £3,500 for the purchase of a compliant van up to 1.6t and up to £4,500 for the purchase of larger compliant van up to 3.5t, with a grant of up to £5,000 available for retrofit where available, subject to eligibility criteria. GM has secured £70m to support the upgrade of vans, sufficient to support around 15,900 vehicles.

2.19 **Table 2-3** sets out the number of vans estimated to be serving GM in 2023, by whether they are expected to be compliant with the introduction of the GM CAP.

Table 2-3 Number of vans in GM by compliance, with GM CAP – 2023

	GM Based	Non-GM Based	Total
Compliant	107,345 (79%)	129,550 (91%)	236,895 (85%)
Non-Compliant	28,401 (21%)	12,132 (9%)	40,533 (15%)
Total	**135,746**	**141,682**	**277,428**

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates

[13] https://assets.ctfassets.net/tlpgbvy1k6h2/2VNncClzejAvGh3CrVn0oo/d45528de22e593c9be285ddf5b26373b/Appendix_1_-_GM_Clean_Air_Plan_Policy_following_Consultation.pdf

Review of Fleet Profile

ANPR

2.20 Three sets of ANPR data were used, based on available data, these comprise the following time periods:

- GMP19 - January 2019 (pre COVID-19 pandemic);
- GMP20 - September 2020; and
- GMP21 - November 2021.

2.21 The LGV vehicle age profile change is presented in **Figure 2-4.** The proportion of newly purchased LGVs (i.e. less than 1 year-old) captured by ANPR cameras decreased from near 12% to 3% from 2019 to 20206 and recovered to close to 7% by the end of the 2021. It is noted that these figures are likely to be slightly overestimated due to differences in the sample size (10 months' worth of 'new vehicles' captured in the January 2019 survey compared to 6 and 8 months captured in the September 2020 and November 2021 surveys).

2.22 **Table 2-4** suggests that the average age of LGVs increased by 0.8 years from the beginning of 2019 to the end of 2021.

Figure 2-4 LGV fleet age distribution

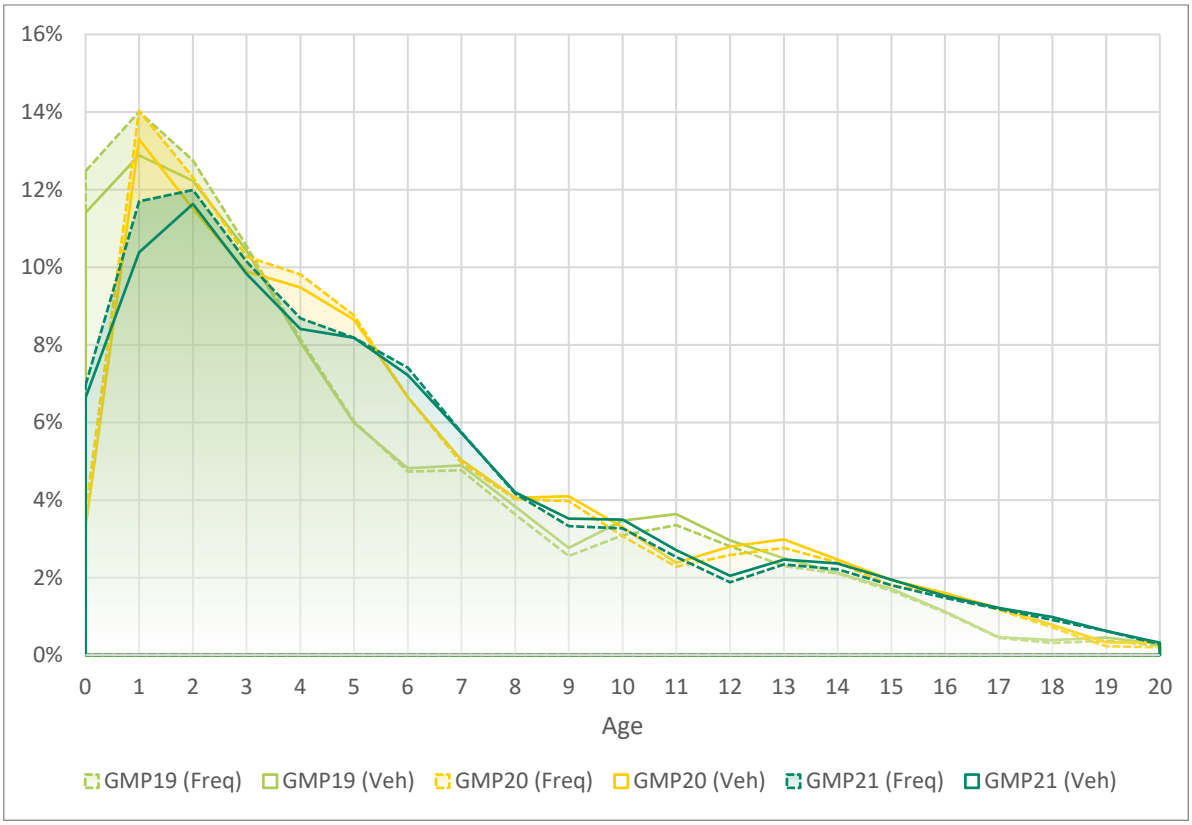


Table 2-4 Average LGV Age

Data set	GMP19	GMP20	GMP21
Frequency			
Average Age	5.3	6.0	6.1
Most common age group	1	1	2
Unique Vehicles			
Average Age	5.8	6.5	6.6
Most common age group	1	1	2

SMMT

2.23 The pandemic had a large impact on the number of new vans sold in the UK in 2020, but sales recovered to nearly pre-Covid levels in 2021. Sales forecasts indicate that market supply will recovery the majority of the lost sales by 2025.

3. National Van Market

Overview of the Van Market

3.1 On average, around 367 thousand new vans are registered nationally each year. New vehicles are primarily purchased by larger businesses, vehicle rental companies and the leasing sector. Many large fleet operators lease rather than own their vehicles, and most such vehicles are kept for around 3 to 5 years, with vehicles from the rental sector typically entering the second-hand market first. These good quality second-hand vehicles are typically purchased by small businesses.

3.2 Vehicles may then be released onto the market again at 8 to 10 years old, into the third-hand van market, which are typically purchased by people and businesses working in the construction, transport and storage sectors.

3.3 Compliant diesel vans came onto the market in 2016 (some early models may have been available from 2015), meaning that the second-hand market for compliant vans started to exist at scale from 2019 onwards.

3.4 Pre-pandemic evidence suggested that there are around 10-12,000 second-hand van sales per week nation-wide, of which around 4% take place in GM.

3.5 This evidence is set out in more detail in GM CAP Technical Note 3: Analysis of the Freight Market[14].

Van Ownership and Usage

3.6 The Department for Transport (DfT) undertook a survey of van activity in Great Britain in 2019[15]. This looked at van ownership, van mileage, where and when vans are traveling, and environmental factors. The survey field work was carried out in 2019-20, prior to any Covid-19 related restrictions.

3.7 The survey showed that the most common primary usage of licensed vans was for ‘carrying equipment, tools and materials’ (54%), followed by ‘delivery/collection of goods’ (16%) and ‘private/domestic non-business use’ (16%).

3.8 Over half (57%) of business kept vans were new; 35% owned outright and 22% owned via a hire purchase agreement. Most privately kept vans were second-hand (82%). Within the DfT survey, the keeper of the vehicle is defined as that responsible for registering and taxing the vehicle only. The keeper of the vehicle is not necessarily the owner or the driver. Furthermore, the keeper is either an individual or a business (including sole trader, partnership or limited company).

3.9 Around half of all vans (51%) in Great Britain stayed local, within 15 miles of their base, on a typical day.

3.10 Associated statistics produced by the department showed that average mileage for vans has remained broadly stable in recent years (pre-pandemic) at around 13,000 miles per year.

[14] https://assets.ctfassets.net/tlpgbvy1k6h2/sxMVbAwfJrcq3tFd9Thb7/fd8843b6d128ef318da320ee22ca6ac5/3_-_GM_CAP_Analysis_of_the_freight_market.pdf
[15] DfT Statistical Release 15 April 2021, Final Van Statistics April 2019 - March 2020

Van Manufacturers

3.11 The British van market in 2021 has sales of 355,380 vehicles under 3.5 tonnes. The biggest growth in recent times is in the area of large vans (2.5-3.5 tonnes) which are typically used by parcel companies, food home deliveries and in the construction sector.

3.12 The top 10 selling models represent around 60% of the market. Within this top 10 there are three Ford Transit variants which represent 99,185 of sales (28% of the total market) and these vans are made in Turkey. The next best seller is Mercedes Sprinters with 6% of the market. The main van made in the UK is the Vauxhall Vivaro made by Stellantis, and this had sales of 17,957 (5%) of the market.

3.13 Almost 95% of vans sold in the UK are imported and reliance on imports has grown over the last twenty years and changed significantly when Ford shut their van plant in Hampshire. Around 330,000 vans were imported last year whilst 60% of vans made in the UK are exported.

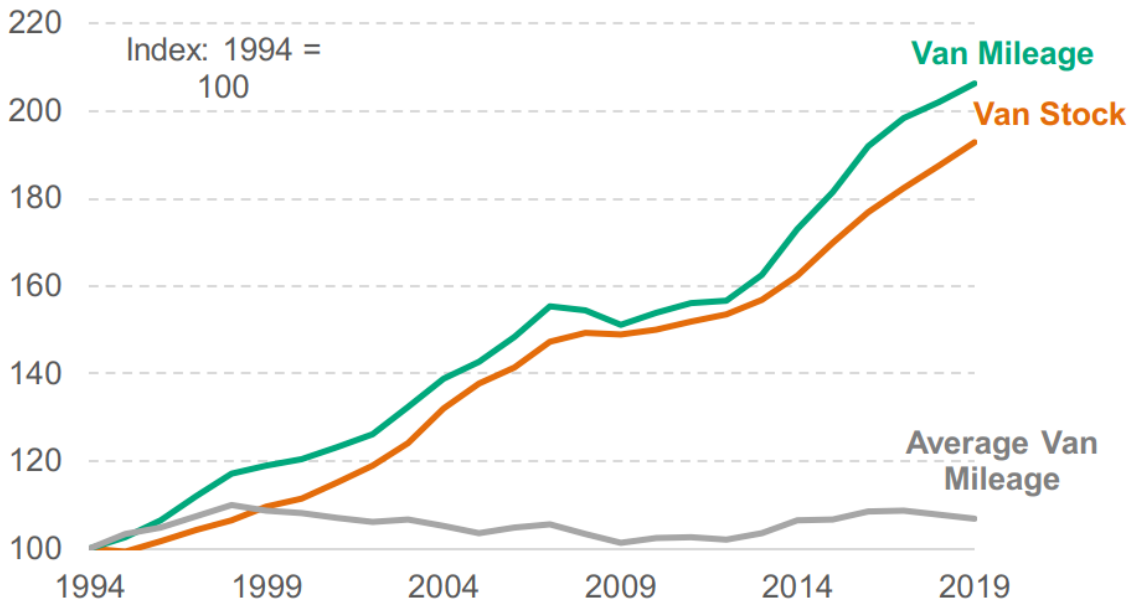
4. Van Demand

Historical Trends Pre-Pandemic

4.1 The Department for Transport's (DfT) road traffic estimates indicate that van travel has grown substantially over the last 25 years, increasing 106% to 55.5 billion vehicle miles in 2019. Van travel as a proportion of all motor vehicle miles has increased from 10% to 16% over the same period.

4.2 This, together with the relationship to the scale of the van stock, is illustrated in **Figure 4-1** from the DfT statistical bulletin relating to the 2019 survey[16].

Figure 4-1 Trend of Van Stock and Van Traffic, Great Britain 1994-2019



Source: Road Traffic estimates in Great Britain: 2019, Vehicle Licensing Statistics: 2019

4.3 The increase in van stock in recent years evident from **Figure 4-1** reflects the significant demand for new vans which has been on a consistently upward trend for many years.

Demand Trends Pre-Covid

4.4 The Society of Motor Manufacturers and Traders (SMMT) 2019 Report[17] identified the following as aspects in the increase in demand seen in the sector since 2000:

- the van parc (the total number of vehicles in operation) has grown by 59% while, by contrast, the HGV parc has shrunk by 2%;
- the majority of this growth has been driven by demand for larger vans (2,600-3,500 kg Gross Vehicle Weight);
- Factors fuelling this growth include a fundamental shift in consumer behaviour with the growth of online shopping;

[16] DfT Statistical Release 15 April 2021, Final Van Statistics April 2019 - March 2020
[17] Light Commercial Vehicles, Delivering for the UK Economy, 2019 Report

- an increase in vans as businesses seek to develop more agile logistics operations in response to the growth in the 'fulfilment from store' model (a service which previously would have been completed by an HGV); and
- a rise in self-employment (from 3.3 million in 2001 to 4.8 million in 2017)[18].

Impact of Covid

4.5 Van sales have been heavily impacted by pressures associated with Covid. SMMT data shows April and May 2020 being particularly poor months for new van registrations.

4.6 Supply constraints on delivery of new vehicles in the early 2020 lockdown, were gradually released into the summer as already purchased and manufactured vehicles could be delivered and received. At this point, new orders were likely delayed due to market uncertainty in the early phases of the pandemic.

4.7 However, whilst the early phases of the pandemic and subsequent lockdowns and constraints in 2020 constrained demand, it appears that this effect was temporary based on SMMT new van registration monthly data (see later in **Figure 5-1**) and has been offset by growth in demand from other sectors.

4.8 Home deliveries surged during the lockdown in 2020, with traditional 'bricks and mortar' retail affected by closures for at least three months of the year. This led to many consumers increasing their use of on-line deliveries or using it for the first time.[19] This includes the grocery sector, which whilst not subject to the enforced closures of other retailers, saw increased demand for home deliveries as customers looked to avoid social contact in-store.

4.9 This has seen an increase in the use of and demand for vans as companies frequently use these vehicles for home deliveries (although some companies have drivers using their own cars). Vans are the vehicle of choice as larger HGVs are impractical and undesirable for most residential streets and the more stringent regulation and licensing requirements of those vehicles.[20]

Green Agenda/Corporate Social Responsibility

4.10 Many fleet operators and individual van owners are looking to transition their fleets to vehicles using low or zero emission fuels. In the Mayor's round table session with large fleet operators held in December 2021, many commented that they had corporate goals to speed up the transition of their fleet to electric, from Euro 5 or 6 diesel, but that they were finding it difficult to do so because of the issues in the supply chain. In some cases, this meant that they were retaining existing vehicles for longer whilst they waited for new vehicles to arrive.

[18] Trends in Self-Employment in the UK Office for National Statistics

[19] Statista Accessed 5th January 2022 https://www.statista.com/statistics/1230225/changes-in-online-buying-among-uk-consumers-since-covid-19/

[20] Motor Trader Accessed 5th January 2022 https://www.motortrader.com/motor-trader-news/automotive-news/booming-home-delivery-construction-fuel-demand-vans-auction-25-08-2021

4.11 Electric vans, in particular, are increasingly attractive as their price relative to conventionally fuelled vehicles drops, range increases and lifecycle costs become more certain. Sales of electric vans are increasing, albeit from a low base and a lower market share than electric cars[21]. This may be placing additional demand pressure on the market, if operators are bringing forward vehicle replacements.

Clean Air Plan Initiative

4.12 Modelling associated with the GM CAP forecast that almost 70% of van owners whose vehicles operate in Greater Manchester were expected under previous conditions to upgrade their vehicles to Euro VI engines or better to avoid the charge, taking advantage of associated funding support. Similarly, the London Ultra Low Emission Zone, along with other smaller city centre CAZs will lead to increased demand for compliant Euro 6 models.

4.13 This will increase demand for compliant vehicles, and more substantially at a regional level in GM and London, which for the used vehicle market could lead to regional disparities in purchasing trends and therefore demand across the wider UK.

Forecasting Van Demand

4.14 In October 2021 SMMT released a forecast of van sales for the next 3 years, demonstrating that they expect registrations to increase each year to 2023.

