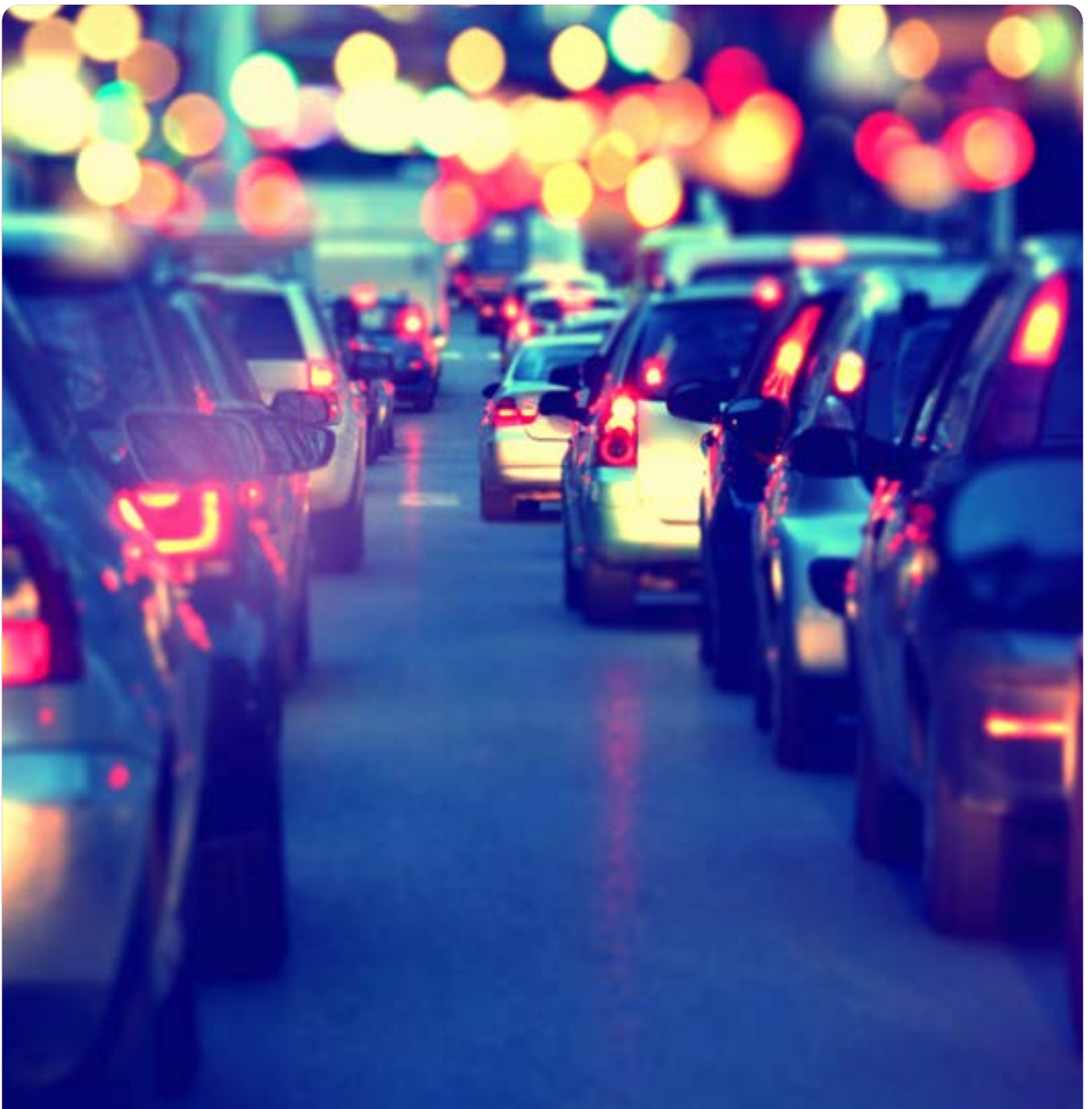


A country in a jam: tackling congestion in our towns and cities

How councils are dealing with congestion and how they could do more



Foreword

For many, traffic is an inconvenience, though some might also describe it as a consequence of economic success. Indeed, it's a sign that a lot of people have jobs to go to. However, if left unchecked it can have a significant impact on our towns, cities and communities, and act as a drag on local growth.

The Department for Transport (DfT) predicts up to 55 per cent growth in traffic levels by 2040. However, levels of congestion are predicted to rise – up to 85 per cent worse in the same period¹.

If traffic isn't managed effectively, congestion on our streets can lead to stalled growth and productivity, and worse still, toxic air and reduced quality of life. The cost will continue to rise if we do nothing. It is estimated that congestion will cost the economy £307 billion between 2013 to 2030². Delays on our strategic roads equate to 4.9 days wasted per person each year.

The environmental impact comes from vehicles in a traffic jam emitting four times as much pollution into the atmosphere as free flowing traffic³ which in turn contributes towards the estimated 40,000 premature deaths a year from air pollution⁴. These impacts are avoidable, and we all – local authorities, central government, individuals and businesses – can help.

