

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

Technical Note: Current issues in the Van Sector

FINAL

January 2022

1. Introduction

Overview

- 1.1 Greater Manchester (GM) local authorities have been mandated by the Government to take quick action to reduce harmful Nitrogen Dioxide (NO₂) levels, issuing a direction under the Environment Act 1995 to undertake feasibility studies to identify measures for reducing NO₂ concentrations to within legal limit values in the “shortest possible time”. In GM, the 10 local authorities have worked together with the support of transport for Greater Manchester (TfGM) to develop a Clean Air Plan (CAP) to tackle NO₂ exceedances at the roadside, referred to as GM CAP.
- 1.2 Government has directed GM to establish a Category C Clean Air Zone within the GM CAP that targets emissions from vans/light goods vehicles, alongside other commercial vehicle classes, with non-compliant vehicles (i.e. Euro 5 or earlier diesel engine or Euro 3 or earlier petrol engine) to be subject to emissions charges from 1st June 2023. Funds have been made available to help those GM-based van owners wishing to upgrade from non-compliant vans, subject to eligibility criteria.
- 1.3 The GM CAP has been developed based upon the best evidence available at the time, and following prescribed Government guidance. 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. 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 Consultation². Research was carried out with vehicle owners potentially in scope for the scheme, including deliberative research³ and a survey with 800 van owners⁴.
- 1.4 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 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 Plan, published as the Impacts of Covid Report in June 2021⁵. This evidence, alongside feedback from the Consultation, was used to inform the revised Plan as approved by the ten GM local authorities in June/July 2021.
- 1.5 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. These were described in an updated Analytical Assurance Statement and sensitivity testing was carried out. These documents have been produced as part of the suite of materials in support of

¹ All available at [Technical Documents | Clean Air Greater Manchester \(cleanairgm.com\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf)

² [https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4 - Appendix A Behavioural Response Cost Models and Demand Sifting Tool.pdf](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf)

³ [GM CAP Deliberative Research ALL - Spring 2019.pdf \(ctfassets.net\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf)

⁴ [CCTS Listening Exercise \(ctfassets.net\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf)

⁵ [GM CAP- Impact of COVID Report \(ctfassets.net\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf)

the Final Business Case which has been prepared for submission to Government and will be published once approved at a later date.

- 1.6 At that time, GM noted that, whilst the GM CAP reflected the best approach and evidence available at the time decisions were made, it is clear that the Plan is sensitive to some of the assumptions made, and that traffic, travel and economic conditions are in a state of flux. It is vital that the proposals contained in the GM CAP remain appropriate and effective throughout the lifetime of the interventions and therefore GM is putting an adaptive planning process in place. This process ensures that GM can:
- Set out a clear process for monitoring the performance of the Plan and factors affecting the plan;
 - Review progress towards achieving compliance in the shortest possible time and minimising or mitigating disbenefits; and
 - Identify issues and make the case for change where appropriate and necessary.
- 1.7 Since the GM CAP proposals were approved in June/July 2021, it has become increasingly clear that there have been pressures on the van market affecting the availability of sufficient vehicles to meet demand. Feedback from van users and industry press suggests this is impacting on the price of used vehicles and lead times for new ones. The purpose of this technical note is to provide information about the current van sector and its ability to comply with the GM CAP.
- 1.8 The report draws a series of conclusions and makes recommendations for further work to be considered by GM and the UK government to better understand the current circumstances affecting van owners and the implications for the GM CAP and surrounding policy framework.