Table 4-1 Forecast van sales between 2021 and 2023, SMMT

Forecast Year	2021	2022	2023
Projected van registrations (thousands)	340*	364	378

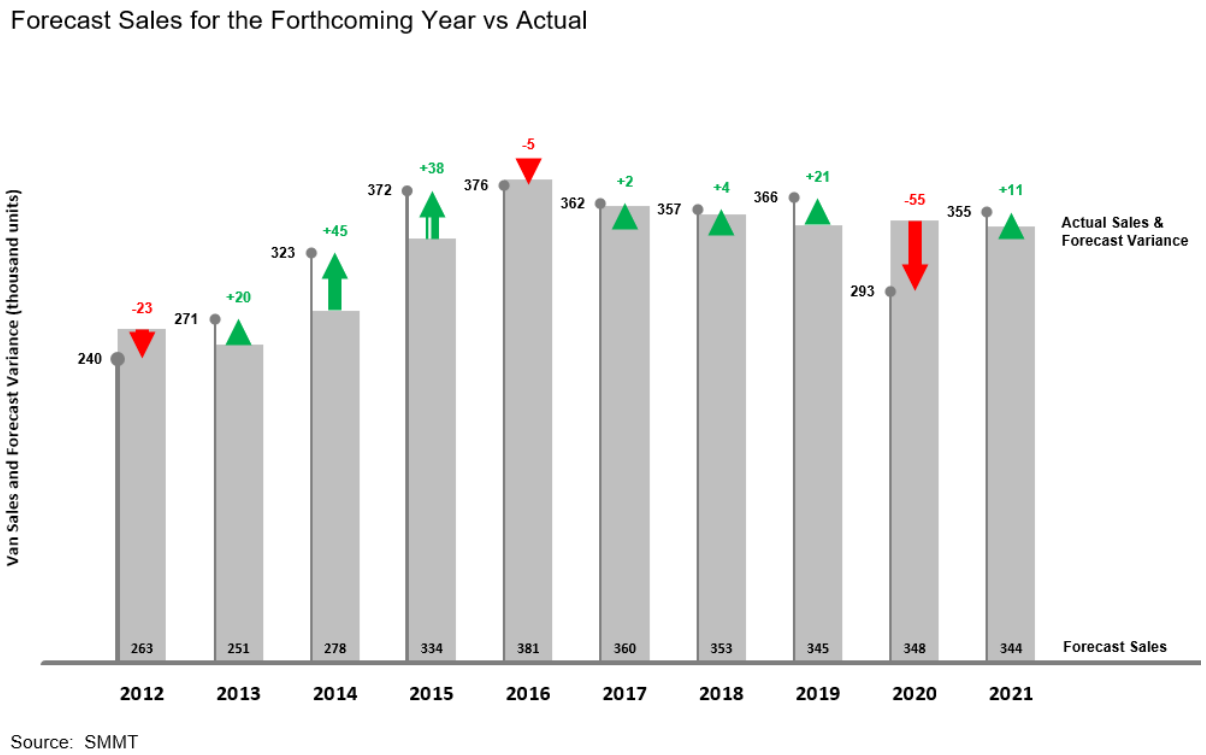
Source: SMMT
Note: The 2021 sales achieved 355,000, 15,000 more than the October 2021 projection.

4.15 The SMMT historic forecast van sales estimates are useful to understand how the manufacturing base anticipates demand and enables supply. The SMMT annual forecasts have been analysed against the actual van sales to help gain insight on trend in supply versus predicted demand.

4.16 **Figure 4-2** and **Figure 4-3** show the variance between actual new van registrations and the SMMT January forecast for the forthcoming year and the following year, respectively[22].

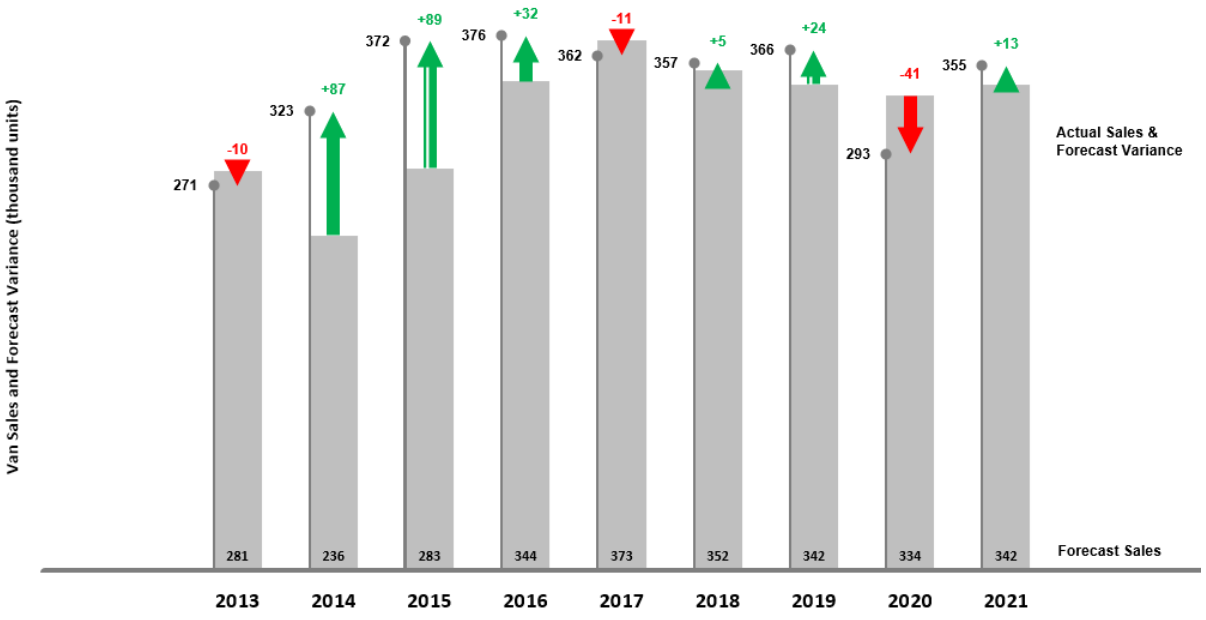
[21] Fleet Europe Accessed 5th January 2022 https://www.fleeteurope.com/en/last-mile/europe/analysis/why-electric-van-sales-are-set-soar?a=JMA06&t%5B0%5D=e-LCV&t%5B1%5D=Dataforce&t%5B2%5D=Arrival&t%5B3%5D=EV100&t%5B4%5D=Renault&t%5B5%5D=Nissan&t%5B6%5D=Mercedes-Benz%20Vans&curl=1
[22] SMMT accessed 9th January 2022, https://www.smmt.co.uk/category/vehicle-data/used-car-sales-data/

Figure 4-2 SMMT Van Sales, Actual Sales and Variance from 1-Year Forecast



Source: SMMT

Figure 4-3 SMMT Van Sales, Actual Sales and Variance from 2-Years On Forecast



Source: SMMT

4.17 What this shows is that the SMMT forecasts have typically under-predicted sales, with the 2 Years On under-prediction more significant, which may be expected if demand is increasing quickly above previous trends.

4.18 The graphs also show that, prior to the Covid-19 pandemic, total van sales had been stable since 2015, with average sales at 367,000 per annum. Van sales in 2021 recovered back to close to typical levels, after the substantial drop in 2020. So, whilst 2021 sales maybe similar to pre-Covid, the overall reduced new vehicle sales in 2020/21 would require a very significant increase in 2022 to recapture lost sales in time for the GM CAP 2023 opening. To simply recover the lost sales in 2020/2021, the 2022 registrations would need to be 448,000, equivalent to an immediate 23% increase over pre-Covid levels. This is in the face of supply constraints in the manufacturing process and ongoing economic uncertainty. In fact, the SMMT forecasts for 2022/23 presented in **Table 4-1** suggest continued typical levels, meaning there is predicted to be a shortfall in the new van fleet and associated impacts for the used van market too.

4.19 However, it can also be inferred that despite these constraints, manufacturing in 2021 has managed to deliver at previous levels of supply, and also owners purchasing new vehicles have been able to afford them. This indicates that there is strong and resilient demand in some sectors, at least those companies able to purchase new vehicles. What isn't clear from these data is how this might filter to the used van market nor whether some groups or sectors are deferring purchases due to high prices or lack of availability of suitable vehicles. The GM CAP behavioural modelling has been based primarily on a sustainable used van market and associated pricing, rather than the cost and availability of new vehicles.

5. Van Supply

Impact of the Pandemic

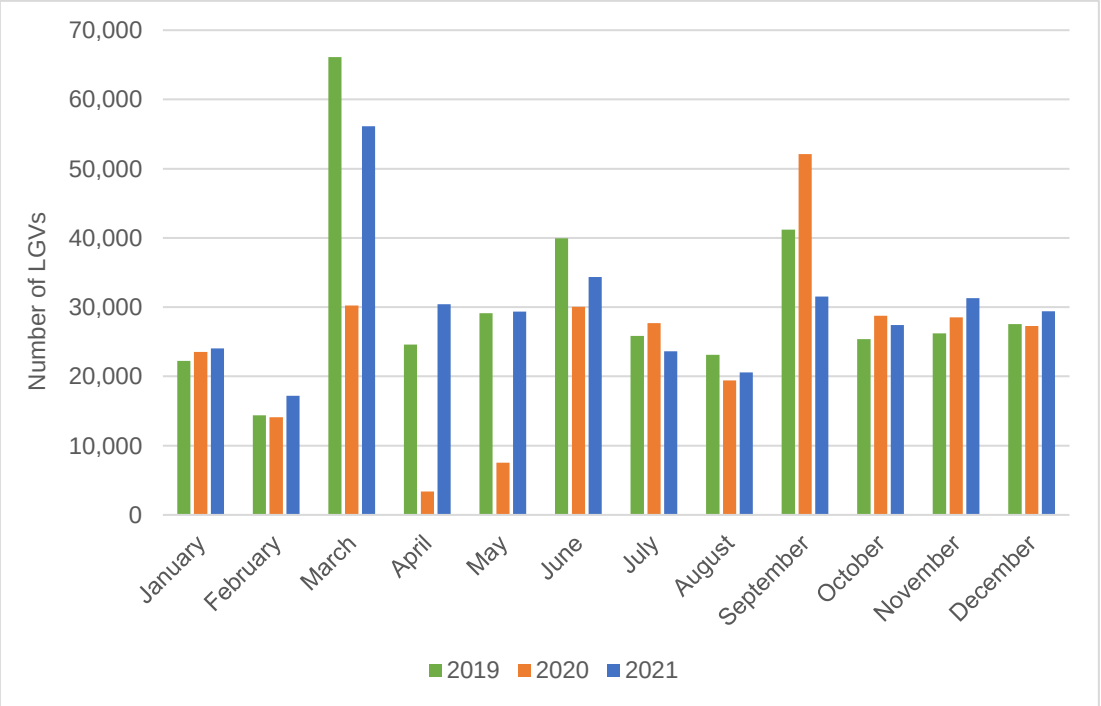
5.1 The pandemic had an initial direct impact on all types of vehicle production as production lines were halted at various times around the world dependant on local lockdown rules. The ability of vehicle manufacturers to respond to demands for increased production is still being limited by the pandemic amongst other factors.

5.2 One factor arising from the pandemic is the pronounced effect that it had on the logistics sector, with employees across the supply chain required to isolate causing delays in the supply of parts, with parts from places such as Asia being unavailable due to production issues and temporary staff shortages there.[23]

5.3 To review the impact of Covid-19 on national van sales, data from 2019 to 2021 for the registration of new vans has been used from SMMT.[24] As the registration data demonstrates in **Figure 5-1** van sales were significantly lower in March, April and May 2020 during the first lockdown.

5.4 **Table 5-1** displays the total number of vans registered in 2020 and 2021 compared to the last pre-pandemic year of 2019. Sales in 2019 were similar to the previous 5-year average of 367,000 and is therefore a reasonable comparator. In 2020 there were significantly fewer new sales with the total registered down 20%. There was some recovery in 2021 though sales remained 3% below pre-pandemic levels. The net effect is a reduction of over 80,000 new vans in circulation compared to what would have been expected based on pre-pandemic sales.

Figure 5-1 Registration of New Vans from 2019 to 2021



Source: SMMT

[23] Baker McKenzie Accessed 6th January 2022 https://www.bakermckenzie.com/en/newsroom/2020/04/global-supply-chains-under-huge-pressure-covid-19

[24] LCV Registrations – SMMT - https://www.smmt.co.uk/vehicle-data/lcv-registrations/

Table 5-1 Total number of new vans registered in 2019-2021

Year	Total	% Change from 2019
2019	365,778	-
2020	292,657	-20%
2021	355,380	-3%

Source: SMMT

Semiconductor Shortages

5.5 The global shortage of semiconductors began in the first quarter of 2021. Analysis by McKinsey[25] suggests that the demand for semiconductors in the auto industry in 2020 was below expectations by around 15%. But at the same time, some other market areas experienced rapid expansion, resulting in overall growth of 5% to 9% in semiconductor sales above forecasts. When the automotive sector's demand recovered, the semiconductor industry had already shifted production to meet demand for other applications.

5.6 As with other markets and industries there are also now Covid-related closures at semiconductor factories and international shipping ports[26].

5.7 Consultation with SMMT and vehicle manufacturers demonstrates the significant impact of the semiconductor shortage, with new vehicles typically containing over 1,000 semiconductor chips. This has led to manufacturers reducing their production targets, limiting the number of new vans entering the market.

5.8 Reports from Commercial Fleet earlier in 2021[27] highlighted that new vehicle supply was affected by the global semiconductor crisis with lead times for new vehicles increased and then standing at up to 12 months for certain factory-order models. Manufacturers were also reported to be removing some non-essential components (e.g. infotainment systems) from vehicle specification to maintain production.

Britain leaving the EU

5.9 It is challenging to disaggregate the impact of Britain leaving the EU and the Covid pandemic on supply chains and consumer confidence, however the changing trading arrangements with the EU meant that there were supply issues as businesses got used to new customs requirements (particularly in January/February 2020), which caused delays at major ports. This backlog is likely to have fed into the number of vehicles produced and subsequent registrations.

[25] https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/coping-with-the-auto-semiconductor-shortage-strategies-for-success
[26] https://www.autocar.co.uk/car-news/business-tech%2C-development-and-manufacturing/latest-updates-semiconductor-chip-crisis
[27] https://www.commercialfleet.org/news/van-news/2021/04/28/used-lcv-prices-to-rise-as-semiconductor-supply-crisis-hits-new-van-production

Views from the Industry

5.10 Consultation was undertaken with SMMT and van manufacturers, as well as a review of industry press on the issue.

Conversations with Society of Motor Manufacturers and Traders (SMMT) in 2021 & 2022:

The semi-conductor shortage has had a significant impact on vehicle production, with the typical vehicle comprising of 1,500 semi-conductor chips. Due to Covid-19 restrictions in South East Asia, approximately 19 semi-conductor plants have been closed, affecting supply. In addition, due to 'stay-at-home' restrictions, demand from other sectors such as the gaming industry has risen, further reducing supply. Car producers have been hit hardest as it is more difficult for high volume manufacturers to source chips. HGV manufacturers have more specialist providers which means they can source chips more easily and overall volumes are much lower.

The lag on production means that shortages are being felt now and are likely to become more pronounced in early 2022.

As a result of this shortage some specialist orders are not being fulfilled until 2023. The typical delivery date for an HGV has increased from 12 to 26 weeks. However, the SMMT believe this will stabilise and return to normal, with no medium- or long-term impact. They envisage it will take 12 months to correct so some time during 2023.

SMMT also reported that manufacturers were now looking at sourcing semi-conductors from alternative providers, including those not previously focused on the automotive sector

Conversations with Volkswagen Van Centre Greater Manchester, 2021:

VW's most popular van model, the Transporter, is produced at the company's German-based plant and brought over to the UK. Transporters are already sold out for 2022, meaning new customers will now need to wait until Q1 2023 for their van.

Several issues underpin the shortage in vans. The most pressing issue is the shortage in semi-conductors.

Another factor is the 70% increase in the price of steel which has resulted in price rises for customers. Together, these issues have led to four price increases in the last 12 months. As a result, Volkswagen has ceased to provide its usual price guarantees for all new sales and customers have now lost price protection.

The second-hand market is performing strongly. Customers are reselling their vans now more than they ever have before and prices are the highest they have ever been

5.11 Reports from industry press also state that supply issues could last until 2023. Speaking at the IAA Munich auto show in September 2021 Daimler CEO Ola Kallenius said soaring demand for semiconductors means the auto industry could struggle to source enough of them throughout next year and into 2023, though the shortage should be less severe by then. BMW CEO Oliver Zipse said: "*I expect that the general tightness of the supply chains will continue in the next six-to-12 months.*"

5.12 Numerous Ford models are affected and Ford's plant in Turkey, where the Transit van is built, was also closed this summer. The manufacturer is now shipping some models with missing features as noted previously in this report.