Over the last year we have seen plenty of media interest in congestion on our roads. It was revealed that traffic in central London at times moves slower than a horse and cart.⁵

Councils, as local traffic authorities, have a statutory duty to manage their networks with the aim of 'securing the expeditious movement of traffic' and are already leading the way with innovative approaches to tackling congestion and curbing the predicted levels of traffic growth. We have detailed some of the best things councils are doing in this report but it is clear from the statistics that we need to do much more. Unfortunately councils are constrained by a lack of resources and a lack of powers to act.

1 English regional plus Welsh traffic growth and speeds forecasts: scenario 5.
Congestion as measured by average delay sec/mile

2 www.fairfueluk.com/publications/roads.html#13/z

3 Environmental Factors in Intelligent Transport Systems, IEE Proceedings, M.C. Bell 2006

4 www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution

5 www.standard.co.uk/news/london/london-traffic-means-buses-are-slower-than-a-horse-and-cart-a3370316.html

Councils use existing measures to the best of their ability and how local circumstances dictate. However, they need greater powers to introduce proven measures that will help us curb further congestion. We cannot solve the problem with just punitive measures. We need positive, practical and attractive alternatives to car journeys with public transport, walking and cycling playing an important role.

Some journeys will always need to be done by car but our goal should be to shift journeys to other means, such as onto public transport, or off the roads entirely. This will help those that need to use the roads as well as those that have to live with the consequences of congestion.

This report is being presented at the same time as the Government has started drafting legislation on transitioning towards electric and autonomous vehicles. It is not clear how this will impact the transport networks of the future. Different outcomes are possible – road capacity could increase as smart technology could make better use of existing capacity, or it is also conceivable that a reduction in the cost of travel could make car travel so cheap people do far more whilst undermining the viability of public or other forms of transport. What is clear is that we have a pressing problem on our roads now, which require more immediate solutions.

The new Government has shown that it remains committed to a forward-looking industrial strategy with growth across the country being one of the key pillars of success. Devolution deals to date have shown councils' appetite for managing transport demand. We need the Government to work with all councils in order to make sure the examples we have highlighted in this report become the norm across the country and the predicted economic and human costs of congestion are avoided. The recent announcement of the Transport Investment Strategy with the prospect of the National Roads Fund being available for improving the capacity of economically vital local roads shows that the Government are listening and recognise the interdependency of the national and local roads network. The Local Government Association (LGA) will continue to push for other reforms recommended in this report.

Finally, I'd like to thank the councils that shared their congestion busting innovations with us – I hope that councils all around the country find the case studies of value.



Councillor Martin Tett

Chairman, LGA Environment, Economy, Housing and Transport Board

Contents

Introduction	6
Workplace parking levy	8
Nottingham's workplace parking levy scheme	8
Promoting bus travel	9
Bus prioritisation, Brighton	9
Reading buses	9
Big data	10
Total Transport, Northamptonshire	10
Smart cities, Oxfordshire	12
Mobility as a service, Transport for West Midlands	12
Active travel	14
Bristol's approach	14
Funding certainty, Transport for Greater Manchester	15
Roadworks innovation	16
Connected roadworks, Staffordshire	16
Managing roadworks through lane rental, Kent	17
How councils could do more	19

Executive summary

This report identifies congestion as a serious problem for economic development, quality of life and public health. It also identifies the steps that innovative councils have taken to reduce congestion and its impacts. We have highlighted nine different innovative policies as well as case studies where they have been implemented. These include:

- the introduction of a workplace parking levy by Nottingham City council, which has led to reductions in peak hour journey time
- bus prioritisation in Brighton and Reading, which has led to both authorities bucking the national trend in the decline of bus passengers
- mobility as a service in the West Midlands, which has the potential to transform the way transport networks work, making them far more efficient
- Bristol's investment in cycling, which has led to a doubling of the number of people cycling in a decade
- the long term funding certainty secured by transport for Greater Manchester, allowing them to secure £3 billion for locally targeted measures
- Oxfordshire's use of big data to crowd-source traffic patterns and help people tailor their route to avoid congestion
- Kent's introduction of a lane rental scheme which has reduced the average length of major works on key routes by a day
- Staffordshire's roadwork collaboration project which has seen councils and utilities work together, delivering £4.6 million benefit to the area in reduced congestion
- Northamptonshire's total transport analysis which shows that 99 per cent of the one million journeys a month made by those using or working for public services could be combined.

In order for these examples of best practice to become more widespread we have compiled further steps that the Government could take to work with councils to ensure that the traffic growth is both better managed, congestion is reduced and our air quality problems are tackled. These include:

- long term funding certainty for local authorities such as that enjoyed by Highways England and Network Rail
- flexibility from Highways England on using its resources on the local network to improve the strategic network
- an end to competitive bidding for local transport funds, with complete discretion given to authorities to make the best decision based on local need
- the resources and powers necessary to improve air quality
- spreading the lessons of the Total Transport pilot project
- full implementation of the Bus Services Act 2017 ensuring all authorities can access the new powers if they wish to make use of them
- all authorities should be given access to lane rental powers if they wish to make use of them
- a clear statement that the Government will allow more authorities to make use of a workplace parking levy should they wish to consider one
- immediate and full implementation of Part 6 of the Traffic Management Act 2004, allowing civil enforcement of moving traffic offences, such as banned turns and blocking of yellow box junctions.