Structure of Note

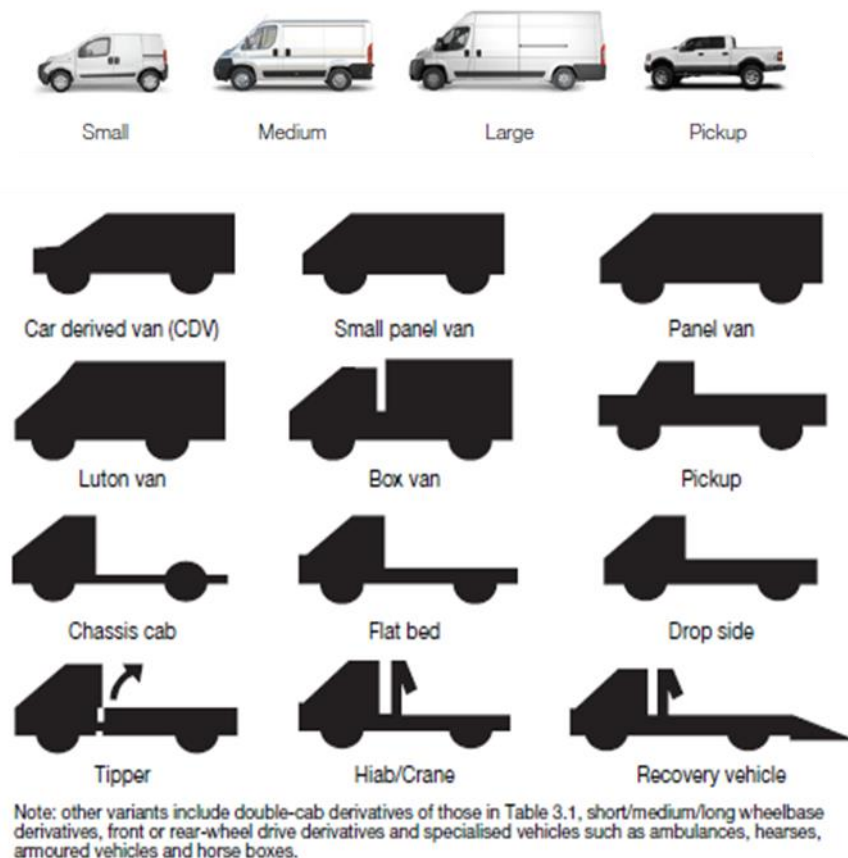
- 1.9 The remaining sections of the report are structured as follows:
- Section 2 provides an overview of the current van sector in GM;
 - Section 3 describes the national van market trends and vehicle volumes;
 - Section 4 describes issues affecting the demand for vans;
 - Section 5 describes issues 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.

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 GDP⁶.
- 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 time⁷.
- 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%).

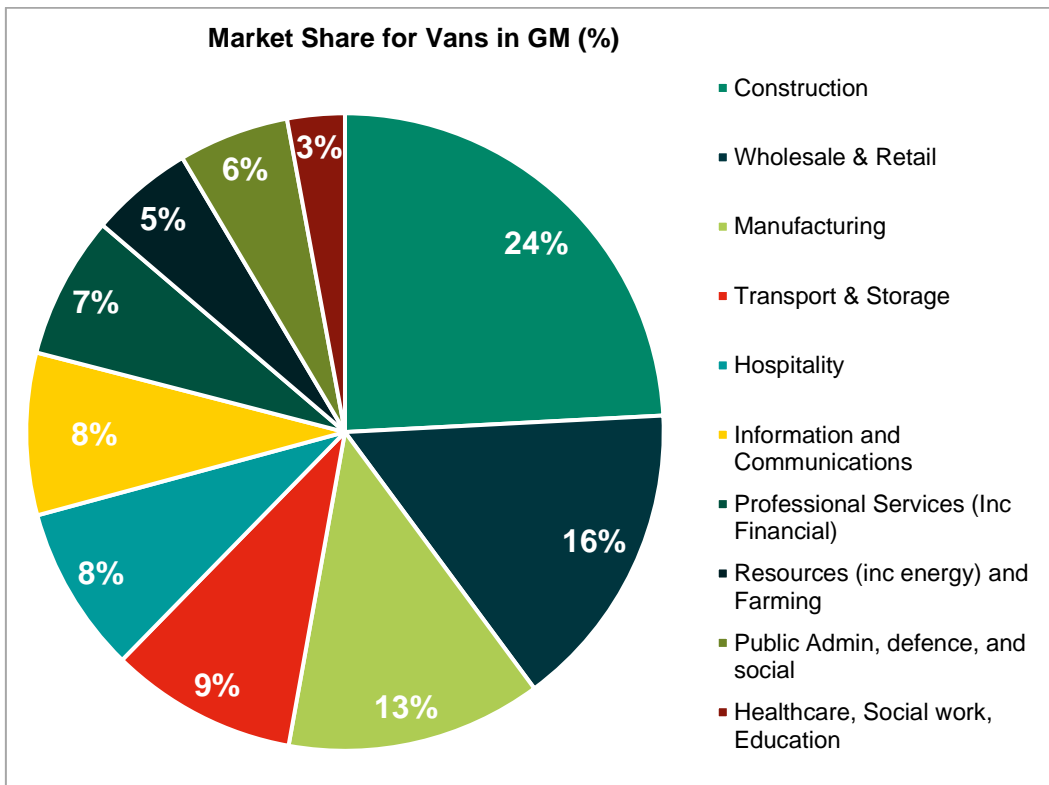
Figure 2-1 Vehicle Types Classified as a Van



