

# How will impact of coronavirus shape the post lockdown transport environment?

The Covid-19 crisis has offered the best chance to reshape the transport landscape since World War II – will we seize this once in a generation opportunity? **Mark Sutcliffe** finds out



## ABOUT THE AUTHOR

**Mark Sutcliffe** has a background in automotive journalism, specialising in the corporate fleet and company car sector. More recently, he has taken a special interest in electric vehicles and sustainable mobility. He launched the

#walk1000miles initiative in 2014, authored a white paper on company car fleet uptake of electric vehicles in 2016 and writes for a number of transport and business publications.

In a little more than a month, the UK's transport landscape changed beyond all recognition.

The immediate changes are stark. After decades at the heart of a dogmatic political point-scoring contest, the railways were quietly renationalised as travel demand collapsed by as much as 95%.

After years at the centre of an equally politically-charged debate over additional capacity, Heathrow Airport was operating at 25% of its passenger capacity. It remains unclear whether it will ever return to its previous capacity – let alone require the additional capacity of a third runway.

Journeys across all modes fell to 60% of pre-lockdown levels, car factories across Europe closed and after years of explosive growth, the car leasing industry warned about a collapse in demand and residual values as redundant employees handed back the keys to their company cars.

In the short term, the risks to our pressured transport infrastructure are urgent and real. In the face of collapsing fare revenues, the battle simply to preserve what we have will require billions of pounds of Government support.

In the recovery phase, as Britain emerges from the lockdown, social distancing and strengthened public health and hygiene requirements to protect both passengers and employees will almost certainly continue to reduce both demand and capacity for months to come.

And in the longer term, questions will remain about the efficiency and sustainability

# 60%

decline in use of all modes of transport during the lockdown

of short- and long-haul business travel and the marked productivity gains and cost savings ushered in by a global boom in video conferencing.

But, despite the almost apocalyptic impact of the Covid-19 crisis, there are potential opportunities and upsides which transport planners worldwide are starting to embrace.

As transport professionals across the country move from the fire fighting and crisis management phase, to planning for the 'new normal', which are the most salient priorities likely to emerge during the post-pandemic recovery?

Is it incumbent on the transport sector to return to the status quo as quickly as possible, or should the lockdown be capitalised upon to accelerate the reset required to rapidly decarbonise transport and turbo-charge the transition to tele-working, zero emissions commuting and active travel?

## THE SHORT TERM: CRISIS MANAGEMENT AND MITIGATION

According to Government figures, at the peak of the UK lockdown, transport use across all modes declined by 60%, with rail and tube use in London falling by more than 95%. The financial impact of this decline will continue to be felt for months – if not years.

In the immediate term, the challenges for public transportation managers are likely to focus on maintaining skeleton services and mitigating the financial impact of a collapse in passenger numbers.

While private sector bus operators are receiving Government support to maintain their services, public sector tram and light rail operators have yet to receive any state financial backing.

As lockdowns ease further and travel demand increases, the emphasis is likely to shift to adapting existing provision to meet more stringent protocols for hygiene which are likely to increase costs while continuing to restrict passenger capacity.

At this stage, it is difficult to gauge the extent of any modal shift as a direct consequence of continuing health fears over Covid-19, but it seems likely a significant proportion of commuters may shun rail or bus services for other modes.

If these journeys shift into private cars, the impact on urban congestion (and air quality) could be profound. Some of these journeys may shift to active travel modes (walking and cycling) and an opportunity exists to shape these shifts by incentivising more sustainable modes of transport as lockdowns begin to be lifted.

The Department for Transport (DfT) issued temporary guidance to local authorities which, effectively, made it easier to instigate temporary road closures and reprioritise roads to encourage walking and cycling.

Dr Rachel Lee, policy and research manager for Living Streets, says: "Loosening the usual rules surrounding Traffic Regulation Orders will make it much easier and quicker for local authorities to create space for people to walk and cycle safely during lockdown.

"This pandemic is making us all realise how much public space is given over to car use rather than walking and cycling.