Introduction

Congestion and its cost

Congestion is repeatedly cited as a key concern by the public. The DfT is forecasting up to 55 per cent increase in traffic by 2040 and up to 85 per cent in congestion levels. The British Social Attitudes Survey has revealed that concern about congestion has risen significantly. The percentage of people seeing congestion in towns and cities as a serious or very serious problem rose from a low of 39 per cent in 2012 to 55 per cent in the latest survey.

Since the publication of 'Every breath we take' last year by the Royal College of Physicians, which linked air pollution to 40,000 deaths a year, there has been an increased focus on the dangers of congestion. A great deal of media attention has focused on the health cost of air pollution, in particular nitrogen dioxide from diesel engines. The Government acknowledges that air pollution is now one of the most serious public health issues facing the UK and their own figures confirm that 80 per cent of emissions come from transport in areas that breach EU legal limits.

The Secretary of State for Transport, Chris Grayling MP, has repeatedly signaled his desire to tackle congestion. In October, whilst setting out his departments priorities he said "On the roads our focus should be congestion busting for both the public and business users". In November in a speech to the County Council Network he stated that "in some cases, devolution will be part of the solution" to congestion.

As well as the obvious inconvenience and sometimes distress caused by congestion, there is a serious cost to industry from delays, especially to those that rely on just-in-time deliveries. There are also financial and health costs to individuals and negative impacts on public transport, which can further lead to increased traffic and congestion.

Inrix estimates that congestion costs the UK economy £30.8 billion a year. This works out at an average cost per driver of £968 a year, which includes direct costs like wasted time and fuel and indirect costs to businesses, such as increased prices through delays in production.⁶

By 2030 the cumulative cost of congestion will exceed £300 billion. Clearly traffic growth has the potential to inhibit economic growth and stall productivity improvements if not managed effectively.

Congestion also has an impact on public transport viability. Research by Greener Journeys found that congestion slows both bus journey times and reliability. In order to counteract this bus companies are forced to put on more vehicles to maintain service levels. This increases costs but there is also a direct correlation between operating speeds and usage: a 10 per cent decrease in speeds reduces bus use by at least 10 per cent⁷. This double effect can seriously impact on the viability of bus routes. The withdrawal of a service forces more people into cars which further exacerbates the problem.

⁶ <http://inrix.com/press-releases/traffic-congestion-cost-uk-motorists-more-than-30-billion-in-2016/>

⁷ www.greenerjourneys.com/wp-content/uploads/2016/06/Prof-David-Begg-The-Impact-of-Congestion-on-Bus-Passengers-Digital-FINAL.pdf p.7

Congestion also has a significant environmental impact. It increases the amount of time cars are producing harmful emissions and the stop-start nature of congested roads is the most inefficient way of running an engine. In a traffic jam vehicle emissions are four times the level they are in free flowing traffic. Road transport is responsible for some 80 per cent of nitrogen oxides (NOx) concentrations at roadside, with diesel vehicles the largest source. In areas where NOx breaches legal limits transport is the biggest contributor. NOx limits are set by the EU as exposure to high concentrations leads to respiratory conditions and has been linked to increasing the rate of heart disease and strokes.

Air pollution is linked to 40,000 early deaths a year. The Royal College of Physicians estimate that 340,000 lost years of life are attributable to air pollution. Air pollution also costs the UK economy up to £16 billion a year⁸, with £2.7 billion of this loss through lost productivity.

The World Health Organisation sets air quality guidelines and the EU sets limits for citizens' exposure. However there is no safe amount of exposure to air pollutants. Any reduction will improve health outcomes. Given the scale of the problem and the amount of contribution traffic congestion makes, it is imperative that we act to reduce congestion.

Relatively simple changes could make a large difference as TomTom Traffic Vice President, Ralph-Peter Schaefer, said: "If only five per cent of us changed our travel plans, we could improve traffic congestion on our main roads by up to 30 per cent." Therefore the LGA has focused on how the further roll out of existing powers and relatively small scale interventions could improve the situation.

Councils, as local traffic authorities, have a statutory duty to manage their networks with the aim of 'securing the expeditious movement of traffic'. The examples in this

report illustrate the range of initiatives and innovations councils around the country are exploring to deal with both congestion and long-term traffic growth. Measures include managing peak time traffic, bus prioritisation and making buses more attractive, investing in cycling, smarter investment in infrastructure, use of real-time data, managing roadworks and better public sector transport planning.

The Government is currently drafting legislation on transitioning towards electric and autonomous vehicles. It is not clear how this will impact the transport networks of the future. It is conceivable that a future of connected and autonomous vehicles would be able to smartly manage their routes, adjusting in real time to make the best use of road capacity. It is also conceivable that the reduction in the cost of travel could make travel so cheap that people do far more whilst undermining the viability of public transport. This could result in our existing road capacity being overwhelmed regardless of how well journeys are coordinated. Following this report, the LGA will be working on how councils are responding to changes to changing travel patterns driven by technological progress, including connected and autonomous vehicles.

Whilst there are many possibilities this report makes no predictions on how traffic patterns will evolve as technology develops. What is clear is that we have a pressing problem on our roads today. We need immediate solutions to tackle the issues our transport networks face right now, that can be implemented quickly and simply.

The following pages highlight good practice from innovative councils in tackling congestion and its harmful impacts.