⁶ Data throughout this section sourced from [Note 3 - GM CAP Analysis of the Freight Market \(ctfassets.net\)](https://www.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 for Vans in GM



- 2.5 GM carried out analysis considering how vulnerable different sectors were to the GM CAP. This was carried out before the pandemic, and then revisited based on evidence of the impact of Covid on each sector⁸. 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 2019⁹ 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 old¹⁰.
- 2.9 The largest sector; construction, makes up 24% of the GM market and includes over 21,000 vehicles affected by the 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 \(ctfassets.net\)](https://ctfassets.net)

⁹ [CCTS Listening Exercise \(ctfassets.net\)](https://ctfassets.net)

¹⁰ [CCTS Listening Exercise \(ctfassets.net\)](https://ctfassets.net)

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

Sectors	Sector Percentage	Vehicle Replacement Age	CAZ introduced in 2023	
			Non-compliant percentage	Vulnerability
Construction	24%	15	56%	Very High
Wholesale, retail & repair of motor vehicles	16%	10	34%	High
Manufacturing	13%	10	34%	High
Transport & storage	9%	10	34%	High
Accommodation & food services	8%	9	27%	Medium
Information & communication	6%	9	27%	Medium
Professional, scientific & technical activities	4%	10	34%	High
Mining, energy & water supply	4%	10	34%	High
Public admin. & defence; social security	4%	12	45%	Very High
Human health & social work activities	2%	12	45%	Very High
Other services	2%	12	45%	Very High
Financial & insurance activities	2%	9	27%	Medium
Administrative & support services	2%	12	45%	Very High
Agriculture, forestry & fishing	1%	15	56%	Very High
Real estate activities	1%	9	27%	Medium
Education	1%	10	34%	High
Royal Mail	1%	9	0%	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 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	74,147	101,437
Non-Compliant	108,456	67,535	175,991
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 Manchester¹¹ 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 76,800 by 2023. This means that around 31,600 vans would have been upgraded from a non-compliant to compliant vehicle as a result of business-as-usual purchases.
- 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 2 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 1.4k.
- 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.

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

	GM Based	Non-GM Based	Total
Compliant	58,935	86,122	145,056
Non-Compliant	76,811	55,560	132,371
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

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

response to the GM CAZ until compliance with the Government Direction has been achieved.

2.18 Of these, it is estimated that up to 59,000 may be in scope¹³ 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	129,550	236,895
Non-Compliant	28,401	12,132	40,533
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

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 Market¹⁴.

Van Ownership and Usage

- 3.6 The Department for Transport (DfT) undertook a survey of van activity in Great Britain in 2019¹⁵. 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/tlpgbv1k6h2/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

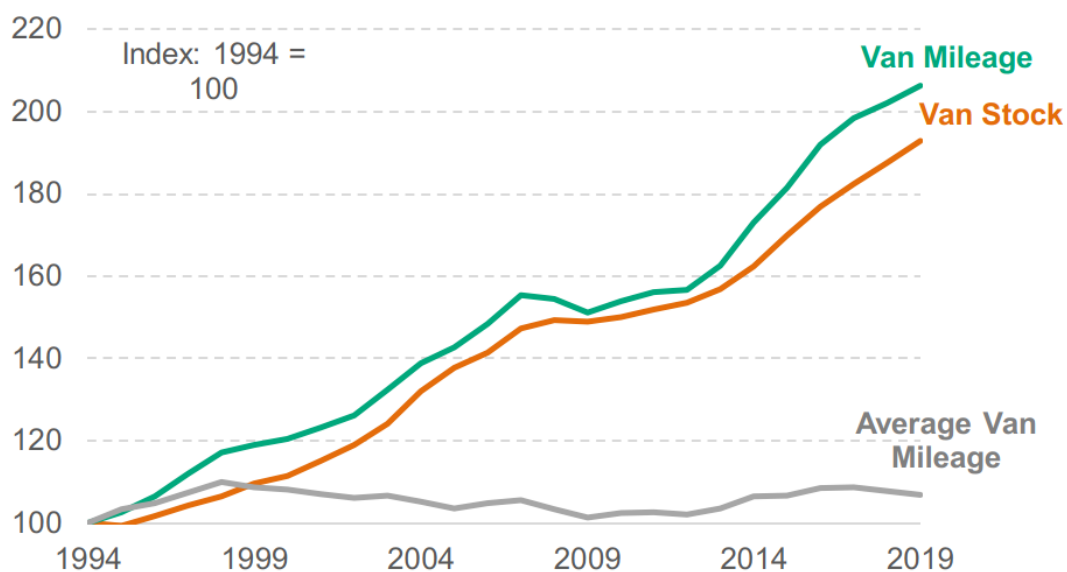
- 3.11 The British van market in 2021 has sales of 355,380 vehicles under 3.5 tonnes. The biggest growth in recent times is in the area of large vans (2.5-3.5 tonnes) which are typically used by parcel companies, food home deliveries and in the construction sector.
- 3.12 The top 10 selling models represent 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 survey¹⁶.