"Filtered neighbourhoods, banning cars from certain roads and tackling pavement parking can all help make our daily exercise easier and safer.

"Towns and cities worldwide are starting to reallocate road space to allow people to move more freely and ensure people ►►

## HOW CITIES AROUND THE WORLD ARE EMBRACING THE NEW NORMAL



**Milan** announced that 35km (22 miles) of streets will be transformed over the summer, with a rapid, experimental citywide expansion of cycling and walking space to protect residents as Covid-19 restrictions are lifted.

**Brussels** has given priority to cyclists and walkers across its central 'Pentagon' zone – encapsulated by its inner ring road – and imposed a 20kph speed limit for cars.



**Berlin** has widened its cycle lanes at the expense of roadspace for motorists to ensure cyclists can maintain safe social distancing. Car traffic is down by 40% and the new bike lanes are temporary, but many Berliners hope they are here to stay.

In the Columbian city of **Bogotá**, city authorities extended the operation of the Sunday-only 76km 'Ciclovía' network to weekdays to make commuting by bike or on foot safer.



In **Bristol**, residents spontaneously created segregated runners' lanes to ensure safe passage between pedestrians and joggers in accordance with social distancing rules.

**Brighton** City Council allocated Madeira Drive for the exclusive use of walkers and cyclists. The seafront thoroughfare will be closed to motor vehicles; Madeira Drive for its full length from the Palace Pier roundabout will be stewarded from 8am to 8pm daily so businesses have essential access to properties.



► can carry out their daily exercise at a safe distance from others and free from road danger. Now we can start to follow their lead."

Some cities – such as Milan and Bogotá – are already repurposing and redesigning large sections of their road networks to prioritise walking and cycling. If these initiatives prove successful, they offer the potential to deliver a win-win by reducing congestion and improving air quality.

### MEDIUM TERM: RECOVERY AND REBUILDING

The protracted nature of the lockdown measures introduced to fight the pandemic has prompted a re-evaluation of almost every aspect of how we live. This could break down the attitudes that underpin decisions about how, where, when and why we travel.

According to Marcus Enoch, professor in transport strategy at Loughborough University, and James Warren, senior lecturer in Engineering and Innovation at the Open University, this is a once in a lifetime chance for the Government to proactively shape how transport is delivered and used, and to support and promote the most effective transport modes.

Smart Transport chair Stephen Joseph agrees: "Travel restrictions will be relaxed once the Covid-19 pandemic dissipates, but some changes might continue and could support decarbonisation. People have learned how to work and meet remotely for one, and the Government should prioritise entrenching some of this behaviour after the crisis ends."

Regional city mayors are urging the Government not to return to 'business as usual' after the lockdown, but to embrace positive changes lockdown measures have led to – such as the drop in UK air pollution.

Andy Burnham, the mayor of Greater Manchester, and Steve Rotherham, the mayor of Liverpool city region, said building cycling and walking networks in cities and

boosting internet connections to allow more people to work from home should form part of a strategy to 'keep some of the benefits that we've been experiencing'.

"There needs to be a new normality where we improve things," says Burnham. "We ask for the public's patience because we're going to build back better. I think people do want to keep the cleaner air, they do want to keep exercising, they do want maybe to have a more flexible working life where they don't have to go into the office every day."

One of the key drivers of rapid change in the urban transport environment could be the emerging evidence of a correlation between Covid-19 mortality rates and poor air quality.

Two separate studies have linked poor air quality to higher mortality rates in patients suffering a wide spectrum of respiratory and cardio-vascular diseases.

Researchers at Martin Luther University Halle-Wittenberg in Germany linked long-term exposure to nitrogen dioxide to higher Covid-19 mortality rates, while a team from Harvard found that increased exposure to PM2.5s had a similar effect.

A causative link has not yet been proven. But, if further research establishes a clear-cut link, recent trends to restrict or ban internal combustion engine (ICE) vehicles from cities will become difficult to resist.

