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Effective road and traffic management: Memoranda Received

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Written evidence from Leonard Wells (ETM 01)

I am a 70 year old pensioner. I spent a great deal of my life as a Professional Driver. The bulk of those years (18 in all) were spent driving the family limousine in to London from a country estate in Virginia Water, in and around the London area itself and then home again in the evening.

During the early years in the 1980's it would often take us up to 2 hours to get home in the evening using a combination of the A30 and the A4 during the rush hour.

This went on for many years and I closely studied the causes and pondered on possible solutions. It immediately became apparent to me that the bulk of the hold ups were related to illegal and obstructive parking along the main arteries into and out of London. Exiting from London on the A4 there are stretches of 2 and 3 'A' road lanes and 2 and 3 Motorway lanes. All that was needed in London to cause a major delay in the flow of traffic was a car parked on one of the 2 or 3 lane stretches of the 'A' roads. For some reason the British Motorists seem to find great difficulty in dealing with switching from 3 lanes to 2 and there never appeared to be any Traffic Wardens available to do anything about the problem.

I sat down for many evenings and devised a solution. What I came up with I called Green Routes. I have worked in various Government Departments over the years and had heard that Mrs. Thatcher had a reputation for getting things done. I therefore set out my scheme in the fullest detail and sent it to her. I heard no more until the Government announced the scheme we know today as Red Routes. This was precisely the scheme I had outlined –even down to motorised Traffic Wardens –or as they are sometimes referred to as Environmental Protections Officers.

Since I asked for no reward or acclaim for my efforts I thought no more about it –though today I am much more cautious in sending details of any such scheme of mine –in any field – without being aware of what had previously transpired.

NOW I will come down to the point of my email. Whilst Red Routes is still a valid system, the bulk of our roads are still subject to enormous delays –resulting in frustration for motorists, bus drivers, truck drivers and bus passengers.

The bulk of the journeys made on our roads are in fact made on 'A' roads which before Motorways were the best available at the time.

The problem today with the advance of car ownership is that many of those 'A' roads are reduced in their capacity by selfish parking on the part of millions of car and van owners-at least during daylight hours.

I now make use of my bus pass so am able to see these problems at first hand. I will just give one particular example. On the A680 between my home town of Haslingden and Accrington the buses are constantly having to stop because the road ahead has been reduced to a single lane by car owners parking at their front door. They do this in many cases, despite having an empty driveway or a nearby side street or cul de sac. This is a tiny sample of what happens on a daily basis from 0700 right round until 1900 on just this one 5 mile stretch of A road. The cost to our local Bus Company alone must be enormous in terms of extra fuel used and unnecessary wear and tear.

My estimate of the amount of fuel wasted by all kinds of traffic because so many roads are reduced in this unnecessary and selfish manner is probably in the order of a billion litres per year.

In our area one rarely sees a traffic warden outside of the town centres. In London you have only to park with one wheel on a pavement and you can guarantee that your car will be towed away and will cost a hefty sum to have it released back to you. Unfortunately, in this area you can seemingly park anywhere –including entirely on the pavement- with total impunity.

Now- the only way to deal with this problem is to make daytime parking on any ‘A’ road an offence of obstruction. Time after time our local Traffic Warden –when he appears- tells me he can’t do anything about parking on a pavement or causing an obstruction as that is a Police matter. In addition he or she is very often unable to do anything about parking illegally on yellow lines because the County Council –having painted those lines- has not put up the appropriate sign.

My own view is that the Police should be responsible for ensuring the free movement of traffic through their area. For example, one often comes across temporary traffic lights which are wrongly phased and causing huge delays. If the Police took full responsibility in such matters they could immediately request the owner of those lights to readjust them- removing the bottleneck at a stroke.

The overall savings to our Nation would far outweigh any additional costs arising from the regular patrols by Traffic Police. It could be done in fact by motorised Traffic Wardens specialising in obstruction infringements. But they must have the authority to deal with cases of Obstruction.

Well, thank you Committee members for your time and I hope that I have been of assistance.

November 2010

Written evidence from David Nelsey (ETM 02)

This is my submission to the Transport Committee who will undertake an inquiry into effective road and traffic management,

I am a simple motorist who has travelled the roads of Britain on average 35,000 miles a year for the last 20 years. I guess many of the Ministers, Members of the Transport Committee and Civil Servants who frame our legislation either do not travel by car or very rarely travel by car. It's time the day to day motorist had influence.

How to ease congestion on our roads is really quite simple if you know the problems. Here are some workable suggestions to implement in Law.

1) Scrap Bus Lanes. They give priority to empty buses over the mass population, whilst they queue behind lines of traffic. Buses are inherently bad for the environment. Yet we allow them the take up valuable space which can be used to reduce congestion for Cars.

2) If it is seen to be politically incorrect to totally scrap Bus Lanes then implement, by Law, a system that allow Bus Lanes only between the hours of 07:00 & 09:00 and then 16:30 till 19:00 on Mondays to Fridays only. Why oh why do local councils have bus lanes during the day and on Saturday & Sunday? Political Correctness !!!

3) In roadworks on Motorways and Duel Carriageways limit HGV, Trailers and Large Vans to Lane 1 (currently allowed in Lanes 1 & 2.) Normally there is a 50mph speed limit through these roadworks. Why do Trucks etc need the extra Lane? They cause tailbacks and congestion and frustration to cars etc when they 'elephant race'.

4) Enforce the 50mph speed limit in roadworks particularly to Trucks who regularly tail gate law abiding motorists by trying to maintain 56mph. Do they have some secret law allowing them to do this?

5) On Motorways and Dual Carriageways limit trucks, HGV.s etc to Lane 1 during the same hours as Bus Lanes. (This happens extensively across europe and it works). Again it prevents trucks trying to 'elephant race' (The truck in lane 1 might be doing 55mph. The one overtaking in Lane 2 is limited to 56mph). What happens? motorists are limited to Lane 3 and congestion and frustration occurs.

6) On Motorways and Dual Carriage ways limit Trucks, HGV.s etc to Lane 1 on hills and inclines ALL DAY. (This happens extensively across europe and it works). Again it prevents trucks trying to 'elephant race' and keeps traffic flowing.

7) Get the Traffic Laws up to date for the new 4 Lane Motorways. Most drivers have not a clue how to drive on 4 lane motorways. Again, it's Trucks and HGV who cause problems. Why oh Why are they allowed in Lanes 1, 2 & 3 ? Whoever thought this was a good idea? Some boffin in Whitehall who doesn't drive on 4 lane motorways !! Just makes no sense as now we have elephant racing in 3 lanes with the normal motorists restricted to 1 lane. Why ??? Restrict HGV's etc to Lanes 1 & 2 and stop the congestion.

8) Restrict 'White Van Man to 60 mph on Motorways and remove them from Lane 3. They are a menace. (by the way I have driven a van).

9) Increase the speed limit to 80 mph (120 kph) on Motorways for Cars and enforce the law with more Traffic Police.

10) Get accidents cleared from Motorways and roads very, very quickly. It should be a goal that traffic is held up for no longer than 1 hour. If the Europeans can do it why can't we? Or, is the real objective to cause motorists and commerce a headache !! Have you ever asked yourself why the M25 needs to be closed for say 8 hours?

Remember I am only a simple motorist but I do extensively travel the roads and see simple solutions. Hope that you find them enlightening.

December 2010

Written evidence from English Heritage (EMT 03)

1. English Heritage is the UK Government's statutory adviser and a statutory consultee on all aspects of the historic environment and its heritage assets. This includes archaeology on land and under water, historic buildings sites and areas, designated landscapes and the historic elements of the wider landscape.

2. Measures for road and traffic management have the potential to introduce alien elements and visual clutter. The impact of such measures can be lessened if their design and materials relates as far as possible to the overall townscape and take their cue from the historic context.

3. Textured traditional materials, such as cobbles or stone setts, and historic built and landscape features such as narrow lanes, bends and high walls can be used to help keep down traffic speeds without the need for increased road markings and signage, or physical constraints such as road humps, chicanes, islands, barriers, and safety rails.

4. Road signs and markings can have a significant effect on the appearance of historic areas. A degree of flexibility in the size, siting and colour of signs is provided for in The Traffic Signs Regulations and the Department of Transport's *Traffic Signs Manual*. There is also flexibility permitted in respect of 'no waiting' signs – a narrower band of a paler colour is permitted in environmentally sensitive areas.

4. Pedestrianising streets in historic areas requires careful planning and implementation if it is not to result in as many problems as benefits. The need to provide new vehicular access and servicing arrangements for properties in the area, to provide additional or alternative car parking nearby, and to change local traffic circulation, can often have a significant impact on historic areas. Park-and-ride schemes may offer the solution where it is desirable to limit car access to major historic centres. In partially pedestrianised streets or areas, where buses and delivery vehicles have continued access, the need to make pedestrians aware that they are not in a traffic-free zone needs to be balanced with creating a congenial and appropriate environment. Keeping the traditional proportions of footway to carriageway and the associated kerb lines is usually more likely to strike the right balance than large scale homogenous surfaces or patterns of surfacing materials which are arbitrary and over-detailed.

5. Items of historic street furniture, such as red telephone kiosks, post boxes, drinking troughs and memorials reinforce local character if they are retained in their original locations.

6. The English Heritage manuals *Streets for All* provide a detailed guide for all those responsible for the management of streets. They set out practical solutions to reduce clutter, co-ordinate design and reinforce local character. The nine guides cover the English regions (including London) and the advice on street design reflects the particular historic character of each region. Manual for Streets 2 provides up to date guidance on highway safety and street and road design which considers historic context.

January 2011

Written evidence from Ken Todd (ETM 04)

Summary
The detrimental effects of congestion are widely known: the loss of time and fuel, the vehicle wear and tear, the air pollution and its ill-effects on health, the increase in the cost of doing business and the cost of goods, The cost of road accidents is also a major burden on society in terms of fatalities, injuries, health service and damage to vehicles. Less widely known is the contribution of the urban traffic control system to accidents and congestion.

Traffic regulations should forbid acts that cause danger and obstruction. Current regulations not only forbid acts which cause no danger or obstruction but encourage and command acts which do. The system runs counter to common law and common sense, to legal, engineering and safety principles, to the advice of the Highway Code, the *Road Safety Good Practice Guide* (RSGPG) and the aims of the Traffic Management Act. Applying sound principles to the traffic control system will eliminate its flaws at no cost.