5.13 Other reports are stating six to nine month lead times for ubiquitous models such as the Ford Transits.

5.14 Information from the wider commercial sector was also provided by the Road Haulage Association (RHA) that reflected some of the issues their members were experiencing. Whilst this relates to the heavy goods vehicle sector, it does reflect a similar picture in terms of supply side issues within the automotive market.

Selected extracts from RHA member correspondence:

(1) We have currently stopped pricing & closed our order books for the short term due to the increased difficulty in predicting pricing close to 12 months down the line.

(2) We had requested rate from our commercial supplier for a tractor unit and 2 trailers on long term rental, but we were quickly met with a response of "unfortunately this isn't something we are going to be able to provide in time for next year". I have also spoken with {anonymous} used and could be supplied a used tractor unit, but that option is very limited to what vehicles are coming in off contract. as for new purchase we were told by a sales rep at {anonymous} we would be looking at 2023 deliver times now.

(3) We predominantly run {anonymous} HGVs. Having had a verbal conversation with the dealer about pricing and lead times, we have been advised by them that for any orders placed within the next few weeks we will be looking at quarter 1 of 2023 for delivery of a chassis to the dealer. We then have to factor in further time for crane installation and truck body build etc. Realistically if this remains the case, we will end up not getting new trucks until the end of Quarter 2 of 2023, almost 2 years from now! They have also said that pricing quoted is not guaranteed and is subject to fluctuation due to pricing of raw materials changing between now and the vehicle being built and supplied.

(4) {anonymous} have closed their order books last Friday until 2023, they are concentrating on back orders and are waiting for their suppliers to provide software for their hardware, i.e computers to operate the gearboxes etc etc. They have loads of incomplete trucks at {anonymous} airport awaiting cpu's for various tasks.

6. Van Prices

New Vehicles

6.1 Van prices are a function both of the production and supply costs, combined with market demand versus available supply.

6.2 As a result of the constraints described previously, new vans are therefore expected to see their value rise more acutely as the semi-conductor crisis persists limiting supply, alongside the newfound shortages in other crucial resources such as rubber and metal, thus pushing up costs.[28]

6.3 The rising costs of materials, caused in part by reduced production associated with Covid are also affecting vehicle prices, with VW reporting that the cost of steel has risen significantly during 2021, causing them to raise prices. Steel prices have reduced in recent months but remain volatile.[29]

6.4 For reasons of commercial sensitivity, it has not been possible to obtain reliable data on changes to prices paid for new vans during the period under review. Advertised prices may be obtainable but records on actual sale values are not available.

Used Vehicles

6.5 It was to be expected that the reduction in new vehicles entering the fleet in 2020/21 would also have a knock-on effect to the used van market as the natural turnover of vehicles is stalled, reducing supply at this stage as well. Given the ongoing demand, this would normally lead to increased prices and there is considerable evidence of this occurring as shown later in this section.

6.6 Used light commercial vehicle values rose during November according to BCA (www.bca.co.uk) as demand for vehicles to service the online and home delivery sector increased in the run-up to Christmas with average values increasing by 15% from the start of November. Average monthly values continue to be well ahead year-on-year, with November 2021 values up by 16.4% increase compared to the same month last year.

6.7 Stuart Pearson, COO at BCA UK, said: "*The used LCV market remains exceptionally competitive and average selling values at BCA have consistently outperformed guide price expectations throughout 2021. The strong market that we've experienced reflects the ongoing economic shift supported by consume-driven online activity plus the well-documented challenges with new LCV supplies. In addition, and as we anticipated, we have seen demand increase in the final weeks of the year to meet the needs of the hub delivery, courier and final mile home delivery sectors.*"

6.8 Matthew Davock, director of commercial vehicles at Cox Automotive, believes the wholesale performance of the past 12 months will never be witnessed again, but warns that the early part of next year, at least, looks to continue similar trends.

6.9 He said the market is likely to reposition itself when stock shortages are resolved halfway through 2022. According to Davock, "*the shortage in the supply of used Euro 6 vans and demand for vehicles that comply with emissions zones such as ULEZ, will*

[28] Ibid
[29] Trading Economics Accessed 6th January 2022 https://tradingeconomics.com/commodity/steel

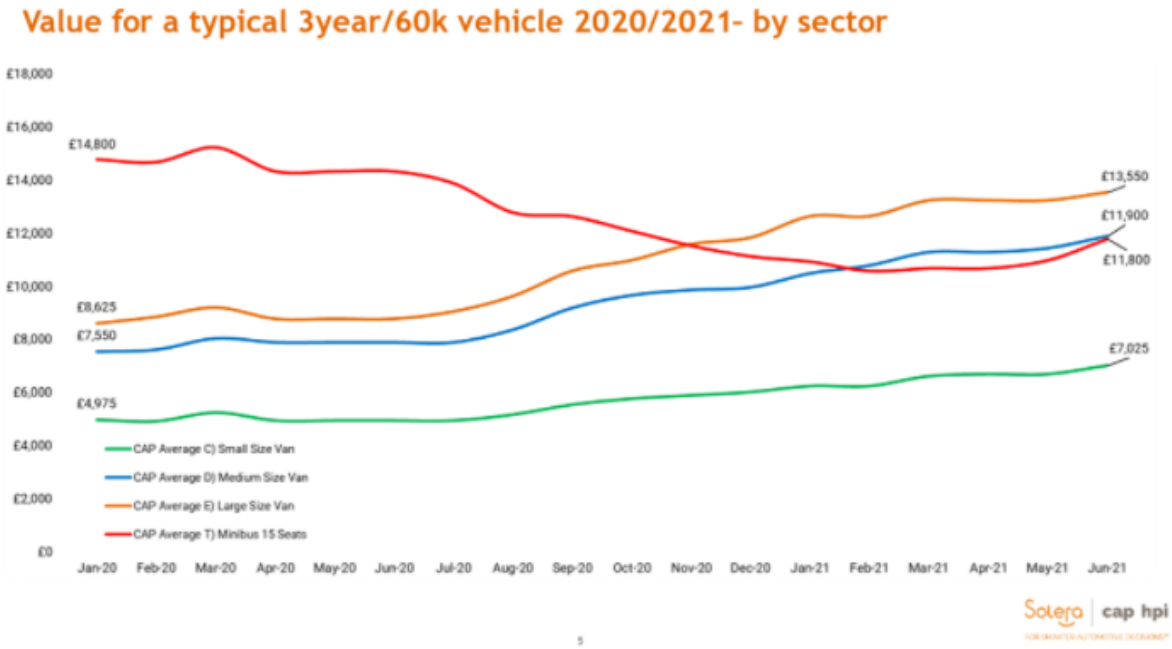
impact the market for the next few months at least, affecting wholesale stock dynamics for at least the next three years".

6.10 Earlier in the year BCA reported that used van values remained stable in September, following a period of rapid growth, earlier in the year. That earlier growth was of the order of 25% based on a year on year comparison from September 2021.

6.11 The general picture is of considerable market volatility, most pronounced earlier in 2021 but still remaining to some extent as we enter 2022. Overall used light commercial vehicle price rises of at least 40% between the pre-pandemic market and late 2021 are not uncommon.

6.12 Commercial Fleet News reported in July 2021[30] reported significant increases in second-hand van prices including the example of a three-year-old medium-sized van, with 60,000 miles, being 58% higher at that time than it was at the start of 2020. The same report included data, from Cap HPI (the vehicle valuation company), which revealed that "*the typical medium van was worth £7,550 18 months ago, but is now achieving an average selling price of £11,900 – an increase of £4,350*". The graphic from CAP HPI is reproduced as **Figure 6-1**.

Figure 6-1 Data from CAP HPI on Used Van Price Trends (as of July 2021)



6.13 It should be noted that this reflects wholesale prices (which a dealer pays at places like auctions) as opposed to retail and therefore the dealer margin is not included. This data is collected by Cap HPI, which collects data on transactions in the automotive sector, recording each sale live as it is completed. Dealers are likely to pass on this increased cost to customers or chose to take a reduced margin. Alternatively, where demand is high and additional funding is available related to CAP scheme with associated deadlines, margins may be increased. There is therefore a difference in absolute value between this information and data elsewhere in this report.

[30] https://www.commercialfleet.org/news/van-news/2021/07/05/used-van-values-up-50-in-18-months-despite-mileage-and-age-increasing

6.14 A review of online adverts carried out in January 2022 shows the price of one of UK's most popular vans in 2022 was 13% higher in real terms (£19,495) than a model of the same age in early 2019 (£17,244).[31] The values are presented in **Table 6-1**.

6.15 Specialist vans like dropsides, tippers and Lutons are achieving big values at auction due to the lack of availability on new conversions. Fleet managers are also reporting that they are running vans for longer, with 6-9 month extensions on leases or hiring additional rental vans rather than replacing them.[32]

Table 6-1 Example change in second-hand van prices between 2019 and 2022

Type	Manufacture Year	Sold Year	Age	Mileage	Price	Increase by
Ford Transit Custom	2016	2019	3	50,000	£17,244	-
Ford Transit Custom	2018	2022	3	50,000	£19,495	13%

Source: Autotrader UK

[31] https://www.carpricetracker.com/car/239343/Ford+Transit+Custom+2.2+TDCi+290+L1H1+Limited+Double+Cab-in-Van+6dr
[32] Automotive Management Accessed 4th January 2022 https://www.am-online.com/news/market-insight/2021/10/15/supply-shortages-creating-perfect-storm-for-van-sector

7. Impact of supply constraints and price rises on the GM CAP

Compliance in the shortest possible time

7.1 Modelling carried out to support the decision to approve the GM CAP, carried out in June 2021, demonstrated that the 2021 GM CAP was forecast to achieve compliance with legal limits of NO_2 concentrations by 2024, as per the Ministerial Direction, based on the proposals set out in the previous Policy[33] and the assumptions made at that time in terms of the age of the fleet and the cost of upgrade amongst other factors[34].

7.2 Sensitivity testing has been carried out to better understand the possible impact of uncertainty in the appraisal of the GM CAP. In particular, the aim is to understand whether variations in the assumptions underpinning the modelling, or the modelling methodology, would lead to a different decision or outcome, or conversely to provide additional confidence in the conclusions.

7.3 The evidence set out in this report has implications for two aspects of the sensitivity testing. Firstly, in terms of the rate of business-as-usual upgrades and the age of the fleet in the 'Do Minimum' scenario (in other words, how old the vehicle fleet would be without any action being taken by policy makers). Secondly, in terms of the impact of changes to the cost of upgrade on how vehicle owners may respond to the measures introduced by the GM CAP.

Rate of upgrade and the age of the fleet

7.4 The Do Minimum fleet mix as modelled at Consultation (January 2021) assumed a normal pattern of vehicle upgrades, including the purchase of new vehicles, trading of second-hand vehicles and the scrapping of the oldest vehicles from the fleet.

7.5 However, GM's analysis suggested that the impacts of the Covid 19 pandemic included:

- Reduction in the number of new vehicles manufactured due to lockdowns;
- Delay in transactions due to lockdown constraints;
- Reduction in vehicle upgrades due to direct economic impact of lockdown or wider recessionary impacts, or because vehicles are not being used as heavily as before; and therefore
- The oldest vehicles remaining in the fleet for longer.

7.6 Analysis showed that these impacts vary between different vehicle types and business sectors with some more affected than others.

7.7 As a result, adjustments were made to the car, van and taxi fleets to reflect the emerging evidence that the normal pattern of vehicle upgrades has been affected for those fleets[35].

[33] Appendix 1 - GM Clean Air Plan Policy following Consultation (ctfassets.net)
[34] DRAFT GM CAP Post-Covid Post-Consultation AQ Modelling Summary Report v1 (ctfassets.net)
[35] Air Quality Modelling Summary Report Appendix D (ctfassets.net)

7.8 While the recent evidence has been used to create reasonable adjustments, uncertainty remained as to whether sales will 'catch up' to their pre-pandemic trajectory or indeed continue to remain below previously assumed levels as a result of the pandemic or other factors and therefore sensitivity testing relating to fleet age assumptions was carried out as follows:

- **Fleet is older than modelled**: HGV, vans and private cars all assumed to be one year older than pre-Covid Do Minimum, taxi to be two years older, no change assumed to Bus. This test showed increased concentrations sufficient to delay the year of compliance. The roads outside of the inner ring road are more sensitive to this test, because car and van emissions are more prevalent compared to buses. However, it is considered unlikely that the fleet age would be as old as this test assumes, given that changes have already been applied to the core to reflect Covid-19 related delays in vehicle upgrades. The most recent data from SMMT suggests that whilst vehicle sales have not caught up with pre-pandemic conditions, van and car sales have not been delayed to the extent of a full year.
- **Fleet is as per the pre-Covid Do Minimum** (the Consultation Option Do Minimum) as Covid-related changes prove to be transitory and fleet quickly reverts to trend, with the fleet tested as assumed in the Consultation Option Do Minimum. This test produced a reduction in concentrations, but with exceedances remaining in 2023 and therefore would not affect the decision to proceed with the GM CAP but demonstrates that there could be greater certainty of achieving compliance as forecast if vehicle sales recovered to their pre-pandemic position.

7.9 GM has used the national SMMT vehicle registrations to assess fleet impacts. The latest data on van registrations to end 2021 suggests that the assumptions with regards to vans remain valid, but given the supply and demand issues set out above, GM will need to keep the evidence under urgent review.

7.10 Monitoring of the on-road fleet will be undertaken throughout the lifetime of the GM CAP using ANPR data and can be compared with the quarterly/annual SMMT releases to assess whether the GM CAP is likely to be affected by changes to purchasing patterns other than those forecast.

Price of upgrade and behavioural responses to the GM CAP

7.11 In summer 2021, GM was concerned that prices could increase as a result of constraints in the availability of compliant vehicles, as set out above, or due to increased demand arising from sustained behavioural changes post-pandemic. For example, GM was aware that the rise in internet shopping during the initial lockdown periods led to increased demand for vans, with anecdotal evidence that vans temporarily released by construction firms were re-purposed for deliveries during lockdown. In summer 2021, GM noted that a sustained increase in van demand could place pressure on the van market and that media reports were suggesting that the price of second-hand vans may be rising. Since then, the evidence of price rises resulting from supply not being able to keep up with demand has strengthened, as set out in this report.

7.12 Sensitivity testing carried out in 2021 suggested that whilst HGV behavioural responses are relatively insensitive to vehicle price increases, for vans an increase of

8% in the price of vehicles (compared to the price as assumed in the modelling) could be sufficient to delay compliance by one year, all other things being equal.

7.13 This is because if van prices rise, more van owners are expected to stay-and-pay rather than upgrade their vehicle, and therefore the emissions reductions would be less than previously forecast.

7.14 The evidence suggests that currently price rises in excess of 8% are being experienced in the van market and therefore that, if these price rises were to be sustained to 2023, and all other things being equal, GM could face an increased risk in terms of achieving compliance by 2024.

Socio-economic impacts on vehicle owners

7.15 If, by June 2023, van owners have been unable to access an affordable compliant vehicle, they may reconsider how to respond to the scheme.

7.16 Van drivers/owners may look to pass the charge onto customers and keep their non-compliant vehicle. As discussed, the demand for those working in the construction/home improvement sector (tradespeople) in particular means that there are often long lead times for work to commence as skills gaps emerge and the price of materials rises.[36] In the context of higher prices and long waiting times, customers may be more willing to accept these charges, which are likely to represent a small proportion of the overall cost of the work. Those charging lower rates or in more competitive markets will be less able to pass on the cost to their customers. If realized, the impacts of this would be a reduction in the environmental benefits of the GM CAP and increased costs for consumers.

7.17 Vans in certain sectors often have low load factors (e.g. operate without a full load) and as such it is feasible that van drivers may switch to larger passenger cars, particularly estate or Multi-Purpose Vehicle (MPVs such as a Ford Galaxy) cars. Some parcel company business models have drivers using their own vehicles, usually cars and it is not uncommon for tradespeople to use larger estate cars if it suits their required tasks. As cars are not subject to any charges associated with GM CAP, this approach may become more attractive. Depending on the type of cars that businesses and drivers transition to (and their availability), this could reduce the environmental benefits of the scheme.

7.18 The Funding policy is designed to support the smallest businesses, sole traders and private owners to upgrade their vehicle. However, in the worst-case scenario, if van owners cannot afford to upgrade their vehicle even with the funding available, and are not able to pass on the cost of upgrade to their customers, they may cease trading or leave the region.