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 Report¹⁷ 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;
 - 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

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

- 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.
- 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 cars²¹. This may be placing additional demand pressure on the market, if operators are bringing forward vehicle replacements.

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>

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->

Clean Air Plan Initiative

- 4.12 Modelling associated with the 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.

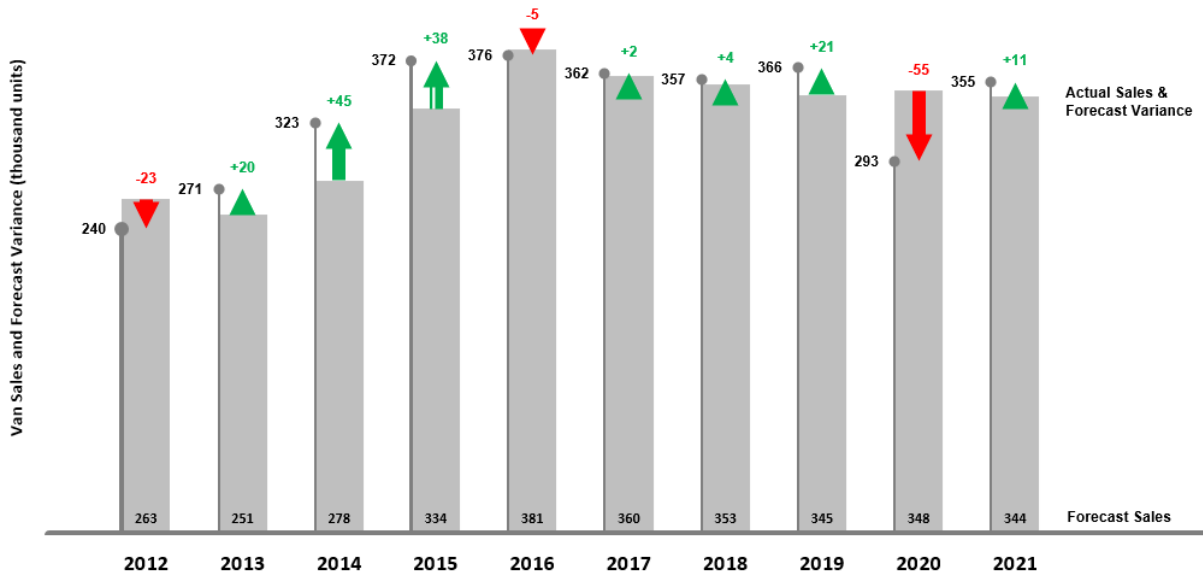
- 4.15 The SMMT historic forecast van sales estimates are useful to understand how the manufacturing base anticipates demand and enables supply. The SMMT annual forecasts have been analysed against the actual van sales to help gain insight on trend in supply versus predicted demand.
- 4.16 **Figure 4-2** 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, respectively²².