1. Major roads The records show that traffic laws were adopted 80 years ago on the basis of personal opinion without research into their safety and operational effectiveness. The concept of giving the heavier vehicle flow on a more important road priority over the lesser flows on the side streets originated from the railway practice of main and branch lines.[1] The primary purpose was, and still is for many traffic engineers, to minimise vehicle delay on the major roads. Today's *Traffic Signs Regulations and General Directives* (TSRGD) requires that *"no vehicle shall... enter the major road... so as to be likely to endanger the driver of or any passenger in any other vehicle or to cause that driver to* <u>*change the speed or course of his vehicle*</u> *in order to avoid an accident."* (Underline added)

1a. Accidents at major-minor road junctions The urban major-minor road concept runs counter to basic safety principles**:** low speed and simple driver decisions. The most frequent and most severe type of accident at a major-minor road junction is the right-angle collision, usually blamed on the side-street driver's priority violation. Priority rules diminish the responsibilities of the major-road driver, while maximising those of everyone who wants to cross.The major road makes motorists on it go fast without looking right or left, while the side-street drivers are given a highly complex task. They have to look right and left for pedestrians when entering, and again when exiting the junction, and also for two vehicle streams, one from the right and one from the left. The right-turner has to deal with yet another traffic stream, the one from the opposite direction — seven conflicts in all, with the elderly being the most vulnerable. It was said 70 years ago that our attention gets distracted from one conflict while we concentrate on another; we should have to cope with only one conflict at a time.[2] That's why the centre refuge is the friend of the pedestrians; it lets them cross in two stages. Likewise, today's RSGPG says driver decisions should be minimised. The danger and delay of crossing busy major roads has forced the taxpayers to pay billions for traffic lights, their manufacture, installation, operation and maintenance.

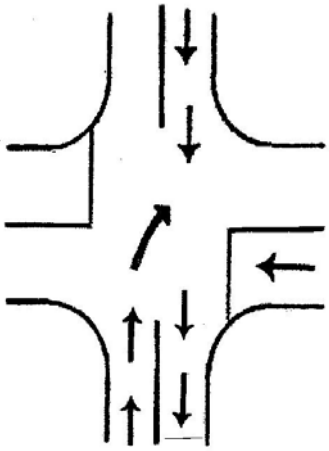
2. Accidents at traffic lights The traffic light turned out to be one of those medicines that cures one disease and gives you another. It was known by the mid-1930s that traffic lights increased accident frequency.[3] They compress an hour's traffic into half an hour of green time and thereby halve all headways. They then make drivers go fast and keep close to the vehicle in front for fear of missing the green light, with their eyes up in the air rather than on the road. The combination of high speed, tailgating, diverted attention and sudden stops causes front-to-rear crashes. The *Highway Code* calls for moderate speed and extra care at junctions, and for safe following distance at all times. Like the major road, the traffic light encourages a disregard of the most elementary safety rules. The RSGPG says that traffic signals cause accidents to pedestrians, particularly in congested conditions, and advises their use should be avoided where possible. In London, 19% of road accidents occur at signalled junctions. An Australian study called signalised intersections the most dangerous sites on the road.[4]

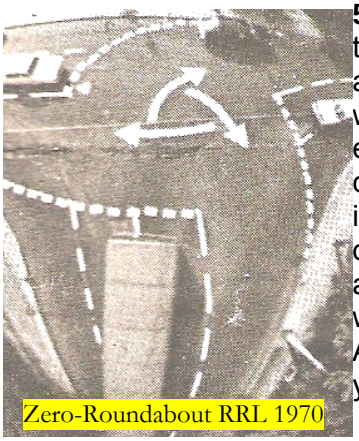
3. Needless delay The public sees the inefficiency of the traffic control system as the needless stops and delays at a red light while no conflicting traffic is using the green. We have

seen no scientific evidence of any benefits that outweigh the loss of time and fuel, the vehicle wear and tear, the air pollution and global warming. We have seen no scientific evidence showing that drivers are competent to cross or enter a major road from a minor road in the absence of conflicting traffic at an unsignalled junction but lose their competence at a junction that is signal-controlled. We have seen no scientific evidence showing that pedestrians are competent to cross a road against a red light but lose their competence when they get behind the steering wheels of their cars. The needless delay at a red light is an obstruction, an offence for which citizens get fined. To forbid licensed motorists to cross a road against red when an 8-year old schoolkid is allowed to do so is an insult to the intelligence and a sign of contempt for our civil right to use the road without getting endangered and obstructed by a system that was meant to assure safe and expeditious travel

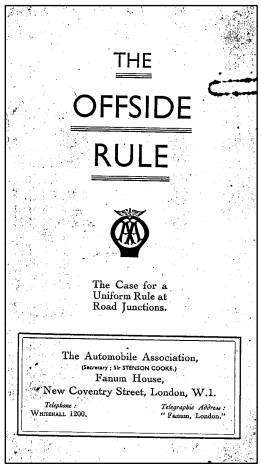
4. Loss of capacity Less obvious to the public than the needless delay is the reduction in junction capacity and the resulting congestion caused by traffic lights.

4a. The system severely reduces capacity just when we need more of it in heavy traffic. The greater the proportion of right-turners, the lower the vehicle-carrying capacity of a junction. The right-turn problem originates from the rule that gives the through-driver from the opposite direction priority and obstructs the right-turning vehicle from leaving the junction, so that those who want to go straight ahead get blocked behind it The remedy of installing traffic lights makes the problem worse, more so when right-turn lanes and multi-phase signals are added. An official report attributed 40% of fuel consumption in US urban areas to the inefficiencies of the traffic signals.[5] If the opposing traffic stream gave way to the right-turners, the problem would be gone. That's how roundabouts work




Zero-Roundabout RRL 1970

5. The Offside Rule: In the light of the traffic signal's tendency to provoke accidents, delay and congestion, we would expect everything to be done to employ safer, more effective and less costly alternatives. The mini-roundabout is such an alternative, but it is not the only one. A junction will work without a central island when everybody gives way to traffic exiting the junction, as the Automobile Association advocated 80 years ago


THE
OFFSIDE
RULE

The Case for a Uniform Rule at Road Junctions.

The Automobile Association,
(Incorporating Sir STENSON COOKE.)
Fanum House,
New Coventry Street, London, W.1.
Telephone: WHITEHALL 1200.
Telegraphic Address: "Fanum, London."

5a. Before the adoption of statutory priority rules in the 1920s, drivers about to enter a junction gave way — under common law — to those who arrived first or were already in it. A "first-come, first-served" system has been in use in the Channel Islands for more than 40 years under the name of "filter-in-turn". It is inexpensive, gives little delay, has as much capacity as a mini-roundabout, and avoids the excessive delays for the smaller roundabouts that occur when a predominant stream on the circulatory roadway prevents vehicles from entering. A "first-come, first-served" system, known as "All-way Stop" in the USA, has been called by the Federal Highway Administration the safest type of intersection control.[6] Serious accidents are extremely rare.

5b. Mini- and other roundabouts are far safer than traffic signals.[7] and have higher capacity,[8,9] findings confirmed worldwide. The first mini-roundabout installed on a public road in 1968 in Peterborough replaced a set of signals and raised capacity by 27%.[10] Enlarging a roundabout can increase its capacity further without a need to widen the road in its entire length, as it is often done under signal control.[11]

5c. As there is no statutory requirement in the UK to assign priority to one road or another, junctions may operate as "unmarked" without any control whatever, just as they do when traffic signals suffer power failure.[12] Attached herewith are 70 comments from commuters on the effects of traffic lights being out of action.

5d. You will be aware of the improvements in mobility and safety achieved by towns in Europe, notably Holland, Denmark, Germany and Sweden, and in a few UK locations, like Bristol. At the GLA Seminar last March, two videos showed how traffic moved fluently from all directions when the signals were turned off. Ten years of traffic management in Friesland (NL) have shown that running traffic at 30 kilometres per hour, eliminating signals and other controls in urban areas — and leaving road users to their own devices and to their common law duty of reasonable care — has cut accidents, delay and congestion, and saved public funds.[13]

6. Verdict: Today's urban traffic control does not move traffic safely and expeditiously with minimal negative environmental impact at an economic cost. A system that causes accidents, delay and congestion is not fit for purpose. Elevated speeds, needless stops and delays, and the priority of drivers who enter a junction over those who are trying to exit have inflicted untold damage on society for the best part of a century.

7. Recommendation. I suggest that the Committee undertake a full scrutiny of the current urban traffic control system and the potential benefits of its revision.

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January 2011

Written evidence from Urban Traffic Management & Control (UTMC) (ETM 05)

1. Executive summary

1.1 Effective road and traffic management involves a complex deployment of policy, physical design, signage, licensing and – increasingly – technology systems. While fixed aspects (such as junction design) provide the basis for management, only technology can provide responsive management of a day to day (and sometimes minute to minute) basis.

1.2 Technology can be complex, risky and expensive, and much effort has been put by both public and private sectors into minimising these issues. However the pace of change means that this needs continual review and guidance.

1.3 DfT has been helpful in this area for many years. We believe that there are areas where central Government could and should continue to provide leadership and guidance, especially in ensuring that the various organisations involved – and the systems they use – work effectively together.

2. About the UDG

2.1 The UTMC Development Group (UDG) is a community body[1] which brings together local highways authorities, the Highways Agency, the systems industry and the service sector. It was formed in 2003 to bring to market the output of the DfT-led Urban Traffic Management and Control (UTMC) research programme (1997-2003).

2.2 The UDG is led by an elected Management Group, supported by a professional Secretariat; resources are a mix of central funding (previously provided by DfT, currently by HA), membership subscriptions, and income from the UTMC Annual Conference which has run since 1997.

2.3 The core of UTMC is a set of open technical specifications, designed to help highways authorities specify their needs and to help industry deliver effective solutions. The kinds of system that it covers include the following (though more are being added all the time):

- Monitoring systems for air quality, CCTV images, etc
- Control systems for traffic signals, barriers, etc
- Variable message signs, for car park information, journey times, warning messages etc
- Strategic systems for network coordination, incident management etc
- Links to public transport operations, for bus priority etc
- Public information websites

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[1] See www.utmc.uk.com.

2.4 By using UTMC specifications, traffic managers can competitively procure products from multiple suppliers, and integrate them reasonably easily and with minimal cost and risk.

2.5 UTMC is policy neutral, and designed as a "toolkit", enabling users to build on no more than they need, and at their own pace. Specifications are primarily derived from system developers, but subject to open public consultation prior to adoption, so they are kept both practical and market neutral.

2.6 UTMC specifications are not mandatory "standards", but practical consensus recommendations. Authorities and suppliers are free to adopt non-UTMC solutions if they believe them to provide better value for money. This imposes a strong discipline on the UDG to stay relevant and focussed.

2.7 As policy challenges develop and technology opportunities continue to diversify, the UDG works increasingly in collaboration with other specifications groups, both in the UK and internationally. Our commitment is to act as a "self-help" group for the industry, to enable traffic managers across the country to do their job better, cheaper and more consistently.