7.19 The impacts of the pandemic and Britain leaving the EU have not been experienced equally across business sectors, with some experiencing major disruptions, costs and loss of business whilst others have been able to benefit from new opportunities created by new ways of working and living. GM's evidence already suggested that a number of vehicle owners were at risk of being placed in hardship as a result of the scheme and it is clear that rising vehicle prices risks worsening that position. However, better evidence is needed to understand the possible nature and extent of such impacts, and who is most at risk.

[36] PBC Today Accessed 5th January 2022 https://www.pbctoday.co.uk/news/planning-construction-news/builders-delays/100980/

8. Summary and Recommendations

Summary of current conditions in the van market

8.1 Pre-pandemic, there was significant growth in van mileage and van stock over a number of years and the expectation was that both growth trends would continue.

8.2 However, whilst the early phases of the pandemic and subsequent lockdowns and constraints in 2020 constrained demand, it appears that this effect was temporary and has been offset by growth in demand from some van-owning sectors.

8.3 The pandemic had a major impact on the number of new vans sold in the UK, initially due to the halting of production lines and local lockdowns around the world.

8.4 Whilst new van sales recovered to some extent, they are still not back to 2019 levels and so there is a substantial 'lost supply' that has not been recovered equating to 80,000 vehicles on a conservative assumption that 2019 levels had been maintained.

8.5 The global semiconductor shortage has also impacted the automotive industry and its effects are ongoing.

8.6 The industry is reporting significant supply issues with extended lead times for new orders.

8.7 It is anticipated that the introduction of clean air zones at particular locations in the UK will introduce some regional disparity in terms of the availability of certain vehicles and place additional demand pressure on the market in general.

8.8 Reliable data on the variation in the price of new vans as a consequence of the supply side issues discussed in Chapter 4 is not available.

8.9 There is substantial evidence of significant price increases in the second-hand van market – the scale of those rises has a high degree of variability depending on the particular vehicle. The extent of the reported rise varies between 13% and almost 60%.

8.10 Overall, the evidence suggests that demand for new and second-hand vans remains strong, and therefore that the loss of supply caused by lockdowns in 2020 and more recently by the semi-conductor shortage is leading to price rises in the new and second-hand markets, and to long lead times for new vehicle orders.

Recommendations

8.11 Whilst there is strong evidence relating to the supply of new vans, there is less insight into the full extent of demand beyond the evidence of rising prices. A better understanding of demand would provide insight into the extent of the shortfall in the market. Further consultation with manufacturers, traders and van owners would be informative.

8.12 There is a lack of robust national data on second-hand van transactions which is important in the context of forecasting and monitoring the impacts of the various clean air zones around the country. This data should be made available by Government.

8.13 There is a lack of robust national data about vehicle prices; this needs to be addressed by Government.

8.14 In addition, it is unclear as to how those affected will respond to the changing circumstances. Research was undertaken with van owners in 2019, followed by consultation activity in 2020, prior to issues described in this note becoming as pronounced as they are at present. Previous assumptions may need to be revisited, which would require engagement with those who operate non-compliant vans.

8.15 It appears that supply constraints and price increases may be more severe for those operating more unusual or specialist vehicles. More research and analysis is required to better understand the types of specialist vehicle operating in the LGV market and how these are being affected by current market circumstances.

8.16 It is apparent that there is strong demand for vans and that high prices are currently being tolerated without reducing demand for vehicles. This suggests that some sectors may be experiencing growth and stronger economic conditions. Nevertheless, it is also clear from previous evidence that rising prices will mean that, for some, it is increasingly unaffordable to upgrade their vehicle. Therefore, more work is required to better understand market conditions by van-owning sector, and to reassess how vulnerable different groups are to the impacts of the GM CAP.

8.17 In particular, GM and Government could consider revisiting analysis carried out previously on the socio-economic impacts of the GM CAP and also review any potential equalities issues that may emerge from changing market conditions.

Appendix A – List of Documents

This Appendix provides a list of documents and data sources used to inform this report

Document Title	Date	Description	Relevance to GM CAP
Chapter 1			
Mayor of Greater Manchester writes to Government reiterating call for non-charging Clean Air Zone	May 2022	Announcement, provide background on current status of GM CAP https://www.greatermanchester-ca.gov.uk/news/mayor-of-greater-manchester-writes-to-government-reiterating-city-region-s-call-for-non-charging-clean-air-plan/	Current Status of GM CAP
GM CAP Technical Documents (various)	various	All available at Technical Documents Clean Air Greater Manchester (cleanairgm.com) https://cleanairgm.com/technical-documents/	Published Technical Reports for GM CAP
Technical Note 3: Analysis of the Freight Market	July 2019	Describes the number of HGVs operating in GM, the compliance status of those vehicles, and the business and usage patterns of those vehicles. https://cleanairgm.com/technical-documents/	Background on Freight Sector
Technical Note 12: Evidence of the Impact of a 2021 Implementation of a CAZ C (Without exemptions)	July 2019	Describes analysis carried out by GM to assess the risks of implementing a CAZ C in 2021 without also implementing a two-year sunset period as was proposed in the OBC. https://cleanairgm.com/technical-documents/	analysis of vulnerability by sector, based on the proportion of the fleet that would be non-compliant
Technical Note 20: GM Specialist Goods Survey Results Summary	Aug 2019	Sets out the results of on-street surveys carried out at three sites identified in the local exceedances study where freight was a significant contributor of emissions. The surveys provide estimates of vehicle volumes by size, compliance status and industry. https://cleanairgm.com/technical-documents/	Reviews the composition of the freight vehicles operating at specific location in GM
T4 Appendix A (Modelling for Consultation)	Jan 2020	Discusses the modelling tools used to assess the impacts of GM CAP https://cleanairgm.com/technical-documents/	Modelling tools used to assess impacts of GM CAP
Deliberative Research	Nov 2019	Research was carried out with vehicle owners potentially in scope for the scheme, including deliberative research and surveys of van owners https://cleanairgm.com/technical-documents/	Understanding the vans sector and views of van owners
GM CAP Impacts of COVID-19 Report	June 2021	Considers the impacts of the pandemic on GM and reviews the potential and actual impacts of COVID-19 on the GM CAP. https://cleanairgm.com/technical-documents/	Review of impacts of COVID-19, including impacts on vans

Chapter 2			
Percentage change in online purchases due to the coronavirus (COVID-19) pandemic	Jan 2022	Percentage change in online purchases due to the coronavirus (COVID-19) pandemic in the United Kingdom from March 2020 to February 2021 https://www.statista.com/statistics/1230225/changes-in-online-buying-among-uk-consumers-since-covid-19/	Linked to vans activities for certain sectors
Light Commercial Vehicles Delivering for the UK Economy	2019	Background on Light Commercial Vehicles Sector https://www.smmt.co.uk/wp-content/uploads/sites/2/SMMT-Light-Commercial-Vehicles-Delivering-for-the-UK-economy.pdf	Provides background details of the vans sector (Pre-Covid-19)
T4 Appendix C – Vehicle Populations	2021	Provides details of vehicle proportions impacted by GM CAP (NB: Current version not published – TN37, link below provides previous version of this note) https://cleanairgm.com/technical-documents/	Details of vans vehicle proportions (compliant / non-compliant splits)
GMP ANPR Data	2019 / 2020 / 2021	Greater Manchester Police – ANPR camera data, reviewed to understand the composition of the vans fleet, including age profile of the fleet (Raw Data not published)	Understand composition of the vans fleet (e.g. fleet age distribution)
Chapter 3			
Vans Sales data (SMMT)	Various	Sales data as reported by Society of Motor Manufacturers and Traders (SMMT) https://www.smmt.co.uk/vehicle-data/lcv-registrations/	Vans sales data
Vans Statistics	Apr 2021	DfT Statistical Release 15 April 2021, Final Van Statistics April 2019March2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1065072/van-statistics-2019-to-2020.pdf	Vans Statistics
Chapter 4			
Self Employment Stats (ONS)	Feb 2022	Trends in Self-Employment in the UK Office for National Statistics https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/trendsinselfemploymentintheuk/2018-02-07	To understand business types for van ownership
Booming home delivery and construction fuel demand for vans	Aug 2021	Motor Trader review of market sectors https://www.motortrader.com/motor-trader-news/automotive-news/booming-home-delivery-construction-fuel-demand-vans-auction-25-08-2021	Understand impacts of COVID on Vans sectors
Why electric van sales are set to soar	Mar 2021	Review of position of electric vehicle take up https://www.fleeteurope.com/en/last-mile/europe/analysis/why-electric-van-sales-are-set-soar?a=JMA06&t%5B0%5D=e-LCV&t%5B1%5D=Dataforce&t%5B2%5D=Arrival&t%5B3%5D=EV100&t%5B4%5D=Renault&t%5B5%5D=Nissan&t%5B6%5D=Mercedes-Benz%20Vans&curl=1	Understand likely EV uptake on vans sector
SMMT Car Sales data	Various	Review of ongoing changes in vehicle sales data. Covers other modes than car	Reviewing trends of

		https://www.smmt.co.uk/category/vehicle-data/used-car-sales-data/	vehicle registrations / sales
Chapter 5			
Baker McKenzie	Jan 2022	https://www.bakermckenzie.com/en/newsroom/2020/04/global-supply-chains-under-huge-pressure-covid-19	Impacts of the pandemic on supply chains
LCV Registrations	Various	https://www.smmt.co.uk/vehicle-data/lcv-registrations/	Changing fleet profile over time
Coping with the auto-semiconductor shortage: Strategies for success	May 2021	https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/coping-with-the-auto-semiconductor-shortage-strategies-for-success	Research
Latest updates as semiconductor chip crisis cripples industry	Feb 2022	https://www.autocar.co.uk/car-news/business-tech%2C-development-and-manufacturing/latest-updates-semiconductor-chip-crisis	Research
Used values to rise as semiconductor crisis hits new van production	Apr 2021	https://www.commercialfleet.org/news/van-news/2021/04/28/used-lcv-prices-to-rise-as-semiconductor-supply-crisis-hits-new-van-production	Research
Chapter 6			
Steel Prices	Various	Changing Price of Steel – impacts on supply chains https://tradingeconomics.com/commodity/steel	Research
LCV Market Statement	2021	BCA – Statements Stuart Pearson, COO at BCA UK www.bca.co.uk	Research
LCV Market Statement	2021	Cox Automotive Statement - Matthew Davock, director of commercial vehicles	Research
Changes in Van Prices	2021	Changing van prices provided by CAP HPI https://www.cap-hpi.com/	Research – Vehicle prices
Used van values up 50% in 18 months despite mileage and age increasing	Jul 2021	https://www.commercialfleet.org/news/van-news/2021/07/05/used-van-values-up-50-in-18-months-despite-mileage-and-age-increasing	Research
Used Van Prices	2019 / 2022	https://www.autotrader.co.uk/	Research – Vehicle prices
Van Prices	Various	https://www.carpricetracker.com/car/239343/Ford+Transit+Custom+2.2+TDCi+290+L1H1+Limited+Double+Cab-in-Van+6dr	Research – Vehicle prices
Supply shortages creating 'perfect storm' for van sector	Oct 2021	https://www.am-online.com/news/market-insight/2021/10/15/supply-shortages-creating-perfect-storm-for-van-sector	Research

Chapter 7			
Appendix 1 - GM Clean Air Plan Policy following Consultation	2021	https://cleanairgm.com/technical-documents/	GM CAP Technical Report
DRAFT GM CAP Post-Covid Post-Consultation AQ Modelling Summary Report v1	2021	https://cleanairgm.com/technical-documents/	GM CAP Technical Report
Air Quality Modelling Summary Report Appendix D	2021	https://cleanairgm.com/technical-documents/	GM CAP Technical Report
89% of builders face job delays as shortages continue	Oct 2021	https://www.pbctoday.co.uk/news/planning-construction-news/builders-delays/100980/	Research
Chapter 8			
		(No new Sources in Chapter 8)	
Appendix A			
		(No new Sources in Appendix A)	
Appendix B			
Coronavirus (COVID-19) UK Government Dashboard	Oct 2020	https://coronavirus.data.gov.uk/	Background of Covid Timeline
"Greater Manchester's COVID-19 Management Plan: how we control outbreaks"	2022	https://greatermanchester-ca.gov.uk/coronavirus/COVID-19-management-plan/	Background of Covid Timeline
"Prime Minister announces new local COVID Alert Levels"	Oct 2020	https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels	Background of Covid Timeline
TfGM's C2 Database	various	Traffic flow data was extracted and analysed from TfGM's C2 Database https://tfgmc2.drakewell.com/multinodemap.asp	Information on local traffic impacts
"Budget 2021: Fuel duty rise axed as petrol prices hit record highs"	Oct 2021	Fuel Prices Increase: https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html	Information on Economic Related Impacts

“GDP monthly estimate, UK : December 2021”	Dec 2021	GDP information https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021	Information on Economic Related Impacts
“Average weekly earnings in Great Britain: February 2022”	Dec 2021	Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022	Information on Economic Related Impacts
“UK economy latest”	Dec 2022	Information on Goods import and exports https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomylatest/2021-01-25#output	Information on Economic Related Impacts
“Cities Outlook 2022”	Jan 2022	Change in pub and restaurant sales in City Centres and Suburbs. Weekday footfall in Birmingham, Manchester and London https://www.centreforcities.org/wp-content/uploads/2022/01/Cities-Outlook-2022-2.pdf	Information on Economic Related Impacts

Appendix B – Review of COVID Impacts

Overview

B.1 Travel behaviour and the economy have been impacted by the COVID-19 pandemic and have resulted in changes in the way that people travel and the way businesses operate. In this chapter we will assess some of the key data findings found throughout the period to better understand the levels of impact on transport and travel generally.

COVID Timeline

B.2 In January 2020, COVID-19 first appeared in the UK. By 30th November 2020, there were an estimated total of 1.6 million people testing positive to the virus in the UK with 58,24537 cases resulting in deaths.[38]

B.3 As stated within the GMCA COVID-19 Management Plan Executive Summary, GM had more than 16,000 confirmed cases and nearly 2,800 people died during the first four months of the COVID-19 pandemic.[39]

B.4 In Summer 2020, North West England was one of the worst affected areas by the pandemic with GM placed under additional restrictions on 31st July 2020. Throughout 2020, GM continued to experience a disproportionate impact to the rest of the UK from these additional restrictions, such as the three-tier system for lockdowns across England. This three-tiered system was first announced by the Government in October 2020 to *'simplify and standardise local rules'*.[40]

B.5 On 5th November 2020, the Government imposed a second national lockdown with restrictions on continued business activity in England. These restrictions were in place between 5th November and 2nd December 2020, followed by a return to 3 Tier system restrictions.

B.6 On 19th December 2020 the Government introduced an additional 4th Tier, with lockdown measures beginning in London and the South East, after having identified the Alpha (Kent) variant, coming into effect on 21st December 2020 until a third nationwide lockdown was re-introduced on 6th January 2021.

B.7 March 2021 saw Step 1 of the Government's roadmap being introduced, with schools reopening and outdoor gatherings being allowed with the proviso of staying local. April 2021 saw Step 2 of the roadmap allowing limited indoor contact, businesses such as hairdressers to reopen and outdoor hospitality. Step 3 came into effect in May 2021, allowing indoor meetings limited to 6 people and 10,000 people for large sport stadiums. Step 4, on 19th July 2021, saw the remaining venues such as nightclubs reopen, and the removal of most other restrictions.