[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](https://www.smmt.co.uk/category/vehicle-data/used-car-sales-data/)

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

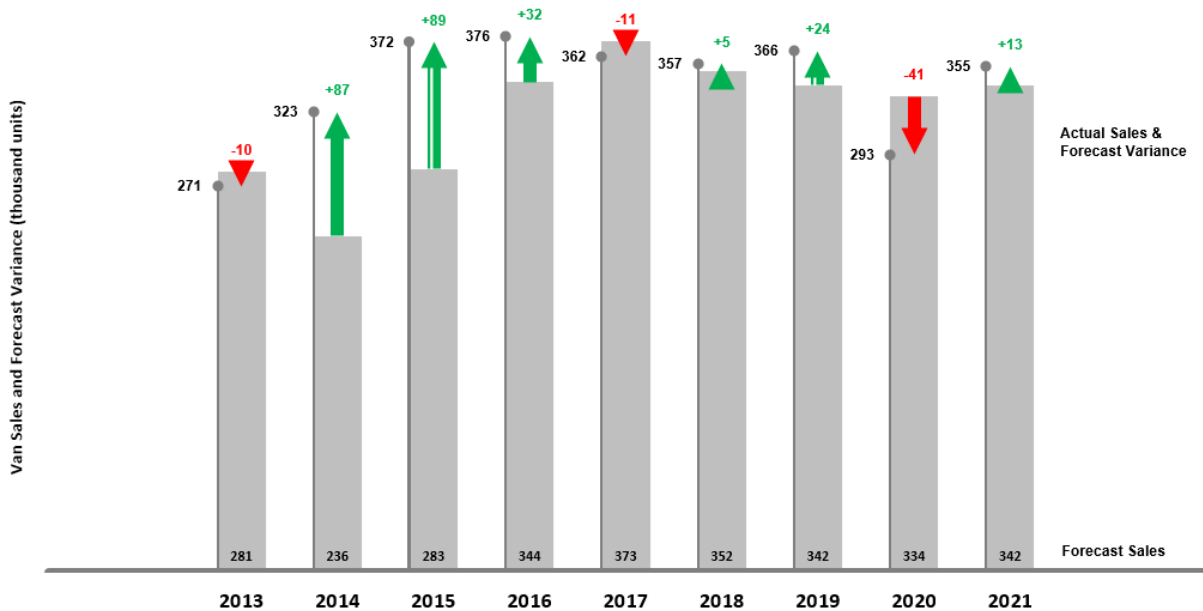
Forecast Sales for the Forthcoming Year vs Actual



Source: SMMT

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

Forecast Sales for Two Years On vs Actual



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 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.

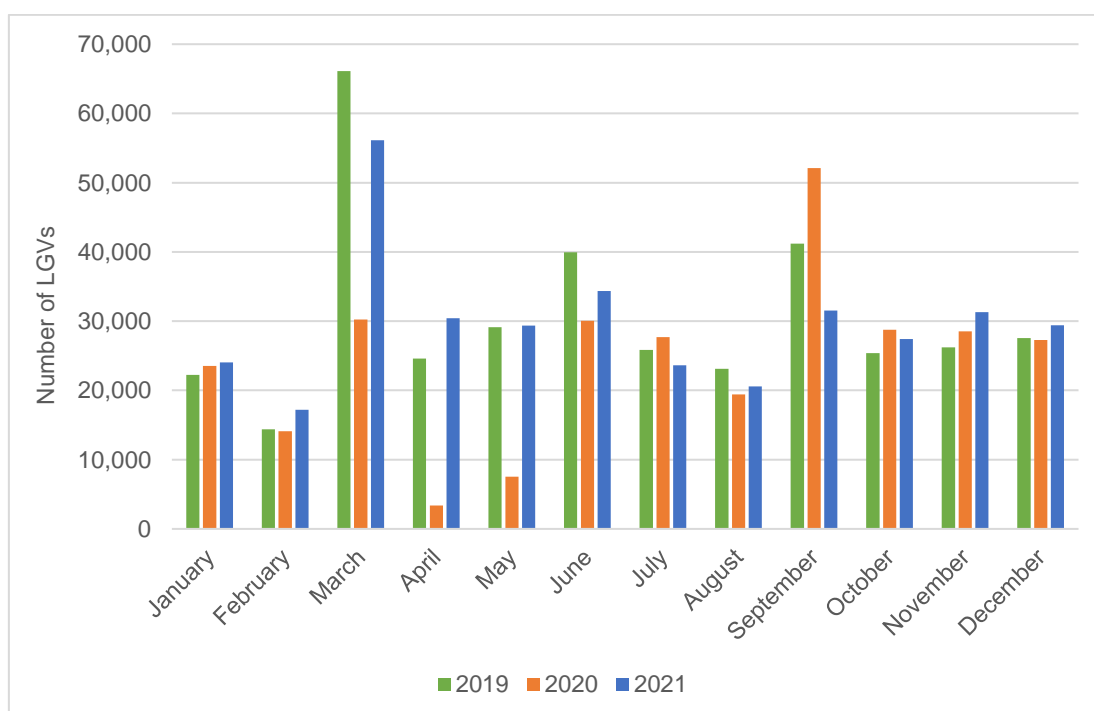
- 4.19 However, it can also be inferred that despite these constraints, manufacturing in 2021 has managed to deliver at previous levels of supply, and also owners purchasing new vehicles have been able to afford them. This indicates that there is strong and resilient demand in some sectors, at least 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 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 McKinsey²⁵ 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 ports²⁶.
- 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 2021²⁷ 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