2.8 UTMC became "mainstream" in the UK urban context from about 2006; there are now something like 100 implementations, including some outside the UK. It has recently benefited from a major boost with the active engagement of the Highways Agency, which is now looking to adopt/adapt UTMC to the interurban context.

2.9 Our evidence to the Committee concerns (and is limited to) evidence on areas where technology systems can help, or hinder, the management of road traffic.

3. Factual evidence

Prevalence and impact of traffic congestion and likely future trends

3.1 The UDG's starting point is that there will continue to be traffic congestion events for the foreseeable future, and that the negative effects of these can be mitigated by active management.

3.2 A general trend to higher traffic levels will of course affect the prevalence of congestion, in much the same way that climate change affects weather events. The focus on traffic managers locally is to mitigate this trend by appropriate interventions, keeping congestion to (hopefully) acceptable levels.

3.3 Congestion "events" can occur for many different reasons: traffic accidents, road layout strictures, popular cultural events or just excessive traffic flow. These different congestion contexts have their own distinct dynamics.

3.4 Good management can pre-empt the occurrence and mitigate the impacts of congestion events. For instance:

- Accidents can be managed by activating diversion routes, speeding up access by emergency vehicles etc, thus reducing secondary accidents

- Junctions can be managed by monitoring the approaching traffic and selecting "strategies" for balancing green time, pedestrian phases etc

3.5 So, the effectiveness of management will affect the frequency and impact of congestion events that actually occur.

Government and local authority intervention

3.6 The different types of congestion normally call for different responses. Different authorities may choose to intervene in different ways, either for local policy reasons or simply because the nature of the networks differs.

3.7 Some interventions are strategic and have effect over a wide area and a long period of time, such as modal shift mechanisms (improved public transport, better pedestrian facilities, more cycle parking etc). Some may be described as pre-emptive – for instance, when planning a new development, the transport layout is also re-planned.

3.8 Technology systems such as those based on UTMC tend to be used for tactical management, ie for minute-to-minute or hour-to-hour changes.

3.9 Authority interventions are under continual review and evolution, to create greater understanding, coverage and coherence in managing the road network. For instance, the HA Integrated Network Management (INM) Programme consists of a set of technology Proof Of Concept projects developing, installing and making operational UTMC Common Databases. The planned UTMC-based technical platform provides facilities, supported by operational and technical processes, that join up HA traffic control and management systems to each other and those of neighbouring LHA UTMC based traffic systems and are readily compatible with many suppliers systems enabling greater integration, innovation and value for money than bespoke systems.

Road user culture and behaviour

3.10 Three kinds of technology systems affect road users: road-based systems, road users' own systems, and third-party systems.

3.11 For road-based systems there is a long-standing distinction between mandatory "control" systems – traffic signals, dynamic speed limits, lane closures etc – where compliance is high, and "information" systems where compliance is much lower (and highly variable). This distinction appears to be becoming blurred with systems such as vehicle-activated speed limit signs, which are treated as "reminders" rather than instructions.

3.12 Driver systems have emerged in a big way over the past few years, particularly satellite navigation and route guidance systems. Simultaneously, public transport users are increasingly benefiting from travel information available from mobile phones. This kind of development gives users a more direct control over their own travel.

3.13 Unfortunately there is a conflict between individual optimisation and system-wide optimisation. For instance, if a motorway is becoming congested ahead, any individual driver might do better by diverting through side roads – but if everyone took this advice, the system as a whole would immediately choke the side roads. This is particularly likely when responding to an incident (thus prolonging or spreading its effects). There appears to be little that network managers can do to prevent this kind of behaviour, though there may be scope in reaching agreement with driver systems providers regarding permissible diversion routes.

3.14 Third-party systems are currently limited to fleet management (for freight or for public transport fleets). In future, there may be many other systems, including vehicle-to-vehicle ("V2V") communications or external bodies directly limiting vehicles' speed ("intelligent speed adaptation", ISA). We are not aware of any behavioural research in this area – the recent European project on "cooperative vehicle infrastructure systems" did not include any[2]; but we expect this to complicate matters further, by providing quasi-official directions which may be at odds with tactical network control. (Satnav information already does this to an extent.)

Intelligent traffic management schemes

3.15 There are many technologies that could, in principle, contribute to "intelligent traffic management", in that they capture, analyse, project and disseminate information about how road users should be directed and/or advised. Authorities are open to considering most of them, though they will quite properly look for evidence that they will make a positive contribution.

3.16 There are few comprehensive economic studies on their impact. The DfT's most recent attempt resulted in a "toolkit" of mechanisms and likely effects, rather than a cost-benefit analysis[3]. The toolkit does, however, provide many detailed results such as:

- "The Cleopatra project in London found that 58% of respondents would immediately respond to VMS congestion warnings, of which 83% would reschedule their journey and 6% would change modes."

- "Following implementation of SCOOT [in Southampton], there were 18% and 26% reductions in journey times during the am and pm peaks respectively. Corresponding reductions in delay of 39% during the am peak and 48% in the pm peak were achieved. Economic benefit (excluding accident savings) equated to £140,000 in 1985."

- "11% saving in [Cardiff bus] journey times in peak period. Where priority given to all buses, 4% journey time saving and 45s improvement in schedule adherence. Where priority given only to late buses, 3% journey time saving and 90s improvement in schedule adherence."

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2 See www.cvisproject.org.

3 See http://www.dft.gov.uk/itstoolkit. Citations are from the "digest of results" tab.

3.17 The US Federal Highways Administration has recently published a 160-page report[4] which summarises the results of almost 100 separate studies. The largest single contributor of economic benefit was electronic toll collection – but this was against a baseline of cash-based toll collection. Second in importance was traveller information (conceived as variable message signs). However this report covered studies on benefits from current technology deployment: unevaluated, underused and developing technologies would not show up as important.

3.18 Localised benefits studies for specific interventions are more common. Work done under the UTMC programme found substantial quantifiable reductions in congestion arising from car park guidance systems (in 2004)[5]. Older work[6] has shown benefits of area-wide traffic control, of bus-triggered signal priority, etc. These are not always focussed on congestion benefits – some studies relate to environmental aspects such as air quality improvements[7], or to road safety[8].

3.19 In light of all these technical possibilities, the key challenge is to build useful *products* into useful, coherent, and effective *schemes*. This calls for some key skills, including scheme design, scheme evaluation, and project management. These skills, typically provided through a mixture of authority staff and contractors, are in short supply. It can be challenging for small authorities in particular to ensure that the right skills are available.

3.20 Partly for this reason, some schemes have emerged as collaborative among two or more authorities. But this collaboration also has a more strategic value. Where neighbouring authorities operate independently, the roads running between them may not be coherently managed and this can give rise to unnecessary congestion; collaboration avoids this.

3.21 It can be difficult to establish and operate schemes across multiple authorities, especially if the local transport policies diverge. Successful partnerships include:

- Authorities with a historical connection[9] (Kent/Medway, Hampshire/ Southampton/Portsmouth, Dorset/Poole, etc)

- Authorities in a metropolitan area, for public transport (where the Passenger Transport Executive can lead/coordinate)

3.22 Areas where collaboration is generally recognised as necessary but underprovided include:

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4 See http://ntlsearch.bts.gov/repository/record/ntl/34991.html. NB - it is difficult to summarise this report without losing some important caveats.

5 Reports now archived, but available on request.

6 Much work has been undertaken by TRL in this area.

7 The University of Leeds Institute for Transport Studies has a long-standing programme of environmental research.

8 Famously, by the Highways Agency for the M42 Active Traffic Management project.

9 However a submission to the Select Committee for the ODPM in 2006 noted that "the fragility of such arrangements were demonstrated when Wokingham and West Berkshire withdrew from the Reading Urban Area Package partnership arrangements" – see http://www.publications.parliament.uk/pa/cm200506/cmselect/cmodpm/977/977we52.htm.

- Links between the strategic and local roads networks[10]

- Authorities in a metropolitan area, for road network management[11]

- Sub-regional integration between "hub" and "hinterland" authorities

3.23 Anecdotal evidence suggests that much of the most serious congestion on the urban and inter-urban road network is caused by problems on the strategic network. (We are not aware of any research to quantify this.)

Legislative provisions for road management

3.24 The principles of the New Roads and Street Works Act 1991 (NRSWA) and the Traffic Management Act 2004 (TMA) are widely supported. Sharing information about roadworks provides the potential to minimise the disruptions they cause. Similarly, monitoring and managing the local road network by an authority, mindful of the impact on other parts of the network, is necessary to minimise the congestion caused by vehicular free-for-all.

3.25 The devil, however, is in the detail. In respect of TMA in particular, it is unclear what constitutes adequate management, "so far as may be reasonably practicable having regard to their other obligations, policies and objectives", to comply with the Act[12]. In practice, therefore, the effect is essentially to codify the LHA's role in legal form.

3.26 With both NRSWA and TMA, there are systems and data issues that cause practical difficulties in network management.

- Systems to manage streetworks do not export data that can fit into systems that manage traffic. If they did, it would be possible for fixed control systems to be reconfigured, semi-automatically, around temporary traffic lights, which could alleviate significant congestion around urban streetworks.

- Systems used within different authority areas could, but generally do not, send live network data to each other. If they did, it would be possible for an area's systems to respond to traffic which is about to enter the area, and to forewarn drivers to problems in neighbouring areas.

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10 Notwithstanding significant effort by the Highways Agency and others. For instance, the National Guidance Framework provides for bilateral Detailed Local Operating Agreements between HA and local authorities. The current version was published in 2007 – see http://www.highways.gov.uk/business/documents/NGF.pdf.

11 This position is changing: see for instance the West Midlands UTC Major Scheme (http://www.westmidlandsltp.gov.uk/majorschemes/utc). The move to Integrated Transport Authorities is likely to spread this further.

12 The Traffic Management (Guidance on Intervention Criteria) (England) Order 2007 is intended to explain this (see http://www.legislation.gov.uk/uksi/2007/339/made, especially Clauses 18 and 19) but is very general. If a car park guidance system can "secure the expeditious movement of traffic " and is "reasonably practicable", is a failure to provide one a breach of the Act? If so, is a local policy choice to avoid street clutter sufficient to excuse non-provision?

3.27 Like UTMC, the Electronic Transfer of Notices ("EToN") specification for streetworks is supported by DfT[13]. It has, however, been difficult to engage to resolve this issue.