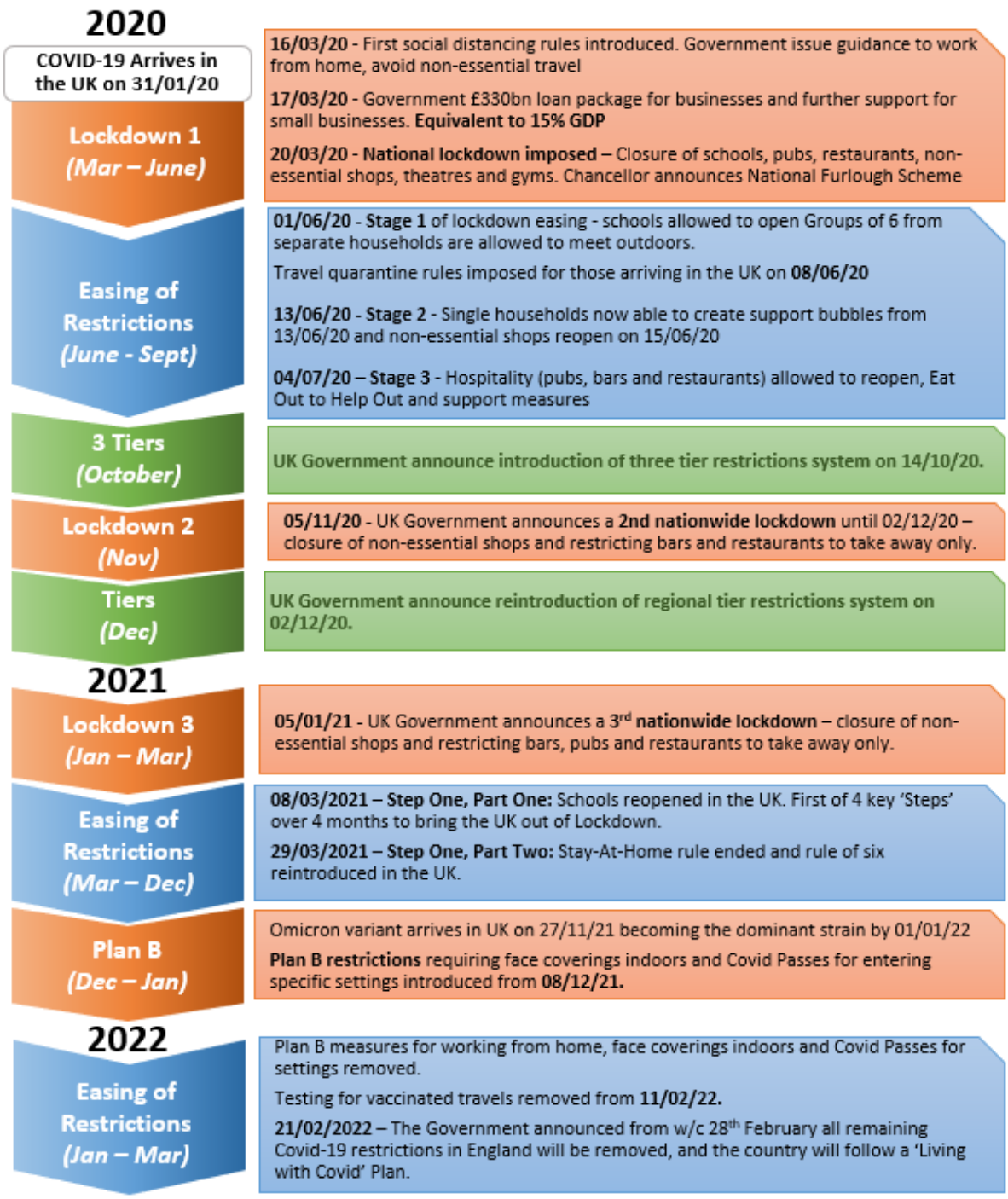
B.8 With the discovery of the Omicron variant, Plan B measures (face coverings indoors and use of Covid Passes at specific settings such as nightclubs), which

[37] UK deaths is based on deaths within 28 days of a positive test and does not include excessive deaths.
[38] Coronavirus (COVID-19) UK Government Dashboard https://coronavirus.data.gov.uk/ (accessed 01/10/20)
[39] COVID-19 Management Plan – Executive Summary (GMCA) https://greatermanchester-ca.gov.uk/coronavirus/COVID-19-management-plan /
[40] Prime Minister announces new local Covid Alert Levels - https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels

also recommended working from home where possible, were implemented from 8th December 2021 to 27th January 2022.

B.9 A summary of the key COVID-19 events and Government responses has been captured in **Figure B-1**.

Figure B-1 COVID-19 Timeline January 2020 to March 2022



B.10 The COVID-19 pandemic has had a transformative global impact to health, businesses, the economy, and way we live and interact with one another.

B.11 At the time of the production of this note in March 2022, the UK appears to be exiting the pandemic. Case numbers are stabilising, death and in-patient numbers

remain low, reflecting the positive impact of a successful vaccine programme rollout.

B.12 However, emerging evidence gathered over the course of 2020 and 2021 has shown that there have been substantial changes to the economy, travel patterns and our behaviours. These changes have been driven by Government policy in the short term, however some of the behaviours adopted during Government lockdowns may continue as restrictions ease. In addition to this, economic impacts following the recent easing of restrictions have resulted in impacts which can be seen locally, nationally and globally within the economy.

COVID-19 Impacts on Travel Behaviour

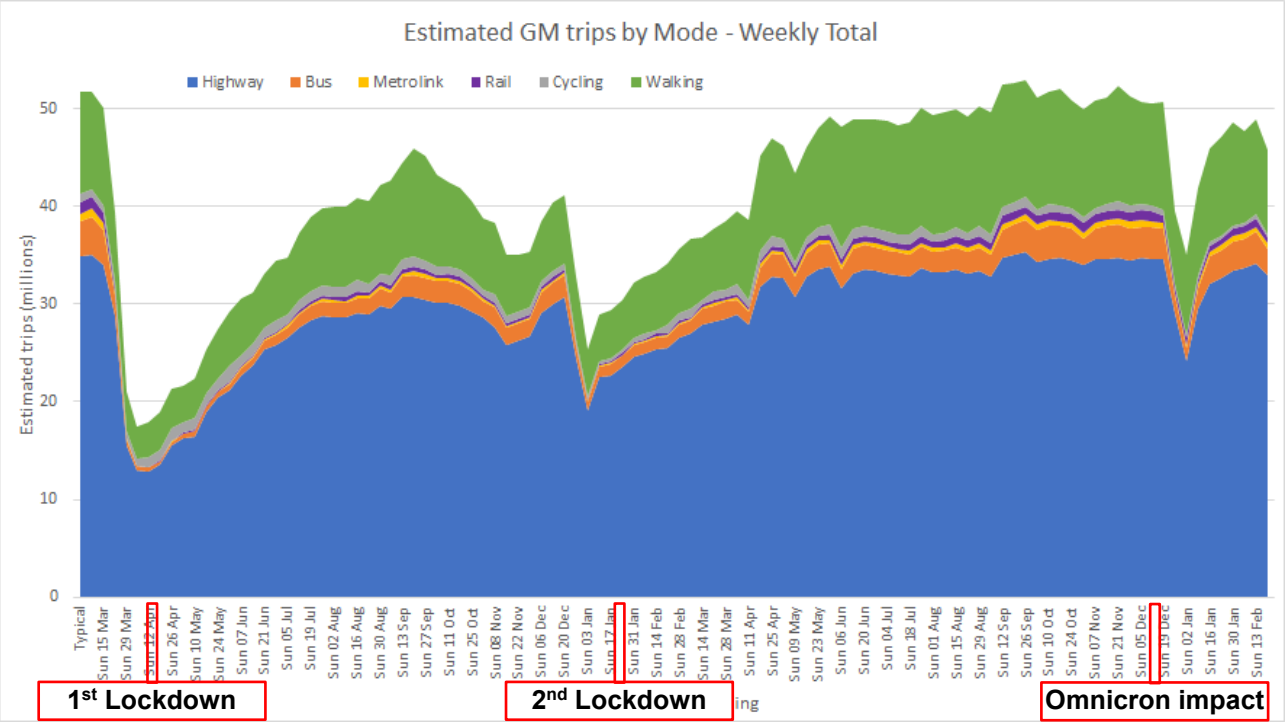
B.13 Detailed analysis has been undertaken on the impacts of COVID-19 on travel demand within GM to compare 'pre-pandemic' and 'during pandemic' travel levels within GM.

B.14 As shown in **Figure B-1**, there are a number of Government interventions which have had an impact on traffic levels (for all modes of transport). These include:

- Government guidance issued on 16th March 2020 to work from home 'where possible';
- Closure of all UK schools to children, apart from those who have key worker guardians on 20th March 2020;
- Closure of the hospitality and leisure sector on the 20th March 2020 including pubs, bars, restaurants, gyms, theatres etc.;
- Re-opening of schools to all children in September 2020 alongside the UK Government encouraging workers to return to the office;
- Implementation and extension of the Government Tiered restrictions;
- Return to lockdown conditions on 5th November 2020, 2nd December 2020 and 6th January 2021; and
- Hotel quarantine for travellers from high-risk countries.

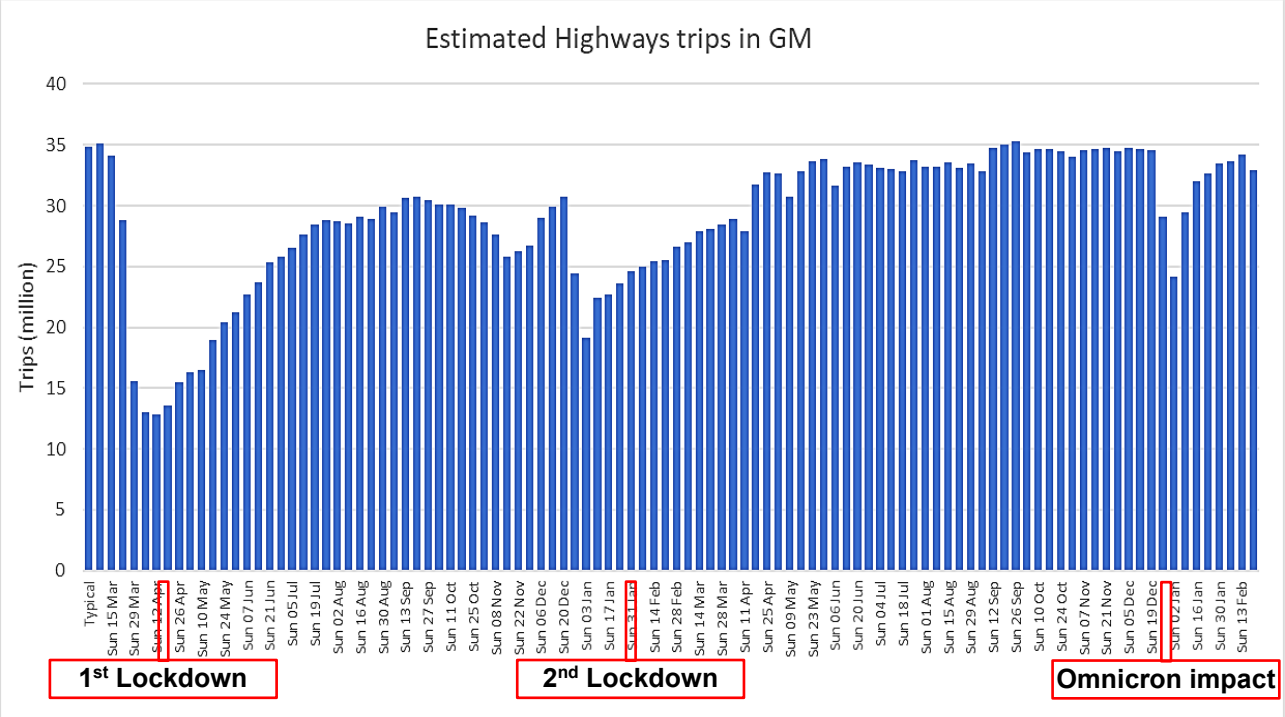
B.15 Since the beginning of the pandemic, travel patterns across the UK have significantly changed, driven by changing Government guidelines and the perception of transmission risks on certain forms of transport. An overview of the changing trends of travel behaviour by mode in Greater Manchester is provided in **Figure B-2** to **Figure B-6**; the data has been provided by TfGM. Three key dates have been flagged in each figure: the first and second national lockdowns plus the emergence of the Omicron variant.