⁸ https://ukair.defra.gov.uk/assets/documents/reports/cat19/1511251135_140610_Valuing_the_impacts_of_air_quality_on_productivity_Final_Report_3_0.pdf

Workplace parking levy

The workplace parking levy was introduced as part of the Transport Act 2000. It allows transport authorities to impose a charge for every parking space provided by an employer. The revenue raised must be spent on things that support the local transport plan. Local authorities are able to bring forward proposals for schemes but the Government has stated that they must demonstrate they have consulted local businesses and addressed their concerns. Although local authorities are responsible for bringing forward schemes it is for the Secretary of State to approve them.

Nottingham's workplace parking levy scheme

Nottingham indicated that they intended to access these powers in 2007. They consulted widely across the city and held a five day public examination to assess the plans. The DfT approved the scheme in 2009 and agreed that the scheme could become operational in 2012.

Nottingham implemented the scheme for employers with more than 11 parking spaces. They set the charge initially at £288 per space per year. Employers are allowed to pass the charge onto employees who use the spaces and about 53 per cent of the spaces covered currently do so. There was an immediate impact as employers sought to reduce their liability, with eligible parking places decreasing by 17.5 per cent in the run up to implementation. The charge is reviewed annually and increases at the rate of inflation.

The charge raised £9.3 million in 2015/16 which has been invested in a major set of improvements to Nottingham's public transport, including the second phase of the city's tram network. The tram improvements led to an immediate £100 million boost into the local economy as well as further long term benefits. Public transport patronage in Nottingham is increasing as a share of total journeys, accounting for over 40 per cent of journeys taken in Nottingham. Unlike the rest of England's core cities, the number of car miles is in decline. Between July 2014 and July 2015, after major works to improve the tram network were complete, Nottingham was the only core city in England to observe a reduction in journey time per vehicle mile on locally managed A roads in the morning rush hour.

There has also been no evidence of an adverse economic impact as a result of the changes. Nottingham has experienced a growth in the commercial property market as well as significant jobs growth throughout the period that the charge has been in effect. The workplace parking levy has proved an efficient way to encourage people to leave their car at home and use Nottingham's public transport, reducing journey times for those who have to use the roads.

Promoting bus travel

Buses are the most common form of public transport in the UK. They do 4.4 billion journeys a year. Buses have a key role in reducing congestion. Every full bus can take up to 75 cars off the road. This means that less road space is used up and congestion is relieved. However buses are also uniquely susceptible to the negative effects of congestion.

Research by Greener Journeys found that for every 10 per cent increase in congestion bus journeys decrease by 10 per cent. Congestion makes buses slower and less predictable and consequently less attractive. In order to compensate bus companies have to put extra buses on congested routes which adds to their cost base, forcing up fares. All this means that more journeys will be made by car which leads to greater congestion and therefore a vicious circle of decline.

There are steps that local authorities can take to address this decline and whilst nationally the number of bus journeys is in long term decline outside of London there are examples of good practice which demonstrate what can be achieved to increase bus use.

Bus prioritisation, Brighton

Brighton has been at the forefront of bus prioritisation for many years. The city has an extensive network of bus lanes. There are 20km of bus lanes and 3000 buses a day use their city centre bus lanes, which were launched in the mid-1990s. The council has had the ability to enforce them through CCTV and fixed penalty notices since 2005.

Brighton have identified key corridors in and out of the city in order to maximise how

attractive bus travel is to passengers. They have also identified real time passenger information as a key driver to increasing bus use. Information on when a bus will arrive and how long it will take is key to allowing people to make informed choices about travel as well as allowing the council to monitor performance.

Brighton has also agreed a bus partnership with all the big operators within the city. They have identified five critical factors for their success.

- prioritising road space for buses
- improved passenger waiting areas
- real time information displays
- ITS – Intelligent Transport System
- bus lane and traffic regulation enforcement.

Reading buses

Reading Council has been supportive of buses for a number of years. As a result, Reading now has more bus lanes per mile of road than anywhere else in the UK.

Reading buses have prioritised customer service and investment in new technologies in order to increase use. Buses offer free wifi, on board charging for mobile devices, smart ticketing, real time rail information for buses that link with the rail network, audio and visual displays and GOS tracking for real time information.

Bus use in Reading has increased since 2010 against a back drop of national decline. Few places have similarly bucked the long term trend of decline in bus use.

Big data

The use of data has the potential to revolutionise our understanding of congestion and also provides new ways to prevent it. It is difficult to predict the ways in which big data, machine learning and/or artificial intelligence may help us solve traffic problems. It is clear that they have the potential to completely reshape our transport patterns.

Transport systems are vital to ensuring society functions effectively. However, they are large and hugely complex and therefore are unlikely to fundamentally change overnight. Change will come in fits and starts and there will be a period of transition as we move from a traditional transport network to whatever comes next. Councils have a vital role in managing this transition and ensuring that the current network runs as efficiently as possible.

Councils are already at the forefront of using data to maximise the efficiency of transport systems and finding new ways to tackle traffic jams.

Total Transport, Northamptonshire

Based on ideas generated by local government, the Government launched the Total Transport initiative in 2015. A key aim of the initiative is to explore the feasibility and benefits of pooling public money that is spent on transport in a locality and spend it jointly, rather than different parts of the public sector securing their own transport needs. Around £2 billion is spent on procuring transport by the public sector but it is split across a number of departments. The principle is that joint procurement can lead to fewer journeys, better coordination and less expenditure on transport by public services. The pilot programme has made £4 million available to local authorities to investigate ways which they could combine transport budgets across the public sector.