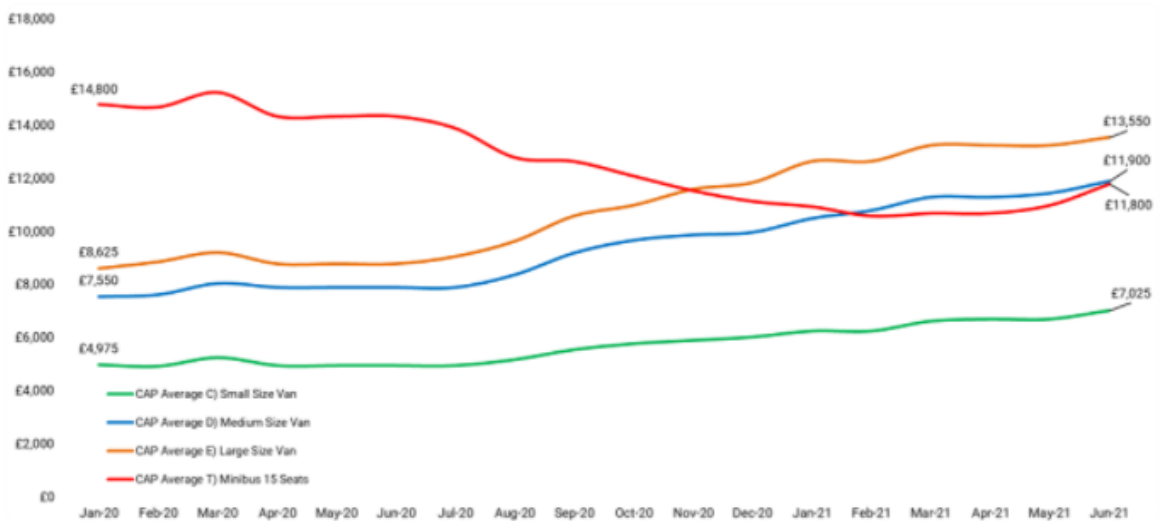
²⁹ Trading Economics Accessed 6th January 2022 <https://tradingeconomics.com/commodity/steel>

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 2021³⁰ reported significant increases in secondhand 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, 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)

Value for a typical 3year/60k vehicle 2020/2021- by sector



Soletra | cap hpi
FOR BUSINESS AUTOMOTIVE ACCOUNTS

- 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 CAZ 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 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 Plan is forecast to achieve compliance with legal limits of NO₂ concentrations by 2024, as per the Ministerial Direction, based on the proposals set out in the Policy³³ and the assumptions made at that time in terms of the age of the fleet and the cost of upgrade amongst other factors³⁴.
- 7.2 Sensitivity testing has been carried out to better understand the possible impact of uncertainty in the appraisal of the Plan. 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 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 fleets³⁵.
- 7.8 Although the evidence suggests that these adjustments are reasonable, uncertainty remained as to whether sales will 'catch up' to their pre-pandemic trajectory or indeed

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 \(ctfassets.net\)](#)

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 Plan using ANPR data and can be compared with the quarterly/annual SMMT releases to assess whether the Plan 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 Britain leaving the EU may also have had an impact but it is not possible to separately identify that.
- 8.7 The industry is reporting significant supply issues with extended lead times for new orders.
- 8.8 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.
- 8.9 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.
- 8.10 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%.
- 8.11 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

- 8.12 The latest fleet surveys were carried out pre-pandemic in 2019. Given the volatility in the commercial and private vehicle markets, ANPR surveys/analysis should be carried out as soon as possible to quantify the on-the-road vehicle fleet in GM by vehicle type, age and compliance status.
- 8.13 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.

- 8.14 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.
- 8.15 There is a lack of robust national data about vehicle prices; this needs to be addressed by Government.
- 8.16 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.
- 8.17 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.
- 8.18 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.
- 8.19 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.