Figure B-2 Overview of travel behaviour – All Modes



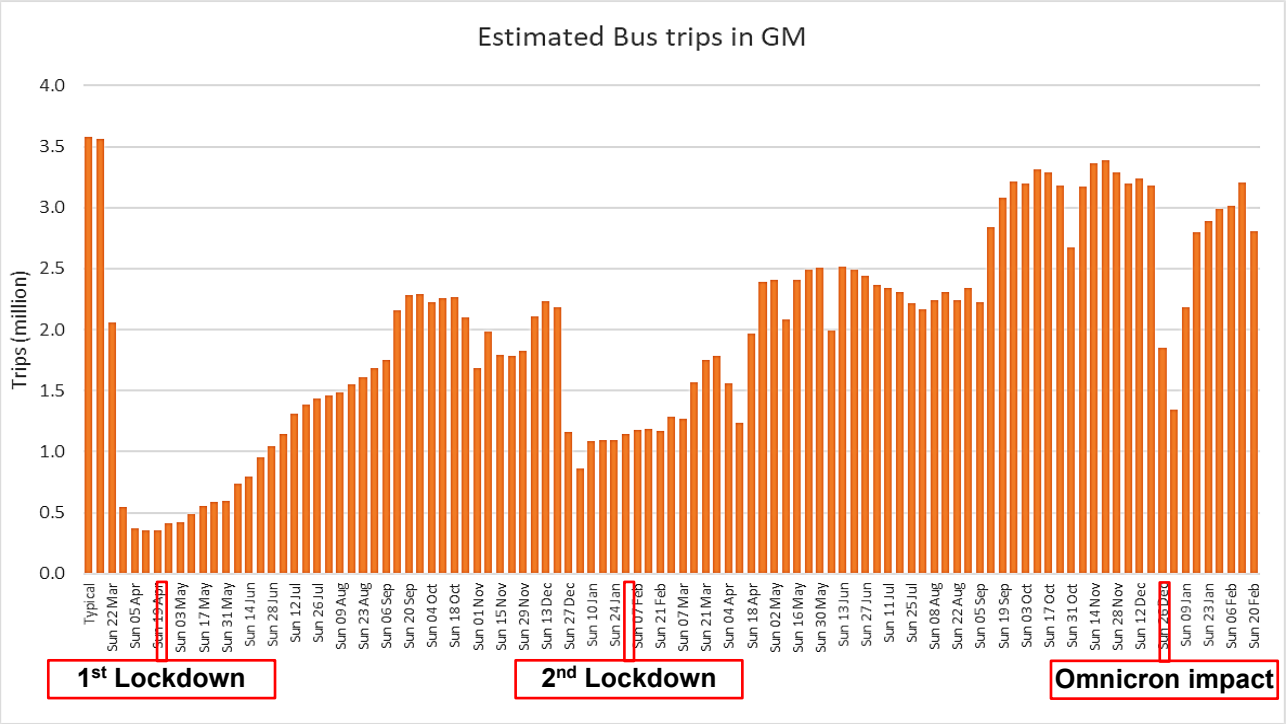
Source: TfGM

Figure B-3 Overview of travel behaviour – Highway



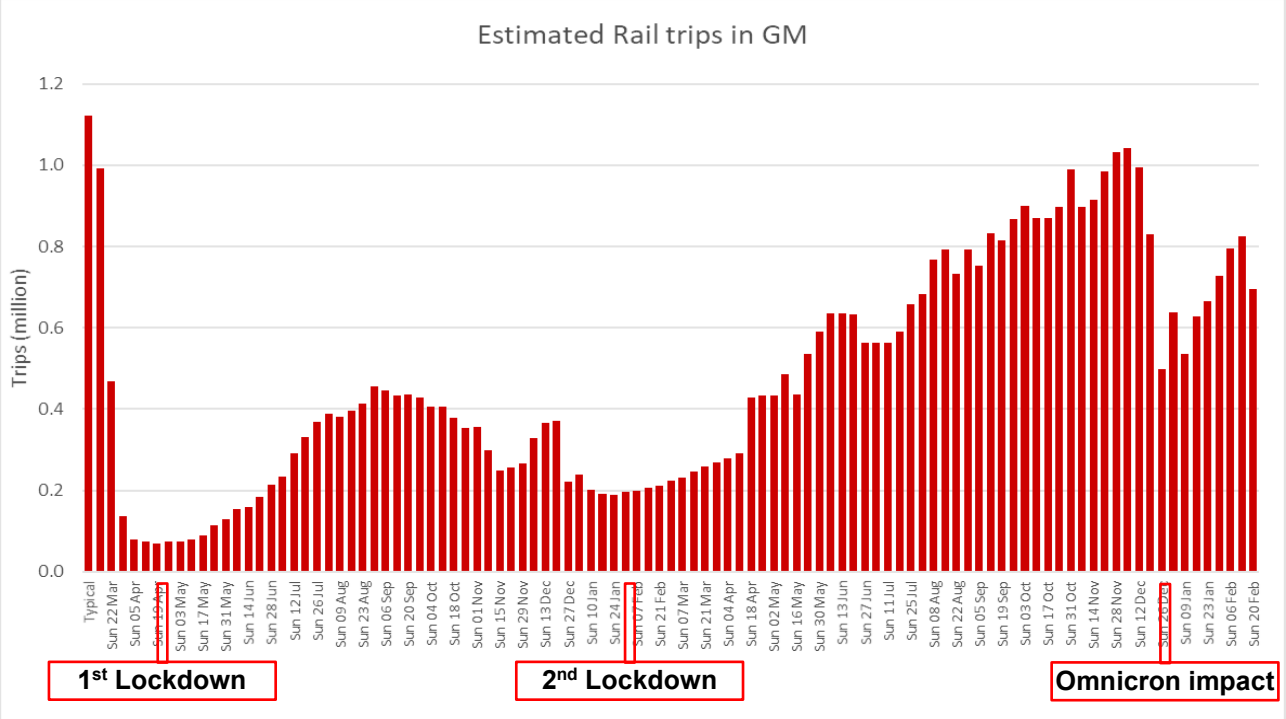
Source: TfGM

Figure B-4 Overview of travel behaviour – Bus



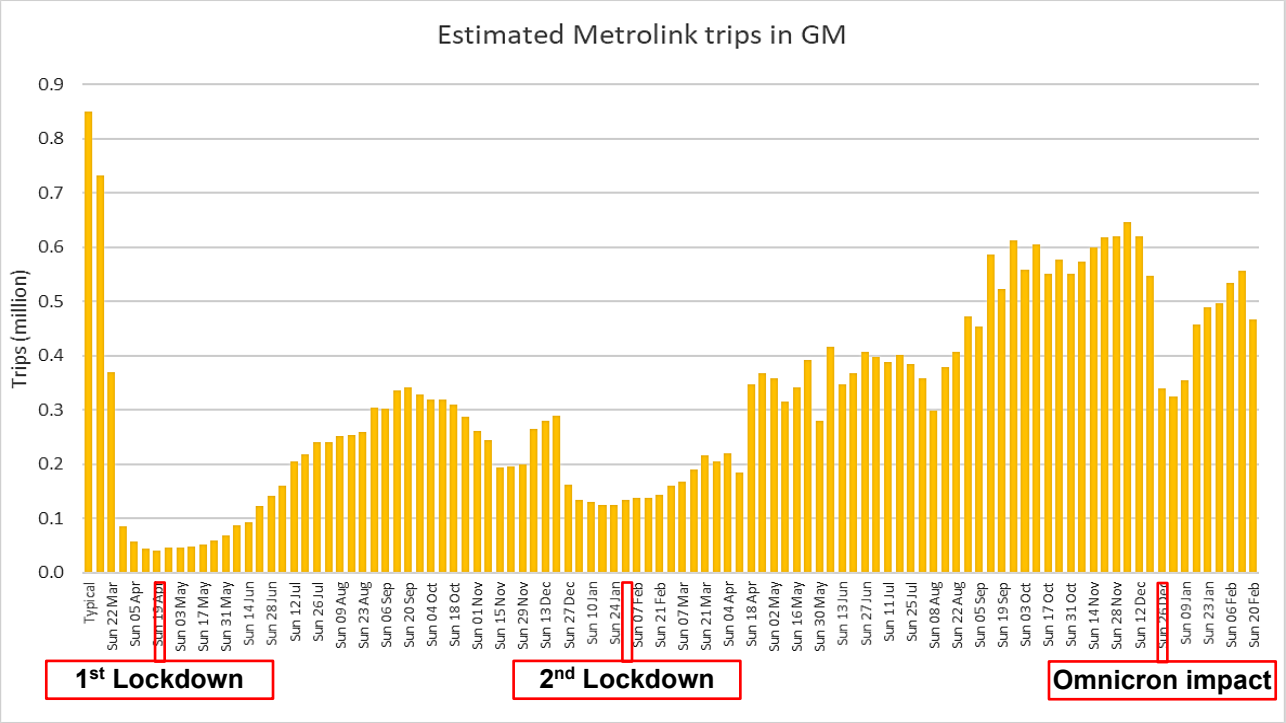
Source: TfGM

Figure B-5 Overview of travel behaviour – Rail



Source: TfGM

Figure B-6 Overview of travel behaviour – Metrolink



Source: TfGM

B.16 These figures illustrate that the impact of the pandemic has been pronounced and the extent to which pre-pandemic travel volumes have returned varies by mode. In summary, at the aggregate level across GM:

- Highway trips are close to pre-pandemic levels (approximately 95% of 'typical'); and
- Public transport trip levels are between 60% and 75% of pre-pandemic / typical levels with bus performing more strongly than rail / Metrolink.

Local Traffic Impacts

B.17 Further analysis was undertaken regarding traffic flows on the local highway network, in order to understand the changing highway demand levels at various points through the pandemic. This has provided an insight into how the COVID-19 related travel guidance and changing behaviours because of the pandemic have impacted travel across GM.

B.18 This analysis has considered changing travel levels at a range of locations across Greater Manchester, to understand how traffic flows have changed on the following:

- Roads near to the Regional Centre;
- Key radial routes;
- Roads adjacent to local centres within GM; and
- Roads accessing centres of employment.

B.19 The analysis has considered several points in time, comparing:

- September 2019 (before the pandemic);

- September 2020 (during the pandemic);
- November 2021 (during pandemic – pre Omicron); and
- January 2022 (most recent, though impacted by Omicron variant).

B.20 Traffic flow data was extracted and analysed from TfGM's C2 Database[41]. These have been reviewed and presented for the 2-way hourly link volumes, by hour, at the following locations:

- Manchester Rd (A56) / 15m South of Ashlor St, Bury (ATC);
- Princess Rd (A5103) / 100m North of Bonsall St, Hulme, Manchester (ATC);
- Washway Rd (A56) / 40m North of Hunston Rd, Sale, Trafford (ATC);
- Bury New Rd (A56) / 90m North of Kingswood Rd, Prestwich, Bury (ATC); and
- Centenary Way (A576) / 160m North of Guinness Rd, Trafford Park, Trafford (ATC)

B.21 Using these specific locations around Greater Manchester the traffic behaviours at each location type can be assessed.

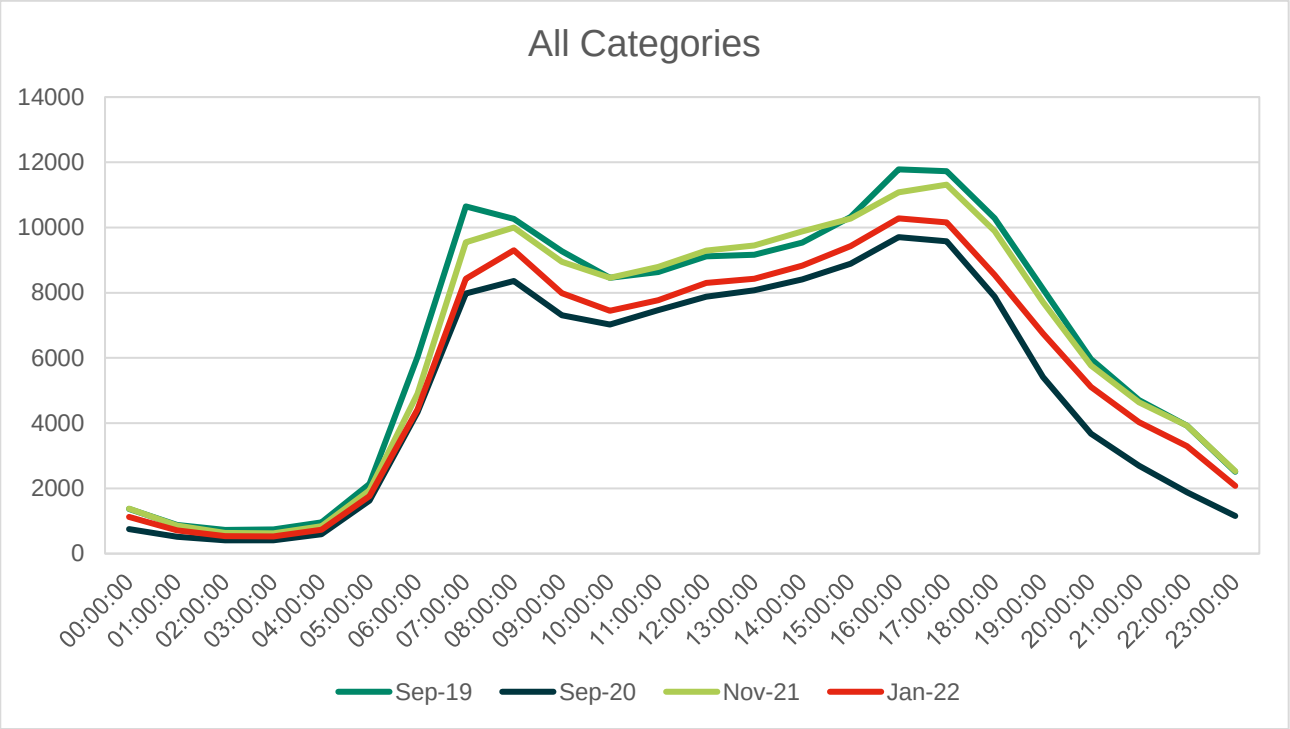
General Traffic Conditions

B.22 Averaging the sites identified above (see **Figure B-7**) suggests there has been a change in travel behaviour throughout the pandemic, noting the following key observations:

- The AM and PM peak periods have remained, although there is a dampening down effect on the peaks, with less variation between peak flows and interpeak flows, as the interpeak has continued to perform strongly.
- During late 2021, highway demand was almost back at pre-pandemic levels, there was then a noticeable drop again in demand as a result of the Omicron variant in December 2021.
- There has been some recovery during the peak periods, though they have not yet returned to pre pandemic levels.
- It is also noted that the earlier part of the AM peak is less strong than pre pandemic levels, with the AM peak now occurring 08:00 to 09:00, rather than 07:00 to 08:00 based on the sample of data sites.
- It also appears that the evening traffic (after 19:00) in 2022 is recovering at a slightly faster rate than the daytime traffic flows. This returned to pre-pandemic levels in November 2021 however, there has been a slight drop again in 2022, although it has been less impacted than other times of day. During the 2020 restrictions, the evening economy was significantly restricted by the COVID-19 restrictions in place at the time.

[41] https://tfgmc2.drakewell.com/multinodemap.asp

Figure B-7 Change in traffic flow levels by time of day (all areas)



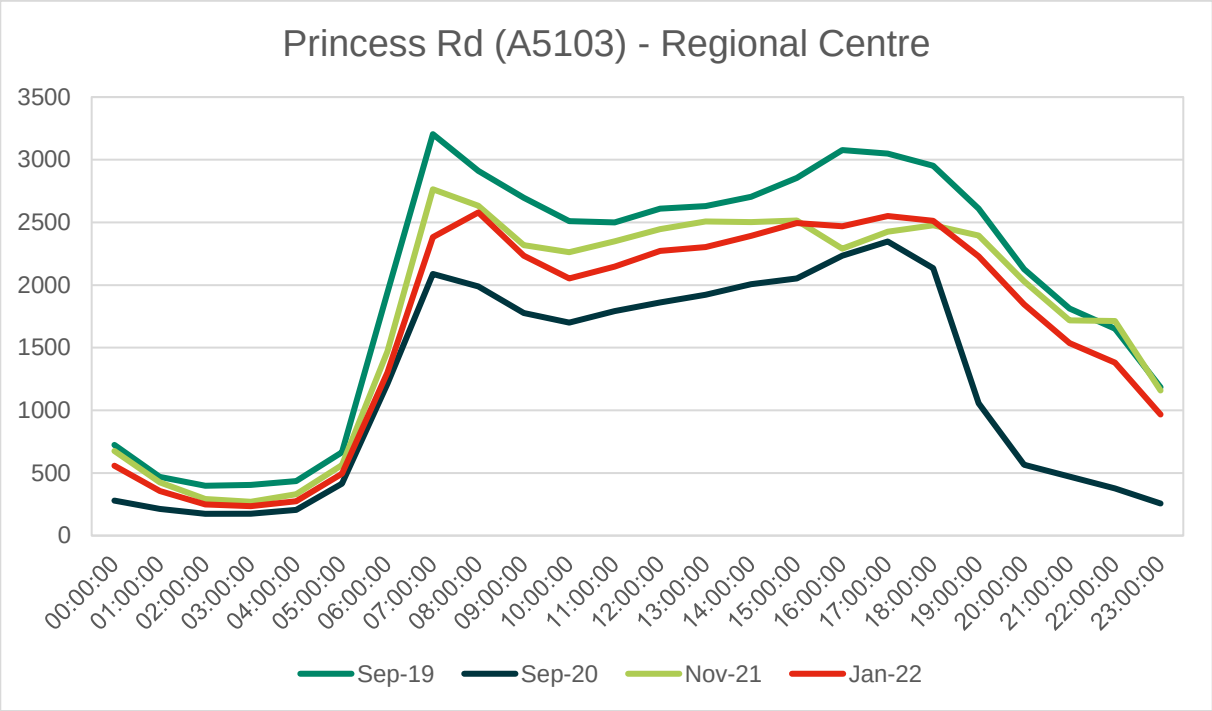
Source: TfGM C2 Database

Roads adjacent to the Regional Centre

B.23 Traffic flows adjacent to the Regional Centre have been significantly impacted throughout the pandemic (see **Figure B-8**). The following key trends have been identified:

- From the data assessed, the pandemic (and associated restrictions) appears to have had the greatest impact on regional centre flows, with the largest decrease in 2020 and the slowest recovery;
- The recovery of traffic flows in the peaks is still subdued, though traffic flows during the Omicron variant have been higher than in Autumn 2020, unlike what is seen at local centres;
- In 2020, COVID-19 restrictions had a considerable impact on demand for travel relating to the Regional Centre, with heavy restrictions placed on sectors such as leisure, tourism, and the night time economy. By November 2021, the easing of COVID restrictions resulted in a return of travel demand to the Regional Centre, showing considerable recovery at particular times of day, reaching close to 2019 levels. The 2022 travel demand to Mar-22 also showed a strong return of traffic during the evening periods, though the Omicron variant is likely to be keeping these slightly below pre-pandemic levels at present.
- The early part of the AM peak is now much weaker than prior to the pandemic, and the PM peak is less pronounced. In November 2021, traffic flows were slightly reduced from pre pandemic levels, with the PM peak most strongly impacted. In January 2022, the PM peak appears to be starting to recover, with a slightly later AM peak.

Figure B-8 Change in traffic flow levels by time of day (Regional Centre)

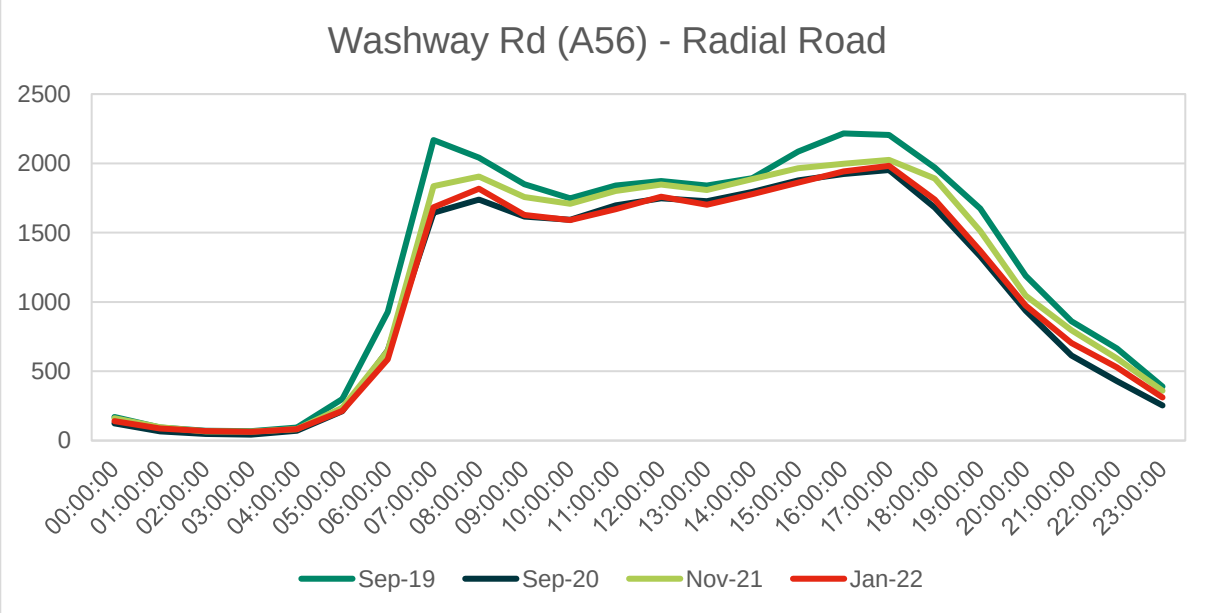


Source: TfGM C2 Database – Location N of Bonsall St, Hulme

Radial Roads

B.24 On Washway Road in Sale (see **Figure B-9**), its proximity close to the M60, and as a key radial route, has resulted in a high level of traffic demand at various points throughout the pandemic. The site is also close to the Local Centre of Sale. Demand has remained strong at the various points assessed although, as with most other locations, the peak periods are showing slightly lower demand in 2022.