Ian Constance, chief executive of the Advanced Propulsion Centre believes much of the transport sector would revert to normal functioning within a year of the lockdown being lifted, but predicted that the experience of dramatically reduced air pollution during the lockdown in UK cities would accelerate the transition to cleaner automotive tech.

He says: "The demands for clean air – especially in our cities – were already increasing before the coronavirus crisis arrived and it's pretty clear that many city dwellers have seen the improvements in urban air quality during the lockdown as one of the few positives to emerge from the crisis.

"I would expect city transport planners to seize upon this and call for a quicker transition to low- and zero-emission vehicles and bring forward packages of incentives and penalties to encourage zero emissions vehicles at the expense of ICE vehicles.

"This emphasises the importance of the work we have been doing to connect universities, the research and design community, start-ups and the investment community to create a benign environment for the commercialisation of clean technologies and the establishment of industrial-scale production in the UK.

"The vast majority of the UK automotive sector is on board with the transition to clean technology and we've had backing from the highest levels of Government and some real joined up thinking across Whitehall departments – we just need to secure funding at scale to take the world class technologies developed in UK R&D labs and universities and put them into commercial production."

Professor Greg Marsden from Leeds University's Transport Studies Unit is predicting a fall in traffic levels post-Covid-19 saying: "The likely drop in traffic post the Covid-19 crisis means we should delay the road expansion programme and focus instead on rebuilding public transport and switching more vehicles to zero emissions."

In the face of huge falls in traffic volumes and air pollution, Birmingham and Leeds have postponed plans for the introduction of clean air zones (CAZs) to January 2021 at the earliest.

While the rapid improvements in urban air quality evidenced by satellite monitoring of particulates and NOx mitigates the impact of delays in the introduction of CAZs in the UK's most polluted cities, sustainable transport campaigners are

95%  
drop in London travel during height of lockdown

warning about the risks of watering down decarbonisation measures.

C40 Cities' programme director for Transportation and Urban Planning Caroline Watson said motor industry calls for Government support and plummeting oil prices risked jeopardising the transition to electric vehicles (EVs).

"As the demand for cars drops, some governments are seeking to protect their automobile industries by scrapping regulations – there could be an increase in the desire for private vehicles for both economic and safety reasons. Additionally, as the price of oil falls, electric cars will become less attractive and sales may shrink."

Bus and light rail operators are facing a double whammy of challenges in the short- and medium-term.

The Government moved swiftly to support the bus industry and quietly privatised rail operators, but light rail systems such as Manchester's Metrolink and Sheffield's Supertram network had to shoulder a catastrophic loss of revenue until the Government moved to support them.

In the capital, Transport for London is facing a funding shortfall of billions of pounds after the collapse of fares revenue threatened to force it to eat into its minimum cash balance.

During lockdown, passenger numbers in London plummeted by as much as 95% in some areas as travel demand collapsed, but post-lockdown, the principal problems will switch from the demand to the supply side.

Operators are expected to face stringent new restrictions to maintain social distancing and prevent overcrowding which could seriously reduce capacity for several more months. Furthermore, it is widely predicted masks may become a pre-

requisite for all passengers – a measure that Mayor of London Sadiq Khan pre-empted following the tragic death of 20 London transport workers from Covid-19. Wholesale adoption of mask-wearing could potentially create enforcement issues and further increase the burden of responsibility for passenger safety on drivers.

Operators are also likely to be required to follow more stringent cleaning requirements – an eventuality which Transport for Wales (TFW) was early to address.

Leyton Powell, TFW Rail Services Safety and Assurance director, says: "We are using an anti-viral cleaning product with a seven-day protection period, under-pinned by cleaning trains thoroughly at least every 24 hours, plus regular cleaning of major contact points such as tables, handles and anywhere people may regularly place their hands."

This increased burden of regulation in combination with reduced capacity and depressed demand is likely to mean many public transport systems will require increased funding to maintain service levels.