Incentivised by a need to respond to financial pressures and achieve greater operational efficiencies, Northamptonshire have pushed the boundaries that this opportunity offered. The initial desktop exercise revealed tremendous opportunities for enhanced service provision at lower cost as well as making journeys more efficient.

The University of Northampton was commissioned to lead on the process of data collection and analysis.

For the first time extensive travel data from the County Council, University of Northampton, Northampton General Hospital, St Andrew's Healthcare and the Northamptonshire Health Foundation Trust was consolidated into a single data set for Northamptonshire as a 'place'.

A new social enterprise board was created, which now had access to live travel information on around 32,000 travellers, covering almost 38 per cent of all trips in the county carried out by employees and students associated with the parent organisations. This 'Big Data' set allows individual travel plans to be combined into a single virtual picture without compromising the sovereignty of any of the individual organisations. Planning for transport was now in a new realm.

The outcome of the analysis was both revealing and remarkable. By way of example, it was discovered that up to 43 per cent of patients provided with dedicated transport to medical facilities had conditions which meant that they could have used other forms of transport. At the same time, an analysis of just one county council transport contract suggested that almost 1000 spaces were available on their vehicles which were potentially suitable for such patients during this down time as a more cost effective alternative. Moreover, an assessment of home to school transport indicated that contracts could be rationalised by as much as a third if considered holistically with other transport provision, including university travel, further education and voluntary services.

It was discovered that the partnership accounted for over one million cars on the road each month, generating over eight million kg of CO2 emissions.

Around 700,000 square metres of car parking spaces are needed (102 football fields) to accommodate this demand. Nearly 43 million miles are travelled each month by the combination of staff and students – accounting for almost 30,000 workdays. Around 10,500 employees of the cohort live within five miles of their work place and 99 per cent of employees could rideshare with at least one co-worker living near them. The potential for change is great if the approach to travelers is correct and they can see, and share in, the social benefits that a social enterprise could bring.

All, of this, and much more, was emerging at a time when the university was in the process of building a new campus for over 14,000 students – with no car parking spaces. The county council was moving into a new building for access by around 2,500 staff, with only 134 dedicated car parking spaces. The hospital and other medical facilities had car parks at capacity and with little scope for growth. A new solution was needed and the social enterprise model provided a fresh approach that was both affordable and sustainable for the partners if they acted collaboratively. No single organisation can deal with these pressures in isolation.

Northamptonshire have taken the concept of the original programme, looking at public sector procurement, and are now pushing it further to examine any employer or service provider in the area that is willing to contribute. They are doing this by mapping a substantial number of journeys that can provide targeted interventions to encourage more journeys to be combined.

Smart cities, Oxfordshire

With the £500 million Westgate Shopping Centre redevelopment currently under construction, Oxfordshire County Council is particularly determined to find a solution to what could be a huge increase in congestion. Millions of visitors are expected to flock to the heart of Oxford to take advantage of the 800,000sq ft retail destination. With average car speeds in city centres continuing to slow, failing to address fundamental issues will put the local economy at risk.

Oxfordshire County Council has launched its UK Connected Citizens Partnership (CCP) with Waze, the real-time, crowd-sourced satnav app. In a bid to speed up journey times and ease up traffic hotspots, CCP is designed as a free, two-way data exchange that empowers areas to harness real time driver insights to improve congestion and make better informed traffic planning decisions.

The hope is to catch congestion before it gets into Oxford and direct people to the most effective and efficient routes into town. Using Waze data to identify incidents and congestion hotspots in real time, users can make more intelligent journey choices. This puts Oxfordshire County Council at the forefront of using data effectively and tapping into a vast knowledge base of traffic and real time driver insights to improve congestion in the local area. This is just one example of how the county will be working with other partners who own and have access to data, allowing road users in Oxfordshire to benefit from data share alliances across the board.

Mobility as a service, Transport for West Midlands

The concept of mobility as a service is to get people to think about the best way to make their journey from end to end. It seeks to shift journeys away from a single mode of transport and seeks to react to the transport network as a whole. The end goal is for a passenger to have detailed information available to them about the price and cost of the different modes and combination of modes. They can then make a decision prioritising the cost of the trip, the time it will take or even its impact on the environment.

It is hoped that modern technology, in particular real time information through smart phones, will allow more trips to be made this way in the future. In order to be successful it requires real time information on as many transport options as possible.

The roll out of this technology could have a significant impact on reducing congestion. Passengers will know in advance what the most efficient journey will be. Real time price adjustments could incentivise people onto underused parts of a transport network. This could be particularly useful for trips that are not time sensitive. It also plays a role in giving accurate information of the impact of delays to the network.

The possibilities of this type of technology are extremely large. Transport for the West Midlands has already begun to experiment through trials of an app called Whim (<https://whimapp.com/fi-en/>).

The app, developed in Finland, allows passengers to get a tailored travel plan for their journeys which encourages them to consider an alternative to a car.

Users can pay for their transport on a subscription or pay as you go basis. The app deals with all necessary ticketing on the chosen route. It includes transport providers like National Express West Midlands, Enterprise Car Hire and train ticket service SilverRail.