Impact of bus lanes and other aspects of road layout

3.28 Broadly speaking, congestion occurs when the number of vehicles on a road section exceeds its capacity for one of two reasons:

- The incoming flow of vehicles is too high
- The speed of vehicles is too low

3.29 An example of the first might be where two lanes merge into one. One possible effect of a bus lane, if badly designed, is to create this kind of anomaly; however, paradoxically, a bus lane could relieve this congestion[14] by taking out the second lane "upstream".

3.30 An example of the second is at a junction. Vehicles slowing to turn and/or to give way can cause the junction to back up. There is a balance between no control (drivers move whenever they can), roundabout (fairly steady low speed circulation) and traffic signals (alternating between stationary and higher speed): which is best will depend on local details.

3.31 Technology systems provide an added layer of management which can, unlike road layout, respond dynamically to changes in flow patterns – for instance, morning and evening peaks will usually have different predominant directions.

3.32 Technology systems can also help to predict the effect of changing road layouts, in particular through running simulation models. However it can be very computer-intensive to achieve a reliable model in a dense urban network.

4. Recommendations for action

4.1 We believe that central Government has a role in helping local highways authorities manage their networks more efficiently, including through technological mechanisms like UTMC.

4.2 We would like to see more encouragement for, and guidance on, cross-boundary operations. This might be through:

- Open technical standards (building on initiatives like UTMC)
- Operational codes of practice (building on initiatives like the HA's National Guidance Framework)
- Full-fledged shared services (building on ITAs and LEPs)

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13 The current version of EToN, dated May 2008, is published on the DfT website at http://www.dft.gov.uk/pgr/roads/tpm/tmaportal/tmafeatures/tmapart4.

14 Those who argued for the bus lane on the M4 Heathrow spur have made essentially this argument.

4.3 We would also like to see more encouragement for, and guidance on, cross-functional operations. Traffic management systems should understand and respond to (systems used for):

- Roadworks
- Incidents and accidents
- Environmental management
- Land use planning

4.4 As recent circumstances have shown, there remain challenges in the collection, collation and dissemination of *appropriate* information to the travelling public in the event of traffic disruption. While this is a legitimate public expectation, it is genuinely hard to get right, and can be expensive and risky. We believe that targeted research on how to fulfil citizens' needs cost-effectively would be widely welcomed by local authorities.

4.5 We believe that the work of good local projects should be made available to others, to minimise "reinventing the wheel". This not only enables a faster rollout of good practice; it also makes for a more streamlined and more robust supply sector.

4.6 We consider that there should be stronger incentives for local highways authorities, and their communities, to create the links and good-practice libraries that this implies.

4.7 Most of the investment required to achieve this will be in local schemes, or for developments within the systems industry. However DfT has a key role in political leadership, in particular to ensure that the various initiatives are "joined up".

January 2011

Joint Supplementary written evidence from Urban Traffic Management & Control Development Group (UDG) and the Institute of Highway Engineers (IHE) (ETM 05a)

1. Current and better systems

Ref Q182: Can congestion be improved by traffic management schemes?

Ref Q183: Which ones? What types of schemes?

Ref Q185: Can any of you give an example of a technology that you think could solve the problem of congestion or go a long way towards solving it but which is not being used enough or being applied? Perhaps you could indicate why you think it might not be being used enough.

1.1 As traffic is generated by many societal factors, so the opportunity to manage it needs to be aware of these factors. In practice this means the integration of disparate computer systems.

1.2 Frameworks such as UTMC have been constructed, and are supported, precisely to allow this kind of integration. This has already had significant benefit around the country but there are many places that it is still underused. There are also a few areas where a stronger central push seems to be required.

1.3 Generally traffic management and public transport systems are working well together. The most significant opportunity probably lies in the use of traffic congestion data to inform bus arrival ("Countdown") predictions. Similarly, integration with car park systems helps reduce congestion by providing directions to vehicles which are searching for a parking space.

1.4 The integration of roadworks data into traffic management systems is less well developed: it currently depends on a considerable amount of specialist coding between local systems, and as a consequence is patchy around the country. This approach is inefficient: a standardised data feed into UTMC systems would allow local authorities to provide better and more timely public information (even over the weekend!). Equally importantly, it would enable traffic management systems to "self configure" around roadworks, which could significantly reduce works-related congestion.

1.5 Another key area where efficiencies could be achieved is the emerging infrastructure associated with electric vehicles. Where networks of charging points are under the control of the local authority, there is an opportunity to design and operate them, and provide information to drivers, in a way that minimises congestion.

1.6 Sponsoring this standardisation and coordination is, we believe, a clear DfT responsibility. Local authorities should then be able to implement it simply and cheaply.

1.7 Mention was made by others and ourselves of "SCOOT" and "MOVA". These are two forms of computer-based dynamic traffic control developed by TRL (and its predecessors) as Government-funded research, and have since moved successfully to the private sector marketplace; both can deliver significant reductions in delay. DfT has published extensive guidance on these techniques[1].

2. Localism and cooperation

Ref Q130: …On bus priority and more general transport issues regarding congestion, is there an issue where local authorities do not work together? They do not co-ordinate their transport strategy.

Ref Q188: You think it is a financial issue?

Ref Q191: Do you think there is enough knowledge in the appropriate authorities of what is available?

2.1 There are many practical reasons why specific scheme designs need to remain local: the role of local politicians, the need for public consultation, the dependence on specific local circumstances etc. However for some aspects of traffic management, current highways authorities are geographically too small to ensure good design and coherent operation.

2.2 In metropolitan areas, especially where there is experience of working with a PTE, there is an increasing move towards a collaborative model. However, outside these areas progress is slower.

2.3 Cooperation between authorities, to undertake traffic management over larger areas, would enable skills to be pooled and offers the potential to both improve operations and cut costs (on both systems and people).

2.4 There are things that Central Government can do to help lubricate this process, short of issuing mandates. It can support the production of technical and operational standards, which make collaboration easier; and it can support the exchange of experiences, on where and how collaboration has worked. In addition to our previous evidence, some specific examples are indicated below.

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[1] Reference information is available for SCOOT ("Split Cycle Offset Optimisation Technique") and for MOVA ("Microprocessor Optimised Vehicle Actuation") through DFT Traffic Advisory Leaflets – see for example http://www.dft.gov.uk/adobepdf/165240/244921/244924/TAL_7-991, http://www.dft.gov.uk/adobepdf/165240/244921/244924/tal109.pdf, http://www.dft.gov.uk/adobepdf/165240/244921/244924/TAL_3-971, http://www.dft.gov.uk/adobepdf/165240/244921/244924/0700_SCOOT_gating.pdf.

3. Bus priority and other signalling intelligence

Ref Q130: …On bus priority and more general transport issues regarding congestion, is there an issue where local authorities do not work together? They do not co-ordinate their transport strategy.

Ref Q182: Can congestion be improved by traffic management schemes?

3.1 Bus priority at traffic signals is now widespread around the country. It need not require bus lanes but can be done instead through detection of buses approaching traffic lights. This does require buses to be equipped with location systems, but over half of the buses in the country are now so equipped[2]. DfT has undertaken much work in this area and issued guidance which the committee should be aware of[3].

3.2 Similar intelligence can be deployed towards other specified vehicles – freight, emergency services, etc. This is much rarer in the UK but is beginning to happen – for example there is a project to give fire tenders priority at certain junctions in Leeds, and other PTEs are also exploring this.

3.3 It is true, as PTEG and Stagecoach noted, that this could weaken the priority given specifically to buses, but there may be areas where other priorities apply. For instance, logistics might be an important cause of congestion in the area around an industrial estate, where buses may be rare.

3.4 There is a continual dialogue between stakeholder groups and DfT to ensure that DfT is kept informed on the community perspective. However it can be challenging to identify who to talk to within DfT. It sometimes appears that local technology systems are more joined up than the relevant sponsors in the Department.

4. Part-time signals

Ref Q196: …Is there an issue over part time signals on safety as well, because there has been talk, on roundabouts, about having traffic control signals at peak times to manage peak flows, and then when the peak flow comes off those signals no longer operate?...

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2 The UK "centre of excellence" for matters of this kind is RTIG-INFORM. Among other roles (some quite technical), RTIG-INFORM has undertaken an annual survey of public transport technology in the UK, on behalf of DfT, since 2002.

3 *Bus Priority: The Way Ahead* – available on Government archives at http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/regional/buses/bpf/busprioritythewayahead12/rioritythewayaheadpdfversion.pdf

4.1 DfT has published a substantial guidance document on signal controlled roundabouts, which highlights potential issues with operating the same part-time[4].

4.2 As mentioned at the hearing, DfT is currently trialling "flashing ambers" and will shortly be publishing advice on appropriate forms of traffic control during periods of low flow.

5. Skills gap

Ref Q191: Do you think there is enough knowledge in the appropriate authorities of what is available?

5.1 There is a well-known and long standing challenge within local authorities, to attract and retain staff with the necessary skills in traffic management. This is today more complex than ever, as IT skills and contract management skills have been added to traffic network skills. Moreover, staff establishments have in many cases been reduced at local level, including through outsourcing arrangements. This constraint is both holding back the deployment of new systems, and limiting the use of existing systems.

5.2 As mentioned at the committee, the existing skills "gap" in the transport industry (and in particular in traffic management systems[5]) is likely to have a significant effect on addressing congestion in the future as the demographic problem of experienced engineers leaving the industry begins to bite.

5.3 We believe that even in such times of economic restraint, for the future good of the economy, urgent work is needed to establish how Local Highway Authorities and consultants can be encouraged and rewarded for directing staff to improve the design and management of the road network. To improve the recruitment, motivation and (perhaps most importantly) retention of skilled staff will require professional registration, training and development, and associated financial reward. The success and immanent expansion of the Highway Agencies Active Traffic Management (ATM) scheme shows what can be achieved with such investment.

6. Guidance and standards

Ref Q191: Do you think there is enough knowledge in the appropriate authorities of what is available?

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4 Available at http://www.dft.gov.uk/pgr/roads/tpm/ltnotes/ltn109roundabouts.pdf.

5 See for example the Final Report of Project Brunel, "Transport Industry Resources Study", http://www.theihe.org/training/uploads/project_brunel_final_report.pdf.

6.1 The Department for Transport provides much valuable advice on road infrastructure and design and in the past has invested significantly in the development of alternative forms of traffic control and evaluation. We believe that similar benefit would be gained from the production of guidance by DfT, working with professional bodies, on a "congestion management manual".

6.2 Such a manual, whilst not being prescriptive on Local Authorities, Private Sector developers or their agents, would by establishing agreed methods of data collection and modelling, allow for a common method of evaluating congestion before and after works take place.

6.3 Whilst not seeking to fetter their decisions it would allow policy makers/scheme sponsors to balance the many conflicting demands on our already overcrowded highway network and make informed decision cognisant of their effects on all highway users and the effect on congestion of such decisions.