Figure B-9 Change in traffic flow levels by time of day (Radial Roads Outside M60)

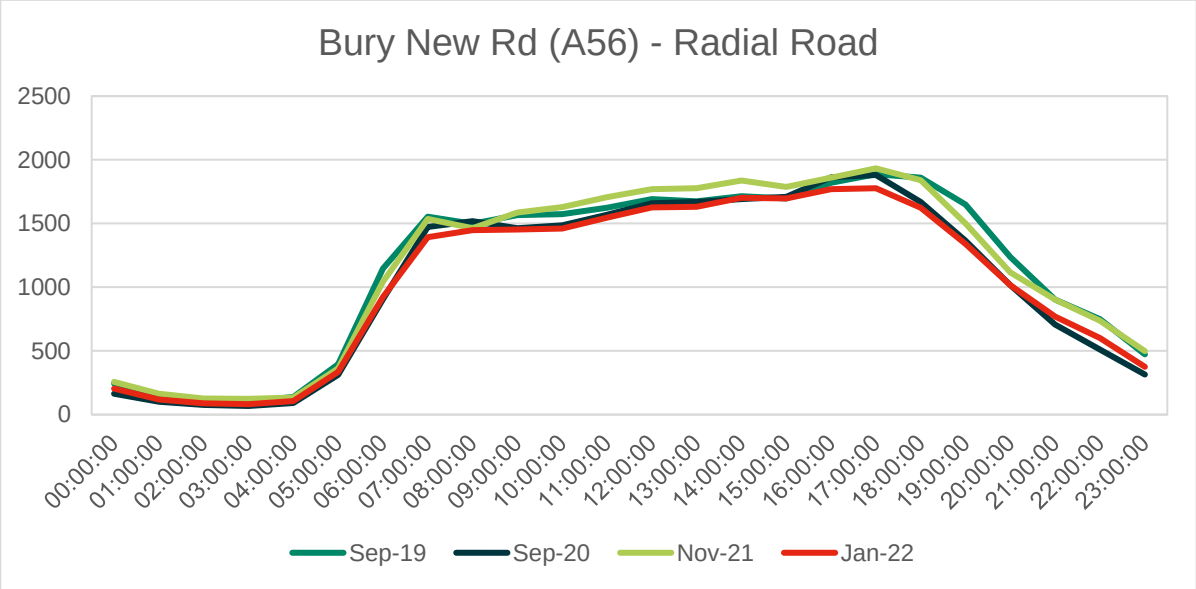


Source: TfGM C2 Database – Location adjacent to Sale Local Centre

B.25 Another key radial route north of the Regional Centre is Bury New Road (see **Figure B-10**). This site is also a key radial, though also serves local centres, such

as at Prestwich. This location has shown a strong recovery of travel behaviour with travel at certain times of day exceeding pre-pandemic levels, especially during the interpeak, both in autumn 2020, autumn 2021 and currently in 2022. The evening period has, however, shown a slower recovery.

Figure B-10 Change in traffic flow levels by time of day (Radial Roads Inside M60)



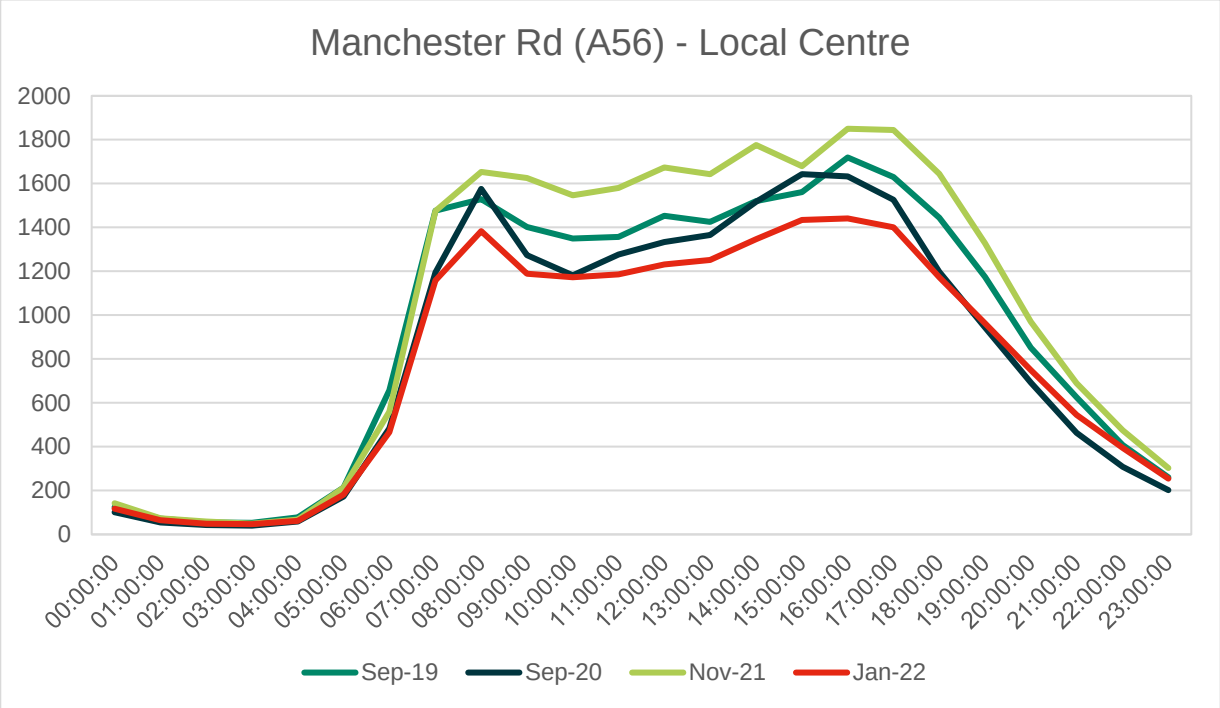
Source: TfGM C2 Database – Location N of Kingswood Rd, Prestwich (Near to M60 J17)

Local Centres

B.26 Throughout the pandemic, as the UK Government eased travel guidance, travel demand in the vicinity of local centres, have bounced back strongly. **Figure B-11**, shows the A56 Manchester Road near Bury, which experienced a strong bounce back effect in Autumn 2020, when travel restrictions were eased. **Figure B-11** shows the later part of the AM peak and the early part of the PM peak exceeding pre pandemic levels, plus a strong interpeak and was likely an impact of more localised travel.

B.27 By the end of 2021, demand had exceeded 2019 pre-pandemic levels by a clear margin, however this demand fell significantly in January 2022. The recent 2022 data shows the impacts of restrictions associated with the Omicron variant which has suppressed traffic flows once again.

Figure B-11 Change in traffic flow levels by time of day (adjacent to Local Centres)



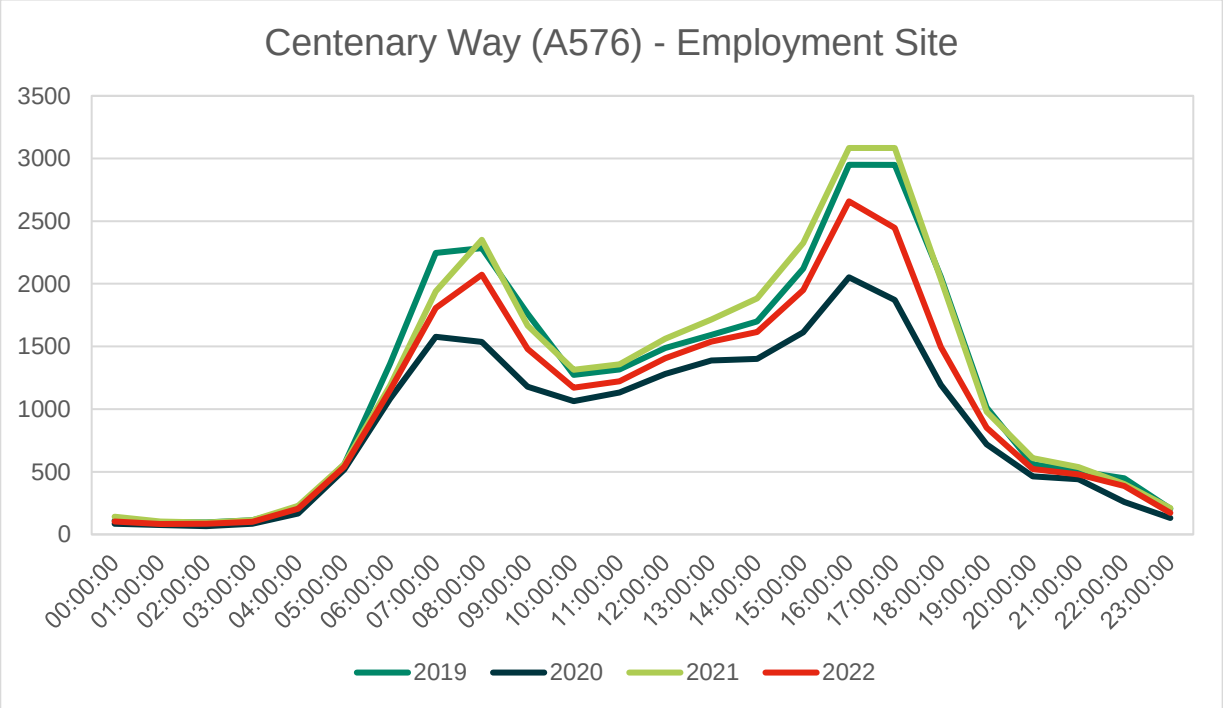
Source: TfGM C2 Database – Location S of Ashlor St, Bury

Centres of Employment (Trafford Park)

B.28 Trafford Park is a major site of employment within Greater Manchester, with traffic flows accessing this employment area changing significantly during the pandemic.

B.29 During the limited easing of travel restrictions in Autumn 2020, traffic flows to/from Trafford Park remained low, with limited return of higher peak time travel flows. This was possibly due to the higher levels of working from home at the time. The more recent data from November 2021 shows flows higher than pre-pandemic levels. January 2022, though impacted by the Omicron variant, shows a recovery of peak hour travel demand, close to pre pandemic levels, although the early part of the AM peak and the later part of the PM peak show a slightly weaker recovery. Interpeak travel is also similar to pre pandemic levels (See **Figure B-12**).

Figure B-12 Change in traffic flow levels by time of day (Centres of Employment)



Source: TfGM C2 Database – Location Trafford Park, Trafford

Summary

B.30 The review of local traffic flows at various locations across GM has shown considerable variations in changing travel behaviour by location, when compared to pre-pandemic levels. This is likely to be impacted by changing travel habits, although the recent Omicron variant is likely to be impacting some travel behaviour in the 2022 data, as shown in **Figure B7**, general traffic levels in Autumn 2021 showed overall recovery in traffic flows above pre-pandemic levels.

B.31 The change in travel behaviour by location since September 2019 is summarised in **Table B-1**.

B.32 Considering the position in November 2021, when travel patterns were least affected, it is notable that Local Centre traffic flows were higher than previously whilst the Regional Centre flows were still much reduced. For radial routes and employment centres, overall (daily) levels were back to pre-pandemic but with some variation during the day; the morning peak being less pronounced but the interpeak higher.

Table B-1 Traffic flow changes by location type from September 2019 to January 2022

Location Type	Period	Change relative to Sep-19 (Index=100)			
		Sep-19	Sep-20	Nov-21	Jan-22
Regional Centre	AM	100	67	88	81
	IP	100	73	95	88
	PM	100	41	92	85
	Eve	100	26	95	85
	Daily	100	61	88	83
Radial inside M60	AM	100	98	98	93
	IP	100	98	105	96
	PM	100	101	102	96
	Eve	100	80	94	83
	Daily	100	92	101	91
Local Centres	AM	100	103	108	90
	IP	100	96	115	88
	PM	100	94	113	86
	Eve	100	74	110	87
	Daily	100	90	111	86
Employment Centre	AM	100	69	95	86
	IP	100	83	108	94
	PM	100	61	102	79
	Eve	100	74	99	91
	Daily	100	74	102	88

Source: TfGM C2 Database

Economic Related Impacts

Introduction

B.33 Changes in the economic situation are also likely to have had an influence on travel behaviour. The section below presents the trends for a range of factors impacting the economy, several of which are likely to impact the way people travel and businesses operate.

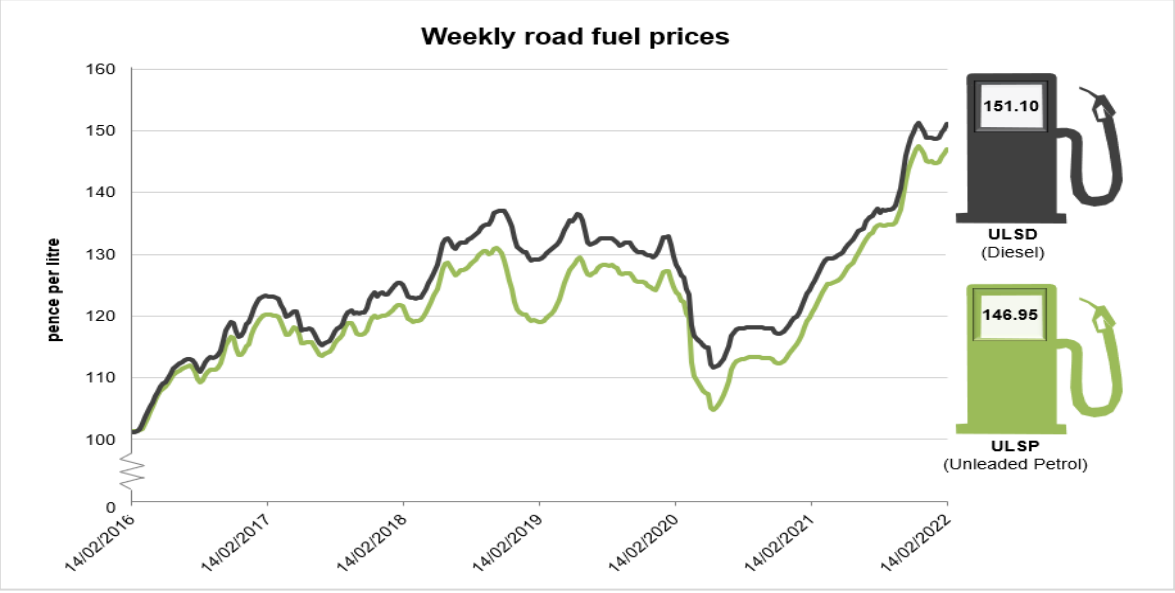
Fuel Prices

B.34 There are six companies (four oil companies and two supermarkets) that feed into the weekly fuel price survey prepared by the government. These companies cover around 65% of the market. The change in fuel price is displayed in **Figure B-13**.

B.35 The price of road fuel is volatile over shorter time periods, with prices regularly rising and falling. The key trends from during the pandemic are:

- At the start of 2020 prices appear to have been on the decline. There was then a significant fall in both Diesel and Unleaded Petrol in early 2020, corresponding with the first national lockdown.
- During the second part of 2020, prices appear to be stable, with prices beginning to rise steadily throughout 2021 in line with global oil market prices.
- There is a steep rise in prices towards the end of 2021, reaching record highs. This corresponds with a sudden rise in post-pandemic energy demand. This has triggered a tax freeze on petrol and diesel for the twelfth year in a row[42].
- In September 2021 long queues and forecourt closures were witnessed, caused by panic buying throughout the country, sparking a fuel shortage in Britain.