The pilot is currently on a small scale involving 500 people for 12 months.

It is anticipated that this kind of technology could allow councils to manage transport networks more effectively as they can not only see in real time what journeys people take, but also they can learn what incentives are successful in persuading people to alter their plans.

Active travel

A key way to reduce congestion is to divert journeys onto other modes of transport. There are also health benefits associated with a more active lifestyle if journeys can be diverted towards walking and cycling.

Bristol's approach

Bristol has some of the worst congestion of any English city. According to the TomTom traffic index it is the ninth most congested town or city in the UK, with residents losing 148 hours a year to congestion.

The city has prioritised cycling as a way to combat this trend and has actively sought to benefit from national initiatives, including Cycling City and Cycling Ambition City. Both of these were Government initiatives with competitive bidding elements to receive funding to improve cycling infrastructure. As a result of on-going investment the number of cyclists has doubled in Bristol between 2001 and 2011.

Bristol have committed to:

- consulting on shared use routes; to resolve some of the key issues they are focusing on delivering segregated infrastructure for cyclists wherever possible
- improving legibility in shared use areas to make it clearer to those on bike and foot

- delivering improved on-street cycle parking, plus up to 20 new on street cycle hangars for residents who have difficulty parking their bike at home
- working closely with the Access Fund to ensure the promotion of new infrastructure to employees, schools and the wider community through new residential developments and their developed network of community groups
- using Access Fund resources to provide loan bikes, cycle training and route planning
- working closely with planning colleagues to ensure that new cycling infrastructure is included in developments.

There is emerging evidence that prioritising cycling can have a positive effect on congestion by using less road space. Over the last eight years the proportion of cycling journeys have increased by 25 per cent in Bristol.

Monitoring of the full roll out of Bristol's plans is ongoing and as their network is developed they will expect to see a number of benefits from reduced congestion and better air quality on improved public health.

Funding certainty, Transport for Greater Manchester

Greater Manchester authorities have long recognised that greater connectivity and less congestion in the city is one of the key ways to encourage local growth. That recognition has led to a different kind of conversation with local politicians and businesses, backed by a new approach to funding decisions in partnership with the Government.

Greater Manchester stated in their submissions to the Government that they would be prepared to stake significant resources into a fund in return for greater certainty of funding over a longer period and also removal of ring-fences so money can be managed in one fund which has a set of local priorities and criteria for investment. This led to the creation of the Greater Manchester Transport Fund.

By committing local funding of approximately £1 billion by the end of this decade, nearly £3 billion worth of investment has been secured. The local funds were raised through a top slice of the integrated transport block, a proportion of the income from Manchester's tram system income and an additional levy on council tax. It was agreed with Government that Greater Manchester could lead the regional arrangements for major scheme funding and pool resources across the city.

Those elements allowed Greater Manchester to have a local process of prioritisation and a robust delivery vehicle for major schemes. The transport fund has delivered flexibility and scale over transport funding.

This approach has enabled Greater Manchester to sustain a successful delivery partner for the Metrolink programme allowing improvements to the Metrolink on time and on budget which would have been considerably more difficult if budgets for works had to be renewed annually. Provision of Metrolink Phase 3 has resulted in overall public transport capacity into the city centre increasing by five per cent, with Metrolink capacity into the city centre increasing by 68 per cent. These figures will be significantly boosted now that the Second City Crossing is open and service frequencies increase. This funding approach has enabled people in Greater Manchester access to an even better public transport system, thereby helping to manage congestion levels.

Manchester has engendered developer confidence in the infrastructure which has improved investor confidence in the city. This has been achieved whilst delivering a capital programme focused on the city's transport needs.

Roadworks innovation

Roadworks cause congestion, they take road space out of use and force traffic into less space. They are also unavoidable, as they are necessary to provide vital utility services and ensure road conditions are maintained. DfT estimates put the cost to the UK economy of traffic disruption associated with street works at some £4.3 billion each year. The social costs of utility works, meanwhile, are put at £5.5 billion annually, with street works giving rise to more pollution and accidents, less reliable journeys, and reduced resident satisfaction. London tops a world list for driver hours wasted annually and for fuel consumed per vehicle while idling in roadwork congestion. Any attempt to reduce congestion therefore needs to include attempts to minimise the amount of time taken by roadworks.

Whilst we can never eliminate them entirely councils are working to ensure that roadworks take place for the least amount of time, in the most co-ordinated way, while closing the minimum amount of road space to ensure that works can be carried out safely.

Connected roadworks, Staffordshire

Staffordshire received £650,000 funding from Innovate UK over an 18 month period in order to find ways through which roadworks could be coordinated more effectively. The project, called Connected Roadworks, collects, maps, and analyses forward planning data from utilities to boost the number of joint street works, to improve coordination, and to cut the cost of disruption arising from street works.

It does this in a holistic way by:

- developing an interactive mapping tool and a central data hub
- promoting fruitful collaboration between utilities and the local authority
- identifying joint street works opportunities and regulatory barriers to their adoption
- making the evidence base business case for joint street work.

Central to the success of the Staffordshire Connected Roadworks project has been the quality of the conversation between local authority operations team and contractors, encouraging stakeholders to share or pool data in a spirit of open innovation and mutual respect.