7. Network monitoring

Ref Q200: But how can technology assess the cost-benefit of installing a particular technology?

7.1 Under the Traffic Management Act 2004, local highways authorities have a statutory duty to monitor the state of their network, and collaborate with their neighbours to ensure they work well. "Monitoring" involves the deployment of sensors[6], and the collection and analysis of the data they provide.

7.2 There is no clear guidance on what kind of data ought to be collected and shared, either operationally (ie with neighbouring traffic managers) or publicly. It would appear to be a DfT role to oversee this process.

8. Incentivising intelligent investment

Ref Q197: …I am just looking at possible ways that we can incentivise authorities to embrace technology and the Invest to Save model. I would be interested in your thoughts as to what that mechanism might be. Would it be a form of a challenge fund from the DfT in a way similar to the Local Sustainable Transport Fund? Do the LEPs or the Local Government Association have a role? What are your views on what might be the way forward?

Ref Q198: How best do we incentivise or encourage local authorities to use that once it is all packaged up?

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6 Or the use of sensors that exist already, for instance buses with onboard location systems, third party CCTV, or traveller's mobile phones.

8.1 At the hearing, our instant response was deliberately careful as it is essentially a matter of central policy how to invest the limited amount of public funding.

8.2 It is undoubtedly the case that dedicated central funding would be helpful in sponsoring more implementation. Whether this is in the form of DfT research, standards and good practice, challenge funds, LTP guidance and scrutiny, ring-fencing or some other form – and how much, and with what scope – is a matter for central policy. However we believe that there is a strong case for more investment to reduce congestion using the "toolbox" of design and operational mechanisms already available.

8.3 Any investment needs to recognise that systems require three separate types of funding, owing to the nature of local authority finance:

- Staff funding, for people to design, implement and operate the system
- Capital funding, to procure and install the system
- Crucially, revenue funding, to maintain and support them once in place.

8.4 There is inevitably a temptation for local authority officers to champion their function. However the governance structures within the authority are more than capable of challenging any project that might be deemed unjustified. We believe that this challenge process, particularly in the current financial climate, is sufficient to restrain vanity projects.

May 2011

Written evidence from Intelligent Transport Systems (ITS UK) (ETM 06)

1.0 Introduction

1.1 The Transport Select Committee launched its inquiry into 'Effective Road and Traffic Management' on 23rd November 2010. The Terms of Reference and Call for Evidence invite organisations to respond to a series of questions about the effectiveness of road and traffic management, in the light of the Government's decision not to introduce road pricing on existing roads (except in relation to HGVs).

1.2 The Transport Select Committee is inquiring how roads and traffic can be better managed in order to reduce congestion, encompassing both the major road network and urban roads and has indicated that it would particularly welcome written evidence on:

the prevalence and impact of traffic congestion and likely future trends;

- the extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so;
- the extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code;
- intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times;
- the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004; and
- The impact of bus lanes and other aspects of road layout.

The Committee has indicated it would welcome evidence about congestion and road and traffic management in specific locations in England, as well as submissions covering broader themes.

1.3 The Prime Minister's Strategy Unit's Report on Urban Transport and the DfT's response "The Future of Urban Transport", published in November 2009, identified a range of transport challenges faced by our cities. The Report 'assessed the impacts of transport on the urban economy, health and environment and estimated the measurable annual costs of these impacts in terms of:

- congestion in excess delays (£12.0 billion)
- road accidents (£9.3 billion)
- poor air quality in particulate pollution (£4.5 to £10.6 billion)
- physical inactivity and the growing level of obesity (£10.8 billion)
- greenhouse gas emissions (£1.2 to £3.7 billion)
- noise (£2.7 billion)

The above costs identify the challenges, threats and potential questions based on the above estimated £40 billion per annum external traffic impacts costs identified by DfT. It was commented at that time that there will be prescribed and /or mandated measures that could be included in a package of proposals covering cities or urban areas but it was expected to include a diverse range of challenging measures under several main headings of sustainable travel, encouraging modal shift, demand management and traffic management.

1.4 Outside urban centres, the impacts of freight and private transport continue to grow to the extent that the total external costs of land transport will inevitably approach a level of £100 billion yearly. Across Europe, the external costs attributed to HGV operations were last year estimated (ProgTrans study) to be more than €400 billion from all causes. Last year DfT estimated that the annual cost of congestion alone will reach £22 billion by 2025. This level of impact represents an appreciable percentage of the national income, decreasing overall wealth and quality of life

1.5 A general overview may prove useful at this point to illustrate how road and traffic management operates. Capacity of a section of the road network in terms of vehicles per hour [vph] depends on its layout (engineering and topography) and the speed limit but achieving that theoretical maximum depends on the extent to which traffic is flowing freely. When a road is lightly trafficked speeds can reach the permitted maximum but the number of vehicles per hour (vph) will be low as the vehicles are widely separated. As the road becomes busier vehicles will continue to flow freely at first, but as traffic increases the speed will steadily drop, but the vph will increase until the point where maximum capacity

is reached. If traffic continues to increase beyond this point both flow speed and vph will drop markedly and the road will become congested. The economic impact of congestion has already been described; the environmental implications are equally serious. Vehicle emissions per km on motorways increase three to four times in congestion – a vehicle travelling at 60 km/h emits 40 percent less CO_2 than one travelling at 20 km/h. Thus, reducing congestion and improving traffic flows considerably diminishes the environmental impact of road transport.

1.6 Sustaining the maximum throughput, and avoiding congestion, on a complex network of roads including multi-lane roads such as motorways, requires active intervention on a wide scale and a strategic approach that cannot be delivered by individual motorists. At minimum it requires the delivery of advice to drivers regarding prevailing conditions and expected trends and as traffic flows grow steadily over time it increasingly involves regulatory intervention by means of control of maximum permitted speed or access to the network or both. The key to maximising both the use of the asset – the road network – and the services delivered to users is being able to see and understand both the flows and pressures across a very large area and the measures available to make a difference, so that travellers can be given accurate and timely advice about the status of the network plus guidance on the best choice of routes where alternatives are available. In addition the network operators could use active traffic management measures such as 'traffic calming' and generally try to control the rises in demand in much the same way as an electricity generating station aims to manage and balance demand and supply. The responsibility for optimal network management has to be transferred from individual drivers' habits and preferences to an area-wide mandatory approach using powerful demand management tools.

1.7 Intelligent Transport Services (ITS), is the term used to describe combinations of electronic equipment, communications networks and people (though automatic systems are increasing) to deliver improved management of people, goods and data. Some examples – ITS can improve the efficiency of transport through traffic control and enforcement of traffic regulations and enhance road safety through both on-road and in-vehicle systems, e.g. for collision avoidance and better lane keeping. Many commercial organisations use ITS to manage vehicle fleets, both freight and passenger, through the provision of real-time information and two way communication between manager and driver. Electronic ticketing (by means of Smartcards, for example) and real-time travel information enables faster, easier travel by public transport. In addition Intelligent Transport Systems have beneficial effects on the environment by reducing air and noise pollution from highways and by helping to create traffic free zones in cities.

1.8 ITS United Kingdom, referred to hereafter as ITS (UK), is a 'not-for-profit' public/private sector association financed by members' subscriptions providing a forum for all organisations concerned with ITS. The Society works to bring the advantages that ITS can offer in terms of economic efficiency, transport safety, and environmental benefits to the United Kingdom – and at the same time expand the ITS market. Membership, over 150 UK organisations, comprises Government Departments, Local Authorities, Police Forces, consultancies, manufacturing and service companies, and academic and research institutions. ITS United Kingdom encourages discussion on issues such as public/private co-operation, standards, legislation, information provision and new technology. ITS (UK) was a significant contributor to the Parliamentary POSTNote 322 'Intelligent Transport Systems' published in Jan 2009. As a consequence of the above ITS (UK) will focus its responses to the Transport Select Committee's questions on its known areas of expertise.

2.0 Transport Select Committee's Questions - ITS (UK) written responses

2.1 The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so

2.1.1 A number of recent initiatives such as those proposed as a part of Transport Innovation Fund (TIF) schemes and the Urban Challenge Fund have failed to address national and local problems of congested networks. Congestion in or around a city, large town, port or an airport is a consequence of the real-time demands placed on a network and, broadly speaking, will be best dealt with by the traffic management authority for that local area whereas congestion on the inter-urban network needs to be addressed at a strategic level by national or regional bodies. Complications arise where the national network passes through or close to locally managed sectors. There is rarely any joint planning or management as local areas focus on their own localised issues and have little interest or commitment

to wider national and/or regional difficulties. There is also little recognition that local problems can be alleviated by controlling the flow of traffic on the wider network – i.e. if journeys are delayed or modes shifted then the flow of traffic into the town, port, etc can be reduced hence reducing congestion.

2.1.2 The recognised ways of addressing congestion are reducing demand, increasing infrastructure capacity or a combination of both. Techniques In the first category include reducing the flow of vehicles on to a congested link using traffic signals (i.e. 'ramp metering') and imposing charges for using the link at peak periods (i.e. road user charging) as well as better travel planning and reduced need to travel (e.g., video and tele-conferencing). In the second category we have road widening, signal-controlled use of the hard shoulders to create temporary widening, and 'traffic calming' – setting a reduced speed limit for the carriageway when traffic density passes a set threshold. More detail on these approaches is given below.

2.1.3 Charging motorists to use the network is an extremely emotive issue and public acceptance of paying for the use of roads, particularly in light of the tax burden from fuel, VED, etc, makes this a topic that is politically sensitive. A coherent and measured proposal to present the case for charging and the resultant benefits is needed. To date the most notable success has been the London Congestion Zone whilst the most notable failure has been the Manchester TIF bid. It could be said that both cities have a similar traffic problem; however it was only through the personal and highly visible leadership of the then Mayor of London, Ken Livingstone, that the scheme was introduced.

2.1.4 For complex schemes to succeed local leadership and tight governance are needed. One major problem that local authorities encounter is the conflict between the long incubation and planning timescales for transport schemes and the much shorter political procedures that oversee them. As transport schemes take many years to design, receive formal approval prior to building and then operate, the eventual outcome of the scheme can be influenced, amended and/or undermined through local political requirements. The government needs to consider the case for an intervention scheme whereby it can empower itself and Local Authorities to guarantee traffic to flow naturally and without hindrance under normal circumstances but retain a capability of intervening as and when circumstances dictate.