Figure B-13 Weekly Road Fuel Prices



Source: gov.uk

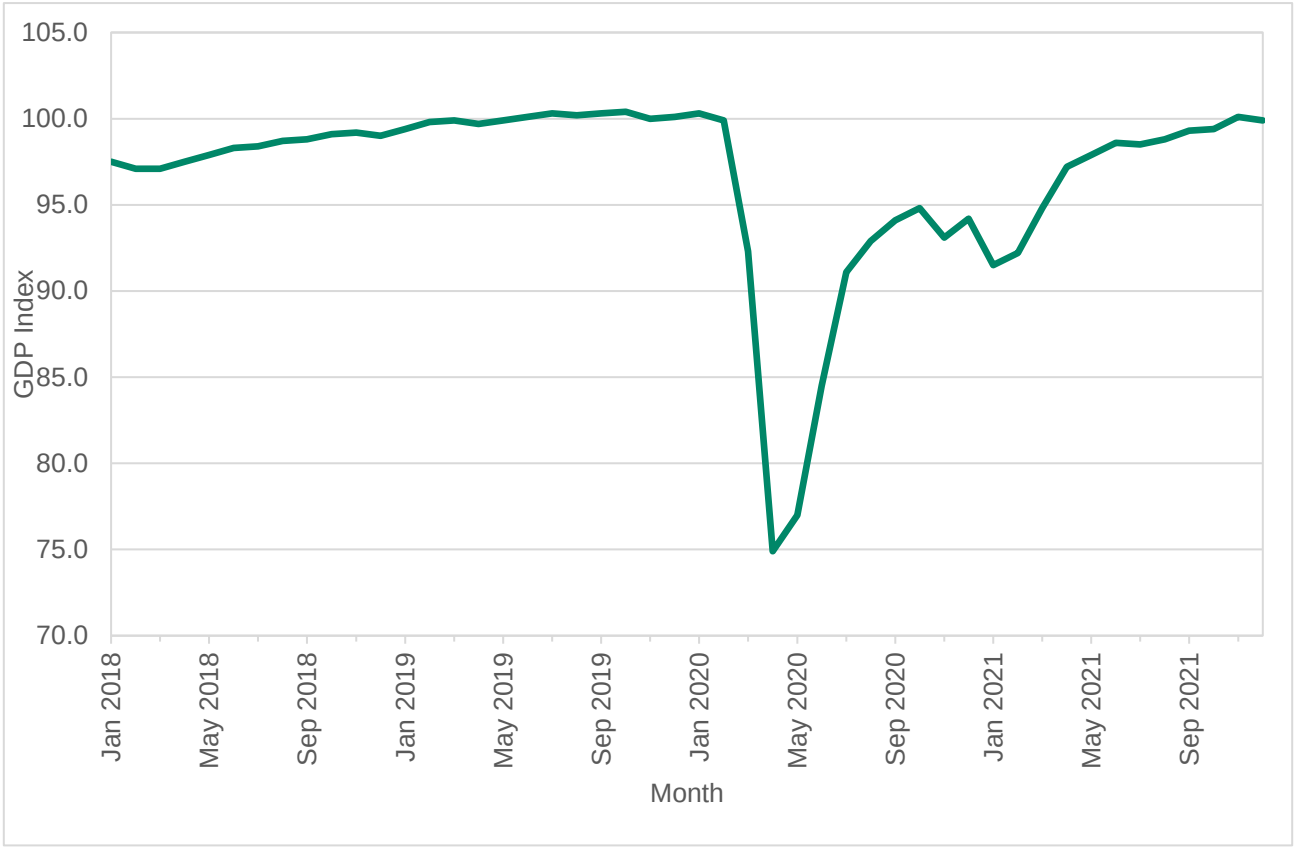
[42] https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html

B.36 It was already likely that the price of fuel would remain unsteady for some time as a consequence of the impact of the pandemic and recent events in Ukraine have brough additional uncertainty to that market.

GDP

B.37 From bulletins on the ONS data website[43] the end of 2021 saw a drop in GDP by 0.2%, to equal the pre pandemic level of February 2020. In December 2021 services and construction are both above pre-pandemic levels, while production remained below. Consumer facing services fell within December, driven by a fall in retail, 8.4% below pre-coronavirus levels, contributing to the GDP fall in December 2021 (see **Figure B-14**).

Figure B-14 GDP in the UK (Index, 2019 = 100)



Source: ons.gov.uk/economy[44]

B.38 Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021[45]. In real terms (adjusted for inflation), total and regular pay fell for the year by 0.1% and 0.8% respectively.

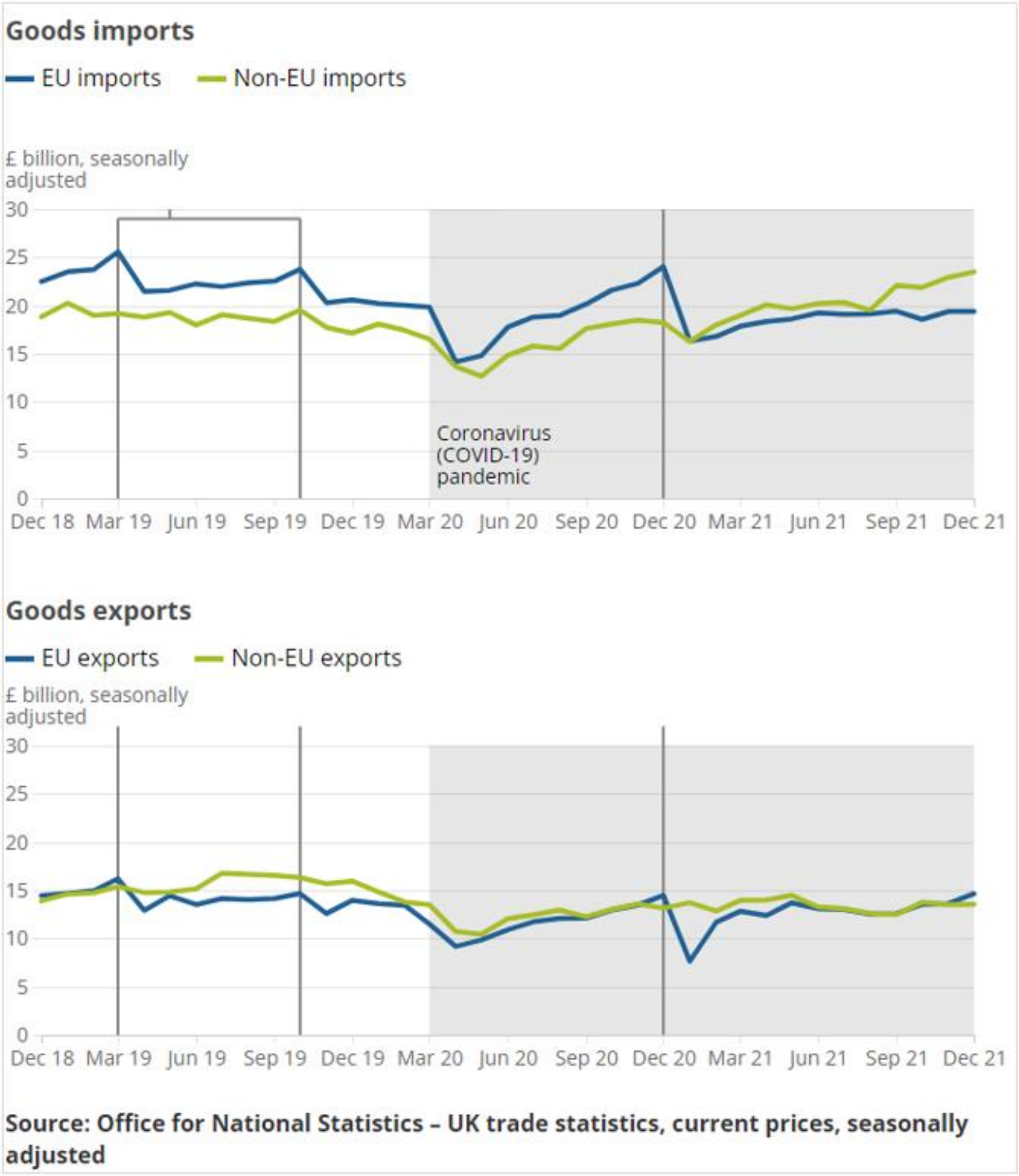
Imports and Exports

B.39 **Figure B-15** shows the trends in UK goods imports and exports throughout 2019, 2020, and 2021. After an initial decrease in imports at the beginning of the pandemic, this appears to have recovered. There was another significant decrease at the end of 2020, however imported goods are on the increase back to

[43] https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021
[44] https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021
[45] https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022

pre-pandemic levels. There was less impact on exports, with these remaining steady throughout.

Figure B-15 Import and Exports



Source: ons.gov.uk/economy[46]

Centre for Cities – Cities Outlook

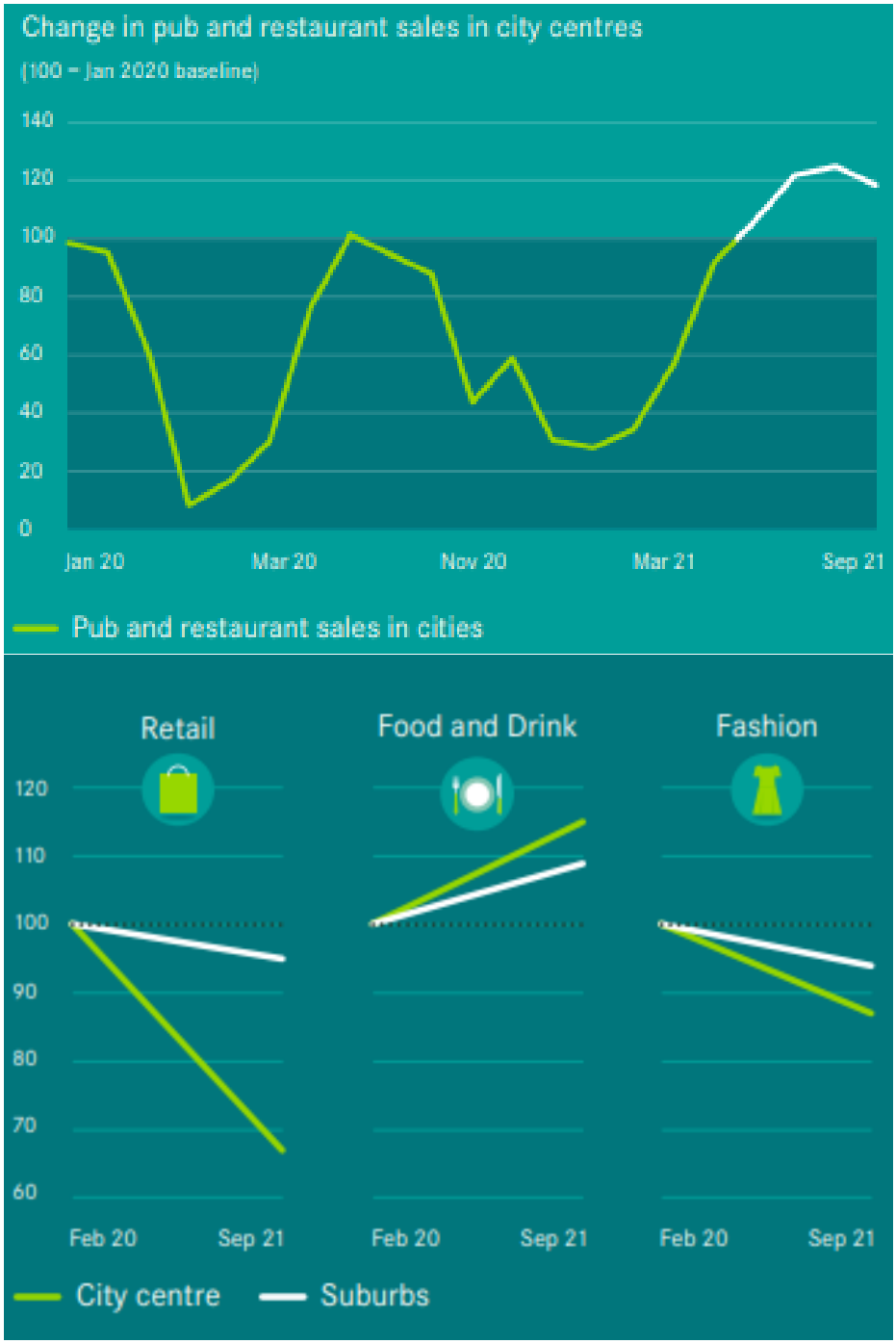
B.40 Centre for Cities produced the Cities Outlook 2022 report looking in-depth at the state of UK high streets, to get a sense of the short-term impact of the pandemic on Britain's town and city centres, and the long-term consequences and

[46] https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomylatest/2021-01-25#output

implications this has for the Government's levelling up agenda. This report showed that there was a quick and considerable shift away from high streets to online shopping during the pandemic. However, in most cities the shift stalled, or slightly fell again once shops reopened.

B.41 The Cities Outlook report also studies the impacts on pubs and restaurants, stating that the fashion sector was hit harder than pubs and restaurants. **Figure B-16** shows the trend in sales throughout 2020 and 2021. There are clear decreases in sales corresponding to the national lockdowns but in all instances, these soon recover when the sector reopens. This is also reflected in the suburbs, with retail and fashion experiencing a slight decline from Feb 2020 to September 2021 but food and drink on a steady incline.

Figure B-16 Change in pub and restaurant sales in City Centres and Suburbs

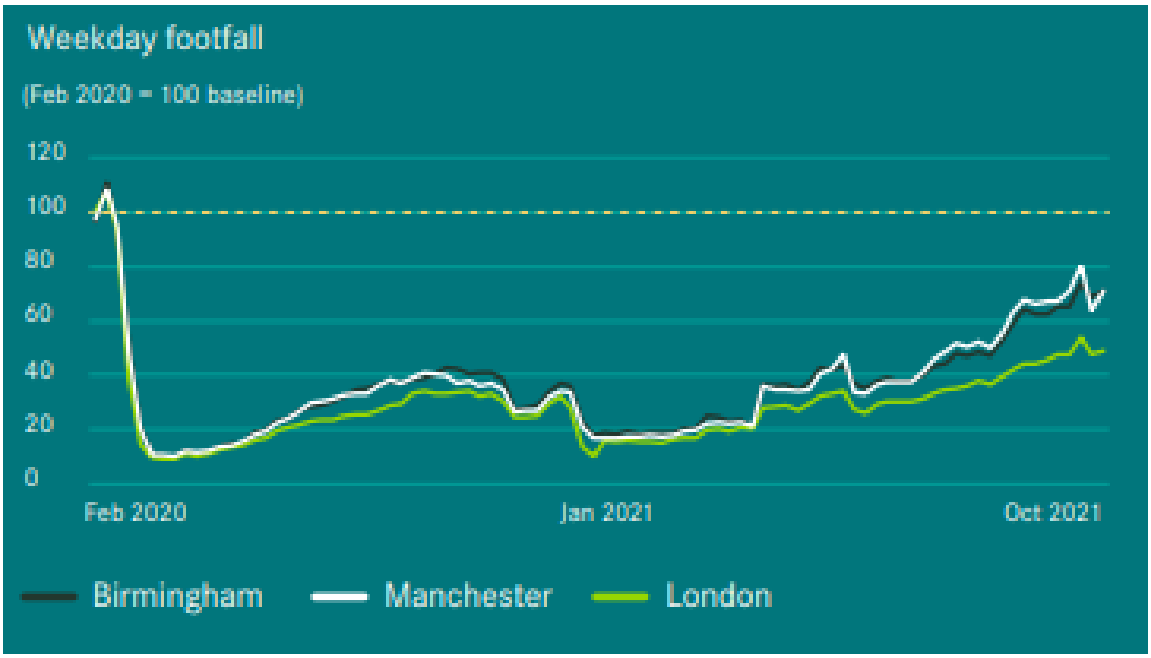


Source: ons.gov.uk/economy[47]

B.42 Due to the work from home regulations and, for many, working from home becoming a regular part of the working week, it is feared the reduced footfall in cities will have a lasting effect on retail, hospitality, and transport sectors. **Figure B-17** show the weekday footfall in London, Manchester and Birmingham. Although not yet back to pre-pandemic levels, there is a steady climb in footfall in the major cities with Manchester appearing to recover more quickly than Birmingham, and London taking considerably longer.

B.43 The more significant impact on London may be related to the impact of COVID-19 on international tourism.

Figure B-17 Weekday footfall



Source: ons.gov.uk/economy

[47] https://www.centreforcities.org/