As well as gathering mid-term (one to five year) planning data from a wide range of utilities, developers and contractors, Connected Roadworks breaks new ground by prototyping and developing an interactive portal for mapping the potential for joint street works in target areas.

It also:

- measures the operational, financial and social impact of prospective street works from the viewpoint of residents, contractors and the council
- engages with local communities and businesses by publishing open databases with the aim of improving communications relating to street works and assesses the current regulatory landscape in order to make policy recommendations.

Among the important outcomes is an economic impact assessment 'white paper' prepared by Future Cities Catapult and Staffordshire University. As well as exploring the effect of roadworks on economic activity – identifying, for example, up to £4.6 million in travel time savings per annum to the local economy through reduced congestion and £1.3 million of efficiency savings to industry – the paper analyses the UK-wide roadworks marketplace in order to baseline data and to evidence findings. It also surveys a substantial cohort of contractors, utilities, businesses and citizens in order to balance quantitative with qualitative data.

Managing roadworks through lane rental, Kent

Whilst road work permit schemes are a welcome improvement to help achieve planning and implementing work effectively so that it has the least possible impact on highway users, for many authorities they do not offer an incentive to think differently to finish works in the shortest possible time or least impactful way.

Lane rental powers derive from section 255 of the Transport Act 2000. They allow councils, with approval by the Secretary of State, to designate the busiest part of their most traffic sensitive road network and charge those undertaking works for the time and manner that they occupy the road. The Government allowed trial schemes in London and Kent but has not invited any other areas to access the powers. In effect companies undertaking utilities and other works are hiring the lane for the period they need it. Charges can be varied to reflect the extra disruption caused by undertaken roadworks in the busiest parts of the day and the economic impact within a particular area. This allows councils to incentivise roadworks at quiet periods, like overnight or at weekends or at certain times of year, by charging less or nothing at all for lane rental during this period.

The aim of the Kent scheme is to incentivise those carrying out works on critical roads to plan and work so that it minimises impact on the road, for example by taking place outside of rush hour and other busy periods such as during term times. The scheme does not apply across the whole of Kent. It is applied to specified locations identified within the Kent road network, which represent the most critical and busiest parts of the county's road network.

The average occupation time for urgent and emergency works that cause congestion on the Kent lane rental scheme road network at traffic sensitive times dropped from four days to three days in the first year of the scheme.

The main reason for the drop in occupation appears to be a reduction in the time taken to reinstate work sites. For example, repairs to failed utility equipment have been completed generally within a few hours whereas previously the reinstatement has taken a number of days. These delays have been reduced to avoid lane rental charges.

There are further benefits as surplus revenue collected through the Kent Lane Rental Scheme has been put towards projects and initiatives associated with the objectives of the scheme. Funds are applied to the following areas and available to all organisations that work on the highway:

- transportation – managing and monitoring traffic and works to avoid disruption
- enabling infrastructure – promoting and providing facilities for future maintenance, access and improvement
- industry practices and research and development –operational practices, materials and new ways of working for the control, planning and execution of works.

The purpose of these projects and initiatives is to reduce the impact of works on Kent's highways and to raise standards in the planning and execution of works for the benefit of road users in Kent. This will create a double benefit with the money acting as an incentive to work quicker and smarter, and any surplus used to find ways to make works even better.

How councils could do more

There is no doubt that congestion is a serious problem for the UK with mounting economic, social and environmental costs. The good practice in this report are just some examples of the work that local authorities are doing to tackle the problem. However they are being held back by a lack of powers, insufficient influence over funding and external factors outside of their control.

Despite the multiple causes of congestion there are simple steps that could be taken to help local authorities manage congestion. Many of these lie with convincing people to change their behaviour.

Overcoming barriers to further progress.

We will never be able to completely eradicate congestion, but local authorities can help avoid further worsening of the situation and even reduce congestion levels through a range of measures. They need to be able to make alternatives to the car as attractive as possible as well as the ability to ensure that those that motorists do not drive in a selfish and irresponsible way that makes life more difficult for others. The LGA believes the following recommendations will go a long way to helping councils manage the growing traffic and congestion levels across the country.

Greater certainty and influence over transport funding

Local authorities transport budgets should enjoy the same long term funding certainty that Highways England and Network rail are given by the Government. Both have five year funding programmes which allow them to make long term commitments to strategic projects. Longer term certainty has allowed Greater Manchester to deliver a programme of improvements to its public transport system. All local authorities need the same level of commitment in order to plan the same kind of strategic projects to improve congestion on local road networks.

The sector would also benefit from considerable simplification of the transport funding regime. Currently funding is provided on a competitive basis by a number of different funders in a variety of different funding regimes. Competitive bidding takes considerable upfront investment from authorities with no guarantee of results. Given the wide variety of schemes with different geographies and criteria it can be difficult for authorities to design schemes that tackle locally identified problems. Some funding comes directly to councils, whilst other transport funding goes to Local Enterprise Partnerships. We welcome the Government's commitment to simplify transport funding for areas with devolution deals but all authorities need a simplified regime in order to take local decisions on how to best combat congestion.

There are also infrastructure problems associated with areas with low land values. Areas with low values, often exacerbated by poor infrastructure, can struggle to gain sufficient funding through the Community Infrastructure Levy (CiL) or the section 106 process. Greater local discretion on funding could ease this vicious circle with targeted infrastructure investment part of wide-ranging regeneration.