Watson of C40 Cities says: "Rescuing public transport after the pandemic will require money but also changed business models. Mass transit will need to be adapted and transformed to a post-pandemic reality. Operators will need to reassure passengers that public transport is 'safe' and not 'dirty'."

Wholesale adoption of tele-working and video conferencing could fundamentally alter the post-coronavirus commuting and business travel landscape.

While a reduction in business travel could precipitate a significant fall in demand for air and rail travel, greater enthusiasm for and acceptance of tele-working has the potential to transform the daily commute.

Leeds University's Marsden says peak-hour commuter journeys were already falling before the crisis, as people choose to work one or two days at home, or simply to come in after rush hour. ►

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IAN CONSTANCE  
ADVANCED PROPULSION CENTRE

► There are signs the lockdown could accelerate this trend dramatically, as both employers and employees embrace the greater flexibility, efficiency and productivity gains afforded by working online.

A global survey of more than 2,000 commuters across 10 cities commissioned by architects Weston Williamson + Partners indicated a 2-5% fall in commuting worldwide before the Covid-19 lockdown.

The same survey found that less than half of Londoners thought their commute represented value for money citing both the Tube and overland rail as too expensive.

Watson says: "Covid-19 has dramatically changed how we work and move around a city. Digital connectivity has been thrust forward while physical connectivity has retreated. I predict there will be less commuting as more organisations see the economic value and become more comfortable with the concept of remote working. Many business trips by rail and air will be replaced by video conferencing."

Johann Fortwengel from Kings Business School also predicts a sea change in the business community's attitude to extreme commuting and frequent business travel.

"Now that working remotely is a necessity, both employers and employees will have

to build competencies and work out how to do it effectively. Employers will see the possibility for drastic cost-cutting, so in the future, we may see significantly lower levels of business travel.

"And employees relying on Skype or Zoom calls, rather than flying around the globe to meet in person, may realise that video conferencing is a good alternative: one that is more flexible, family-friendly and more environmentally sustainable."

#### LONGER TERM: INVESTMENT TO SECURE THE FUTURE

As the lockdowns are lifted, transport systems are likely to continue to feel the strain.

Many regional transport systems were in urgent need of investment before Covid-19, but with Government borrowing set to balloon, how easy will it be for regional transport to secure the medium- and long-term investment they will clearly need?

Watson paints a gloomy picture saying: "As the economy contracts, there is a significant risk there will be less money available to maintain operations and maintenance. Transit agencies get their revenue largely from fares and sales taxes – all of which will dramatically reduce.

"It's highly likely that the consequences will be felt far longer than the virus itself with unemployment and less money circulating. Transit agencies are likely to appeal for financial assistance or aid packages from national governments. It's highly likely there will be less money overall for ongoing subsidy or capital expansion of services from the national government."

# 2-5%

fall in commuting worldwide

Urban Transport Group director Jonathan Bray says: "We need Government to provide funding to transport authorities to make good the lost income and increased expenditure which has resulted from measures transport authorities have taken to support the national response to tackling Covid-19.

"Wherever practicable, Government should route funding to maintain and support city region public transport provision via city region transport authorities so decisions about how best to fund those networks can be taken in a holistic way and in light of local circumstances, rather than funding being directed mode by mode, on the basis of national formula which is insensitive to local circumstances and conditions."

Bray says access to strategic funding would be critical: "Although there is a considerable cost associated with dealing with the coronavirus crisis itself, we will also need to continue to invest in urban transport to meet wider goals for inclusive economies, carbon reduction, the levelling up agenda and improving air quality. The cost of dealing with this immediate crisis should not mean sacrificing our ability to invest and support the transport policies, programmes and projects which remain essential to addressing these objectives.

"The Government should urgently review in a coordinated way the conditions and deadlines attached to the many different funding streams (including those that are competition-based) that transport authorities are currently subject to.

"This is with a view to relaxing those conditions in order to allow authorities access to direct funding where it will have the most impact in addressing the immediate impact as well as the recovery from, and legacy of, Covid-19." **ST**