2.1.5 Consideration might also be given to developing a regional approach to network management in the urban environment. As this is far more complex than managing the strategic road network it will require the inclusion of technological interventions, such as ITS systems, to promote active traffic management in the urban environment where most journeys start and finish as well as institutional arrangements and agreements between the Local Highway Authorities (LHA). Such a regional approach from LHAs, utilising ITS, would bring their operational capabilities up to those of the Highways Agency and provide the opportunity to pool resources – both human and technical. This approach would achieve a consistency of network management and would optimise capital and revenue costs through mutual hosting and sharing of facilities.

2.1.6 Area wide Urban Traffic Management & Control (UTMC) is a concept conceived and developed in the UK and has proved to be one of the most significant integration technologies employed to achieve effective network management. Over 100 Authorities utilise UTMC for adaptive traffic control systems that seek to create 'normal' traffic patterns by regulating traffic flows. However in the current financial climate in local government there is a risk that the understated success of UTMC may be jeopardised through a lack of ongoing investment. Traffic growth may slow in some months but overall it continues strongly and continued investment is needed to keep the networks flowing to support commercial productivity. The competition that the UTMC open standards approach brings leads to better value from the availability of a wider choice of systems and components particularly when compared to the enormous losses to the UK's economy through ineffective pan-national network management. Whilst those losses are not seen as real and cashable to LHAs it has proved difficult to build a cost/benefit analysis to support the investment in UTMC.

2.1.7 Innovative ITS technologies can unlock revenue from public assets such as on-street parking, where the use of technology can reduce the overall cost of implementation and operation; thus creating income from currently 'free' parking areas as well as managing congestion. Similarly, access may be controlled (or charged) for commercial vehicle access, loading/unloading in city centres, and time may be rationed so that a fair policy can be enforced. Such facilities can be readily integrated into a UTMC database.

2.1.8 Local Authorities can set an example *via* the use of commercial facilities such as Car Club vehicles, which can be extended to a wider public. This can save money for the Authority and encourage lower vehicle use. Evidence suggests that the use of one Car Club vehicle can remove five vehicles from the city centre. Car Clubs operate via a range of technologies, including internet booking, smart card and satellite location to provide an economic alternative to private car use. The use of such alternative transport modes also means that journeys by car are shorter and the use of newer vehicles results in lower emissions.

2.2 The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code.

2.2.1 The complexity, volume and nature of road traffic have increased greatly in recent years and this in turn has affected the general behaviour of drivers. Until recently policing how road users complied with road traffic regulations was the responsibility of the Roads Policing Departments of the UK's Police Service. However a redefinition of police roles and responsibilities has reduced uniformed law-enforcement capability. Increased reliance has been placed on roadside technologies, primarily Road Safety cameras, which complement the human intervention afforded by police officers. The introduction of the Highways Agency Traffic Officers service has alleviated this situation to a certain extent but the lack of a rigorous enforcement capability is readily recognised by motorists. As a consequence, there has been a generalised deterioration in driver behaviour and compliance with Regulations and the law, and without any effective counter-balance the tendency is for the common attitude to be towards a continued reduction in driving standards.

2.2.2 The lack of emphasis and focus on the 'rules of the road', as described in the Highway Code, renders it virtually anachronistic in the eyes of many motorists' and ther appears to be an increasing tendency to adopt an 'it's all right for me to do as I feel' attitude. The main applications of the Highway Code appear to be concentrated on a driving licence test requirement and circumstances where a prosecution agency seeks to determine a 'benchmark' regarding what is perceived to be a proper code of conduct for driving or using the road. The dearth of refresher learning or contemporaneous information is an important factor and there are no measures to prevent motorists developing 'bad habits' that are only detected when prosecution is effected. As an example motorists routinely fail to display driving lights in snow or heavy rain on the basis that they assume that "because I can see, everything is fine" without realising either that they cannot be seen by other road users or that there is legal requirement to do so. The increase in non-UK based drivers has also had a marked affect on driving standards; Regulations and requirements are not inter-changeable even between EU states.

2.2.3 Other than those limited circumstances described above, motorists in general have little knowledge or awareness of the requirements of the Highway Code and drive in accordance with a belief in their own abilities. If, as mentioned earlier, there is no governing regime then those circumstances can only gradually deteriorate over a period of time. If the Government considers the Highway Code to be relevant then it needs to be refreshed to take into account current and predicted road usage and the consequent impact on driving patterns. It needs to be disseminated and generally publicised in a way that it is seen as having direct and immediate relevance on a daily basis. The use of web, 'podcast', 'apps', and other 'new' media should be considered in the dissemination of such messages.

2.3 Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times

2.3.1 Faced with a steady increase in congestion, and a budget that did not allow for the previously planned motorway widening programme, the Highways Agency started to investigate means of "making better use" of their existing network. The keys to optimising the road network were to 'sweat' the road space to maximise its capacity and to manage traffic flow over a wider area. This comes down to understanding the flows and pressures across a much larger area so that travellers could be given factual advice about the status of the network plus guidance on the best choice of routes where alternatives were available and having a "toolkit" of measures available to the operators to calm and manage traffic. The overall goal is to control the rises in demand in much the same way as an electricity generating station aims to manage and balance demand and supply.

2.3.2 Intelligent Transportation Systems (ITS) have proven to be extremely effective in a variety of situations across the whole UK road network. However the best examples can be found on the 'Managed Motorway' schemes such as the M42 Active Traffic Management (ATM) scheme that has facilitated traffic flow across the region by opening the hard shoulder to peak time traffic, with speed limit controls in place to smooth traffic flow and enhance capacity as and when required. This can be as a response to incidents, or excess traffic flow when intervention is critical to enable the maximum number of journeys to be completed in the most reliable and best possible time. The effectiveness of the operation of the ATM has been demonstrated on a section of the M42 between junctions 3a and 7 over a twelve month period (including the operation of hard shoulder running (HSR) where there had been reductions in a number of areas:

- The average number of personal injury accidents reduced from 5.08 per month before the implementation of ATM to 1.83 per month following the introduction of HSR.
- The average number of casualties reduced from 8.48 per month before the implementation of ATM to 4.00 per month following the introduction of HSR.
- The effect of ATM on emissions from all vehicles was a general reduction of noxious gases and particulates (between -4% to -10%) with the exception of an increase in hydrocarbons (+3%)
- When HSR was operated at 50mph the average traffic speed was 49mph. When HSR was subsequently operated at 60mph the average traffic speed increased by 5 mph compared with HSR at 50mph.
- The operation of HSR on the M42 ATM section increased the observed capacity of the motorway by an average of 7% compared to conditions before the implementation of ATM.

2.3.3 An earlier example of active traffic management is the 'Traffic Calming' (Controlled Motorways) scheme on M25 in the area adjacent to the M4 interchanges and Heathrow Airport. The complex road layout – including many route mergers and cross-overs – means this location is prone to congestion as well as incidents. Since the scheme was installed the traffic flow has been closely monitored and activated when the sensors detect the necessity to do so. Close regulation of traffic flows means that travellers can routinely expect to complete journeys along this stretch of motorway with more reliable journey times.

2.3.4 Across the UK there are many other examples where ITS has been deployed to help manage traffic flow during peak periods and situations where congestion occurs. Whilst the Highways Agency has established a national standard with Regional Control Centres, many urban systems have been introduced to counter specific problems and as bespoke systems operate to local requirements.

2.3.5 'Ramp metering' is another effective technology that is employed when needed. It uses traffic lights on access slip roads to motorways and trunk roads to regulate the flow of vehicles joining the main road without detriment to either flow. It prevents "stop-start" conditions which is one of the main causes of congestion. The system operates only when needed (peak periods) as it relies on sensors to detect when there is a growing traffic merger problem at that location. However 'ramp metering' can sometimes operate in conflict with surrounding roads that are also congested. Currently this technology is confined to the Highways Agency network and as yet has to be fully integrated with LHA systems although a greater extension of UTMC principles to urban, inter-urban and the strategic network could be expected to enable high benefits if a 'one network' approach is adopted. The Highways Agency's Integrated Network Management (INM) project seeks to provide this integration and the 'proof of concept' sites have been successful to date.

2.3.6 Variable Message Signs (VMS) are being increasingly deployed across the road network and enable travellers to make 'informed decisions' on their journey options as and when incidents occur. This enables congestion to be reduced as motorists select alternative routes thereby allowing the speediest resumption of normal traffic patterns. The improved level of information also helps motorists to understand why and for how long they may be delayed and leads to reduced driver stress – also helping them as they review likely arrival times, etc.

2.3.7 Increasing use of the Internet through website messages is proving to be an additional tool as 'real-time' information is readily available to travellers to assist journey planning prior to or during journeys. Data from information-gathering systems linked to intelligent roadside infrastructure can be interpreted by the Highways Agency's National and Regional Traffic Control Centres and used to communicate specific messages to the travelling public. The recent extreme winter weather conditions

have proven to be an excellent example with a significant increase in the number of travellers accessing the Highways Agency website seeking information and advice on the conditions on the network enabling them to review the timing, necessity and applicability of their journeys.

2.3.8 ITS can be described as having a 'Cinderella' role in that they are extremely effective behind the scenes but so often fail to receive their due recognition. In these straitened financial times relatively inexpensive ITS systems can return their investment many times over as they operate efficiently 24/7 in the background and enable direct intervention at the most crucial times. If there is to be a genuine effort to resolve and effectively manage congestion then the network must be treated in a coordinated manner by both the HA and LHAs.

2.3.9 There is still a tendency for many road authorities to look at traffic management problems from a zero base and not to take into consideration past investment in UTMC and similar technology. The lack of funding severely inhibits bespoke new systems being commissioned therefore the ITS industry needs to work more closely with LHAs and HA to consider how ITS can be deployed an operated within the new financial environment. For example a consolidation of existing UTC control centres can introduce some of the savings that would enable enhancement to existing systems or new systems being introduced.

2.4 The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004

2.4.1 Whilst the New Roads and Streetworks Act 1991 and Traffic Management Act 2004 have improved the management of some activities which regularly disrupt the network, they do not currently mitigate enough of the congestion caused by temporary highway occupation. This is largely caused by the clear focus on road works over all other activities and on enforcement rather than incentivised improvements in behaviour. Both Acts set out strict rules and penalties for management of road and street works, but currently do little to require the provision of quality information to the travelling public. There is a need for the legislation to reduce the focus on enforcement and to focus on the delivery of the Network Management Duty 2005, which provides guidance on the benefits of utilising technology and traffic data to improve the management of road works and information to the public. ITS has a significant part to play in providing and disseminating quality information to the travelling public and could be implemented relatively quickly and cheaply, as it can use information sources that already exist and will require some degree of manipulation and configuration.