Legislative powers to encourage behaviour change

Whilst councils can help make alternatives to car travel more attractive, sometimes different measures are required to encourage behaviour change to incentivise people to use alternative, more sustainable and healthier travel choices.

Workplace parking levy – all authorities should be able to use powers to introduce the work place parking levy which has been successful in Nottingham. Local authorities should not have to go through a cumbersome process of seeking Secretary of State approval to access a power that has proven its ability to reduce congestion and simultaneously improve public transport. By using the revenue stream to improve public transport alternatives Nottingham has led the way in reducing unnecessary commuting traffic through its city centre.

Enforcement of moving traffic offences – in all of England, except for London, selfish and dangerous behaviour like blocking yellow box junctions and making banned turns can only be enforced by police. In practice, police forces do not have the resources, nor do they prioritise, the use of this power. Consequently, rules are flouted, junctions get blocked and local authorities, who are responsible for ensuring a smooth flow of traffic, are powerless to stop costly congestion at busy junctions.

As well as London, enforcement of moving traffic offences is also available to local authorities in Wales – there is no logic for this distinction with the rest of England. The powers that would allow this to happen are already on the statute book but the Government has never chosen to enact them. We urge the Government to pass the necessary secondary legislation that would give all authorities the power to enforce traffic offenses. There is an appetite from local authorities across the country – the Government should therefore immediately give local authorities the power to keep traffic moving through providing the necessary supporting secondary legislation to Part 6 of the Traffic Management Act 2004.

Managing the strategic/local road network interface

Highways England should mitigate the impact of their road improvement programme on local networks. Almost all road journeys start and end on local road networks and if they cannot cope with the increased capacity of the strategic network all we are doing by improving the strategic network is making it easier to get between traffic jams. Highways England have committed to work in partnership with local authorities in their Road Improvement Strategy. They should continue to do so and demonstrate that how their schemes will mitigate the impact on local networks. Funding from the RIS programme should also be spent on local networks where it could relieve congestion on the strategic network. This could include Highways England funding park and ride schemes or parkway stations. It could also mean funding for local network improvements.

We have welcomed the flexibility shown with the Government's proposal to set up a Major Routes Network (MRN), which will be formed of strategically important local controlled roads.

The new MRN will be able to access funding from the Government's National Road Fund. The LGA will work closely with the Government to ensure that the network is set up in a way that matches local priorities. This money is welcome but will not be a substitute for effective engagement from Highways England at a local level.

Managing Streetworks

All local authorities should have access to the full range of powers to manage street works. There are many examples of successful permitting schemes and pilots of lane rental schemes have shown that this can be a powerful additional tool in managing the impact of roadworks at key locations on the road network. We would urge the Government to allow all local authorities to take decisions about what the appropriate regime is for street works in their area and give them access to powers that have worked well in pilot areas.

Total Transport

The Government's Total Transport initiative has the potential to significantly reduce the amount of journeys taken by the public sector fleet. The lessons learned should be shared as soon as possible and the Government should ensure all parts of the public sector are encouraged and able to play a full role in local total transport initiatives and consider ways in which good practice can be spread across the sector.

Promoting bus travel

The LGA supported the Bus Services Act 2017. The Act introduces important improvements to partnership arrangements making them easier for councils to introduce. It also gives Mayoral combined authorities the automatic right to introduce a franchising model should they wish to.

It is important that the Act is fully implemented as quickly as possible in a way that enables councils in all areas to make use of the new powers and make bus travel a more viable and attractive alternative to car travel for local people. The Government should also act to address the long term decline of bus ridership. They could start by devolving the Bus Service Operator Grant (BSOG) to local authorities. This would allow it to be targeted better according to local needs - it has led to improvements in areas where devolved BSOG has been trialled. The Government should also commit to fully fund the national statutory concessionary fares scheme to ensure councils are not forced to cut other areas in order to meet the cost.

Powers to improve air quality

All local authorities should be given a wider range of powers to improve air quality, including Clean Air Zones. The problem of congestion and air quality are two sides of the same coin and efforts to tackle one cannot ignore efforts to tackle the other. Different areas of the country have different problems when it comes to air quality and the solutions will need to be tailored to suit accordingly. All authorities should enjoy the wide ranging powers that London currently uses to tackle air quality issues. Many of the powers suggested in this report would help curb traffic growth and improve congestion. It is also imperative that action to cut air pollution is properly resourced by the Government as this is as much a national issue as a local one.

Diesel charging, Westminster

Westminster Council is trialing parking incentives to reduce the number of diesel vehicles on their streets. The Marylebone area is one of the worst areas in the country for air pollution.

As part of a pilot programme pay and display parking charges have been increased by 50 per cent for diesel cars using Section 122 of the 1984 Road Traffic Regulation Act. The scheme is seeking to implement a 'polluter pays' principle for an area that suffers from high levels of nitrogen dioxide. It is hoped that additional costs for diesels will make people reconsider their travel choices in central London.

The pilot 50 per cent surcharge for diesel will also provide valuable insight into how the policy works practically and whether there are positive behavioural changes from it that could be replicated elsewhere. The borough also simultaneously invested in its electric vehicle infrastructure and freight consolidation.



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