2.4.2 The Network Management Duty focuses on reducing congestion through effective network management, but the New Roads and Streetworks Act 1991 and Traffic Management Act 2004 only provides tools to manage road and street works. To effectively manage all the temporary activities which disrupt the network Traffic Managers are reliant on much older legislation such as the Highways Act 1980 for management of a range of activities such as events, filming, crane operations, skips and hoardings. The nature of activities and the impact on the modern congested network is far greater now then when the legislation was conceived and a simpler, more consistent framework for managing the full range of activities would make network management more efficient. Again ITS can be used to alleviate the situation – by using existing systems such as UTMC.

2.4.3 In addition to the above there is value in highlighting the benefits offered by a diversity of Real Time Passenger Information systems; the availability of which allows travellers to be 'better informed' of planned and/or spontaneous highway and street works thereby enabling them to plan and/or rearrange their journeys.

2.5 The impact of bus lanes and other aspects of road layout.

2.5.1 Reducing individuals' use of private vehicles and encouraging modal shift to public transport helps to maximise road capacity – a double-deck bus carries the equivalent of 50+ cars but occupies the space of fewer than 5 cars. However for public transport to be perceived as preferable to private it needs to compete not just on cost but also on reliability and consistency. If public transport is restricted to the same speeds and travel constraints as private vehicles there is no advantage in taking this transport mode. Bus lanes enable public transport to circumvent the delays experienced by private vehicles and help to deliver passengers to their final destination rather than a remote car park. The 'my space' (i.e., it's not crowded, I can listen to my music, etc) element of car travel is an important

consideration and one that needs to be considered by bus operators if buses are to become a real alternative to private cars.

2.5.2 ITS technologies can be used to great effect to support bus lanes. Roadside or in-vehicle equipment can locate, identify and penalise drivers who abuse bus lanes or create hazards by illegitimate parking practices and, provided there is rigorous enforcement of these offences, help to ensure that bus lanes are kept free. ITS systems can be used to much greater effect. The purpose of the bus lane is to allocate separate road space to permitted vehicles and if the bus service is not especially intense there will be long periods when the bus lane is empty and the adjacent lanes are very busy. It is a straightforward matter to fit roadside equipment that instructs vehicles to leave the bus lane (in effect the reverse of the M42 ATM where roadside equipment signals that vehicles are allowed into a lane) and equipment on the bus that broadcasts a signal 10-15 minutes ahead to ask for the bus lane to be cleared. Dynamic signalled systems such as this maximise the capacity and efficiency of the network and the services using it. ITS within buses such as wireless networks, entertainment systems and provision of power supplies for laptops, can also make bus travel more attractive.

3.0 Comments

3.1 Vehicle use continues to increase resulting in the existing urban and inter-urban network routinely reaching maximum capacity on a regular basis and, regardless of incidents or collisions, congestion occurs as a consequence. The dilemma that government and LHAs have is to determine the best means to alleviate urban congestion and the associated environmental and safety issues.

3.2 Large-scale investment in new, refurbished and/or replacement infrastructure is unrealistic in terms of cost and environmental impact therefore a more innovative approach needs to be adopted, including some demand constraints and astute management of what we have to make more efficient use of network space. Previous attempts to resolve these problems in urban environments failed primarily because the benefits were not ‘sold’ effectively to motorists and failed to focus on the pertinent issues such as reducing congestion or providing better information. The virtues of replacement technologies were extolled but there was no focus on how to alleviate problems suffered by travellers on a daily basis nor an attempt to identify any benefits that might be accrued.

3.3 It should be acknowledged that there is minimal chance that modal shift will ever be achieved *via* public education measures to influence the rising tide of congestion to a sufficient degree. However, ITS schemes can be effective as they enable traffic flow to remain as close to normal by enhancing the efficient use of vehicles for the majority of a journey, before switching to public transport for the “last mile”. The technologies described previously are a clear indication of the extent and capabilities of ITS and their implementation and supporting these are a diverse range of systems, procedures and policies that are available to national, regional and local agencies and authorities. In broad terms these systems, schemes and policies provide ‘low-cost’ options to unlock maximum potential benefits.

3.4 Government and local authorities have a responsibility to intervene to alleviate congestion, because a failure to do so will only result in individual drivers arbitrarily making their own decisions based on individual interests and in accordance with their decision to drive rather than choose the public transport alternative. As an example recent efforts to prosecute drivers using a ‘rat run’ through a hospital are one indication of how motorists are making their own decisions on what is best for them. The expected ‘backlash’ is likely to concentrate on the lack of efficient traffic management systems that are forcing motorists to take drastic alternative action. ITS schemes can provide dynamic information (pre-trip, in-vehicle or on-road) notifying routes to and the occupancy of ‘Park & Ride’ facilities, dynamically managing road space (including bus lanes), controlling access to localities and enforcing road user compliance.

4.0 Summary

4.1 A steady increase in network use in recent years necessitated a number of new initiatives with the underlying principle that management was for a single road link and no matter how well this was done this was found to be insufficient. The key to maximising both the use of the road network and the services delivered to users was to be able to see the flows and pressures across a much larger area so that travellers could be given factual advice about the status of the network plus guidance on the best choice of routes where alternatives were available. Network operators have sought methods whereby

they could initiate ‘traffic calming’ measures that attempts to control the rises in demand in much the same way as an electricity generating station aims to manage and balance demand and supply.

4.2 ITS systems have helped to fill that void and have consistently demonstrated a proven track record by offering considerable benefit and assistance to travellers. To illustrate this the answers to the Inquiry’s questions re ‘effective road and traffic management’ have included a number of examples whereby ITS deployments have shown their effectiveness. These schemes operate efficiently 24/7 in the background but have direct intervention at the most crucial times. ITS schemes have all too often failed to receive their due recognition or reward owing to their ‘behind the scenes’ profile however in these straitened financial times relatively inexpensive ITS systems can provide substantial return for their investment many times over.

4.3 Innovative approaches are needed when setting out policies. Cost savings need can be made and direct cooperation with commercial providers will provide opportunities to deploy technology-based solutions that can render policies deliverable at economical costs. In addition improved integration of transport modes can also be facilitated by removing barriers and undermining ‘stove-pipe’ cultures between operators and regions.

4.4 A critical element regarding the effectiveness of network management systems is the timeliness of their installation and integration into existing structures. All too often the project evaluation and selection process is restrictive and time-consuming which is further protracted by a limiting and bureaucratic procurement process. Current Treasury / DfT Cost/Benefit calculations work well for a single activity project, but were never designed to cope with the prevailing circumstances where a complex ‘package’ of inter-connected issues need to be addressed and so inhibit the assessment of procurement decisions. This needs to be reviewed and refined as a matter to urgency to enable the self-evident benefits of ITS schemes to be introduced so that they have the desired effect at the earliest opportunity.

4.5 In the absence of a policy to encourage demand management by pricing, shown to reduce congestion while generating funds for improvements, ITS schemes have an important role to play in solving local traffic challenges. Such schemes should take advantage of legacy traffic control architectures and established best practice to provide customised solutions meeting the diverse needs of local communities. Closer cooperation with industry via frameworks and partnering to encourage innovative commercial approaches can encourage the growth of self-funded services, offering drivers greater choices and the scope to make better travel decisions.

January 2011

Supplementary written evidence from Intelligent Transport Systems UK (ITS (UK)) (ETM 06a)

Executive Summary

- Congestion is going to get worse as the economy grows again – we have had a relatively "easy ride" recently. Most congestion is caused by too many people trying to use the same road space at once, not by roadworks or accidents;

- Government intervening and coordinating how traffic moves – but not interfering in all aspects – can reduce congestion, given how it forms when roads approach capacity,

- Many such interventions are met with initial stakeholder resistance – like the M42 Active Traffic Management scheme – but have then shown safety, emissions, and journey time benefits plus cost savings valued by all stakeholders. This was an innovative project where government took the risk of investing in a pilot that proved the viability before moving to wider implementation – government needs to underpin more experimentation like this;

- Almost all the tools required to reduce congestion from new technology and better operations are developed and available, allied with proven tools like SCOOT that link traffic signals – a tool so effective that it has been sold to cities around the world. But these tools desperately need to be joined up to work together and exploited across the UK – not just in a small proportion of local authorities with expertise and remaining budget. Central Government can educate and co-ordinate them to reduce costs to the public purse;

- The public and some parts of government – central and local – are unaware of what is available now. There are many myths about congestion and so this lack of awareness means the wheel is frequently reinvented and investment wasted;

- Drivers have already bought into reducing congestion themselves – there are about 4 million satellite navigation devices with existing traffic information and many more traffic apps. These same devices can also provide new coverage of data to detect and measure congestion, using technology paid for by drivers themselves, not by government;

- The key is making it all work together and encouraging wide-scale adoption, *via* 3 steps:
    1. A central Government facilitated template for how to join up the various existing tools– often called an "architecture" but better seen simply as the picture on the box of a complex jigsaw illustrating how it all fits together
    2. More awareness amongst local authorities of what tools are available, their benefits in clearly understandable terms for elected officials -not technologists - and how to procure them quickly and cheaply
    3. Exploiting and extending the skills in local government in this area as resources are reduced through combining very local schemes into more regional approaches
- We cannot remove congestion, but we can intervene to reduce it, and allow the people of the UK and the goods they need to flow as the economy regains strength. We have the technology on both the road and in vehicles and some skilled people but central government needs to push this now as a mainstream – and cost effective - part of traffic management and smarter travel and not "tomorrow's world" technology.

- Governance changes might be needed –Local and Central government combining resources & skills and regional, rather than local, operations and procurement to reduce costs.

How Traffic Management can help reduce congestion

Traffic congestion has one of 3 causes:

- Demand consistently exceeds supply (like tickets for major pop concerts, Wimbledon)

- Demand regularly exceeds supply at certain times (like a PO counter on pension days, or a supermarket at weekends)
- Something temporarily affects demand or supply: an accident , rain, drivers' behaviour, a special event *etc*

Data provided to ITS UK by Trafficlink – who collect traffic and congestion data across all the UK from their own sensors and traffic authorities – is attached. This shows that most congestion is caused by simply too much traffic. It also shows that congestion change has followed GDP change, but in an exaggerated way, and the UK is at a congestion "tipping point", where small changes in traffic demand can make congestion far worse. This is similar to driving at half term holidays, where just a small change in demand for traffic in peak hours has a marked impact on journey times.

Traffic management – such as through ATM or simply better information – can contribute to reducing congestion once it has started to build up or even prevent it; Intelligent Transport Systems can additionally contribute to preventing or delaying the onset of congestion by making these small changes in flow or capacity reap much bigger benefits in congestion. The Society's first memorandum described how traffic speed varies with demand – shown as a picture at the end of this memorandum. The key objective of congestion management is to keep the road network as close as possible to maximum throughput. This is best achieved on a motorway by regulating all lanes in a carriageway to the same speed to deter "lane hopping". Three techniques are well established for this purpose:

- Variable Speed Limits (pioneered on M25 near Heathrow) to constrain all lanes to the same maximum speed
- Ramp Metering to smooth the flow of new traffic onto a motorway using traffic signals on the 'on' ramp
- Active Traffic Management , the sequential deployment of variable speed limits, then ramp metering then controlled use of the hard shoulder for a temporary capacity boost

Such interventions need only be used during the critical parts of the day when demand nears capacity – so they are not interfering with traffic at less busy times.

Use of Intelligent Transport Systems (ITS) to reduce congestion

ITS can go beyond traffic management by influencing demand for use of road space. Probably the most direct method for doing this is distance based Road User Charging – either all vehicles or trucks – but we recognise that the Committee does not intend to look into RUC in this study.

There are two well-established ITS techniques for reducing demand or for spreading demand across the day so that peaks are reduced:

- Using real-time traffic condition information and knowledge of historic patterns, so that travellers planning a journey can be nudged away from recognised peak periods, and travellers already on the network can be alerted by a variety of means ranging from traditional radio messages to being offered alternative routes *via* traffic equipped with satellite navigation devices. An example here is that so many people still choose to travel on Maundy Thursday "to beat the rush", yet it is the busiest day on the network. Freeing up more and more data to provide better information and access to services – and marketing of their existence to drivers – would have benefits simply through changing the times people make journeys;
- Using new sources of data such as GPS equipped vehicles and data from off call mobile phones, combined with modelling and pattern recognition techniques to monitor the flows on a network, so that the conditions likely to lead to congestion can be identified at the earliest possible stage and mitigating techniques can be deployed before the worst situations develop

Deployment of traffic management and ITS by Local Authorities

The extent to which LAs use these methods is very uneven and reflects familiarity with the techniques and resource and skills shortages. Very roughly, there are 15 or so authorities who are adequately resourced, familiar with the state-of-the-art, capable of innovation and mostly self-sufficient. There is a group of 30 or so who are aware of current thinking, enthusiastic about the possibilities for improving conditions, fairly capable but need more help and guidance. That leaves over 100 authorities who are not well aware, are missing the benefits and potentially need a lot of help to get started. In the view of ITS (UK), this is unlikely to change as:

- There is no central Government coordination in this area and a DfT project for documenting and publishing benefits has been stopped ("ITS Toolkit")
- In many LAs the size and number of potholes dominates transport thinking. The need to manage traffic actively, and to understand the economic and social consequences of a congested network, seem only rarely to be recognised
- Funds are ring fenced too severely
- Schemes to improve knowledge transfer and understanding and address skills shortages have been cut
- Procurement of systems is far too complicated and is not helped by the absence of a National System Architecture to simplify both the purchase of products and their integration – it also favours large systems houses rather than innovative SMEs
- LAs seem reluctant to combine into larger consortia to share resources and knowledge

The following comments made by the Chairman of the Audit Commission Michael O'Higgins in announcing the publication of the 'Going the Distance' – Achieving better value for money in road maintenance' Report - May 2011 will be of interest to the Transport Committee members. His statements offer an independent assessment of traffic management by local authorities. He said, "Prevention is better than cure, but councils have to consider the safety and insurance risks of damaged surfaces" adding that "roads costs are rising while councils' belts are tightening." However he said that councils could be more effective at using the resources they did have, stating "Sadly we found collaboration between councils to be rare, with too few councils procuring in cost-saving partnerships."

Deployment of traffic management and ITS by Central Government

In general central government, as represented by the Highways Agency, has an excellent record of implementing advanced traffic management and ITS schemes – the success of the M42 ATM Hard Shoulder Running concept is internationally recognised – but this leadership is likely to be lost because:

- Central Government seems not to be thinking sufficiently strategically with virtually no long term view of where the transport technology, automotive and telecoms sectors are going. Electric vehicles seem to be the only focus, yet here too the link to congestion is missing.
- Despite the considerable public spending on transport technology there is no central centre of excellence able to advise on technically proven, cost-effective solutions in an analogous way to the NICE's advice to hospitals and GPs on medical treatments. Such a centre should be an essential complement to the Localism policy.
- There seems to be a reluctance to try new ideas – the fear of an unsatisfactory result in 3 cases in 1000 appears to dominate the chances of success in 997 cases. New problems need new approaches and a state of mind that does not try to stop an experiment with the argument that it has not been done before.
- The Government's wish to 'stop the war on the motorist' is recognised and understood but there appears to be an inability to differentiate between intervening and regulating in a sector on the one hand, and coordinating or supporting it by supporting best practice for local decision on adoption.
- The Government procurement process is sluggish and does not encourage innovative solutions nor participation by SMEs.

- There is a need to join up the thinking and actions of different Departments. For example, DCMS and BIS have proposed changing the allocation of radio spectrum, and stopping deployment of FM radio in favour of DAB. But there is no evidence of referral to transport policy regarding the widespread impact on 4 million satellite navigation devices that use RDS-TMC for live traffic updates – or the considerable cost implications for many millions of motorists forced to purchase new car radios.

Quantifying anti-congestion actions

There are recognised measures of success or performance indicators for most of the techniques described in this memorandum. The key requirement is to set a policy objective against which costs and benefits can be assessed and for ITS schemes generally this could be improved journey time reliability, increased network capacity, reduction in vehicle emissions, improving the average traffic speed for a specified time period, cutting average times for specified end-to-end journeys *etc.*

The FREEFLOW demonstration project, part funded by DfT and the Technology Strategy Board, is showing how largely the same technology can be used in London to help smooth traffic, in York to improve bus compliance with timetables, and in Kent to manage impacts from motorway closures by joining together existing tools.

The question should always be what objective does the local policy require – not what technology. For example TfL have recently shown that by plugging together a number of disparate systems they can obtain a far more intelligent picture of congestion, and so intervene to reduce it. The Architecture they have produced for doing this would form a foundation for all local authorities – appropriately scaled down – with different local policies. The benefits of deploying such a common architecture across the UK would be:

- More management of congestion from existing systems and evidence of the benefits gained to encourage local policy makers to continue investment
- The ability for the same resources to support more operational interventions against congestion, or the interventions to be undertaken with reduced investment; and
- The exchange of data between authorities and its delivery to other road users by a variety of means taking on board new technologies and supporting traditional channels like radio traffic news.

Why Government intervention is essential

The current approach to national traffic management has a strong reliance on each driver behaving in a socially aware and flexible way in full compliance with the spirit of the Highway Code. Such a philosophy has clearly been acceptable and successful in the past but it is not well suited to 21st century road conditions. Getting the maximum output from infrastructure investment requires managing more than a single length of road. A collection of linked roads has to be taken together as a network and the UK has pioneered this approach with initially SCOOT for small area traffic signals management and then UTMC (Urban Traffic Management and Control) for linked groups of networks. The benefits of SCOOT have been included in TRL's evidence [ETM 07] but in summary over 200 cities worldwide use it, saving 19% of delays in London when measured in 1985. Much of the quantified evidence for its use is old, but a recent study showed reduction of active delays with SCOOT were worth around £100K per junction per year to road users, as well as substantial carbon savings.

The responsibility for optimal network management has to be transferred from individual drivers' habits and preferences to an area-wide approach. Sustaining the maximum throughput, and avoiding congestion, on a complex network of roads including multi-lane roads such as motorways, requires active intervention on a wide scale. At a minimum, it requires the delivery of advice to drivers regarding prevailing conditions and expected trends. As traffic flows grow

steadily, it increasingly involves regulatory intervention by means of control of maximum permitted speed or access to the network or both.

No single organisation or group of local bodies can deliver this result; the policies and practices have to be set by central Government.

Removing barriers to progress – some 'Quick Wins' to improve traffic management and reduce congestion

Nearly all the ITS technologies are now well established and there is considerable knowledge regarding their usage either in the UK or easily accessible from research projects or deployments overseas. **So the barriers to their widespread use within the UK are not technical but administrative and financial**. While careful use of ITS products can generate real cash savings, rolling out Hard Shoulder Running or Traffic Management schemes requires 'real' money but the return is 'social' in the form of reduced emissions, better journey time reliability *etc*. Individual travellers or hauliers will then realise monetary savings from reduced fuel consumption or better returns from assets.

To address administrative barriers, ITS (UK) recommends Central Government should:

1. Maximise the productivity of the physical assets we have by:

   - Getting the private and public sectors working more closely together by avoiding the procurement 'Red Tape' and actively encouraging partnership solutions.
   - Reduce red tape also on Network managers so that they can focus on minimising congestion rather than minimising possible consequences of actions.
   - Making more use of Hard Shoulder Running and Variable Speed Limits.
   - Intervening when traffic is such that congestion might occur, but not interfering when it will not, for example:
     - Improving journey times by using variable speed limits in road works when traffic is very light or the workforce is absent, or between, say, 02:00 and 06:00 – to permit 10mph more than the "at work time", and
     - Managing mixed traffic separately (as is done with rail networks) by restricting PSVs or HGVs to lanes 1 & 2 only on 3+ lane carriageways and targeted controls at other times.
   - Reducing the numbers of trucks running empty by creating opportunities and incentivising cooperation and sharing.
   - Relaxing delivery restrictions so that more are made outside normal business hours with consequent benefit to networks at peak times and using technology to manage new ways of parking enforcement.
   - Introducing more goods consolidation sites to minimise the numbers of deliveries and thus the impacts on traffic flow.

2. Be more experimental: try new or experimental techniques on a small scale; monitor and assess their benefits and costs; then accept or reject them as part of the standard 'tool kit' and notify all highway authorities. M42 ATM is a perfect example of this.

3. Revise the HA's procurement approach to one based on buying the outcomes of technology, so that it doesn't focus on the process and technology itself but seeks to maximise the business objectives.

4. Make more use of data available from in-vehicle fleet management and other systems, especially smartphone applications and other devices that road users pay for themselves that can reduce the cost to the public purse of measuring congestion. A large proportion of HGVs is equipped with fleet management systems already, and soon

all trucks entering the UK from France will be equipped with GPS tracking as part of the Ecotaxe project there.

5. The opportunity to 'piggy back' on existing investment (*cf* the Ecotaxe note above) for distance related truck charging in the UK that could impact on congestion has not been taken up with the proposed time only vignette.

6. Adopt weather-related traffic management policies that intervene when required:

   - Reduce accident and incident risks by 'wet' speed limits on motorways and high quality 'A' roads *eg* 80mph if it is dry 60mph if it is raining as used in France
   - When trunk roads are seriously snowbound, empower network managers to clear just one lane thoroughly for priority commercial traffic

7. Encourage consolidation and sharing between Local Authorities

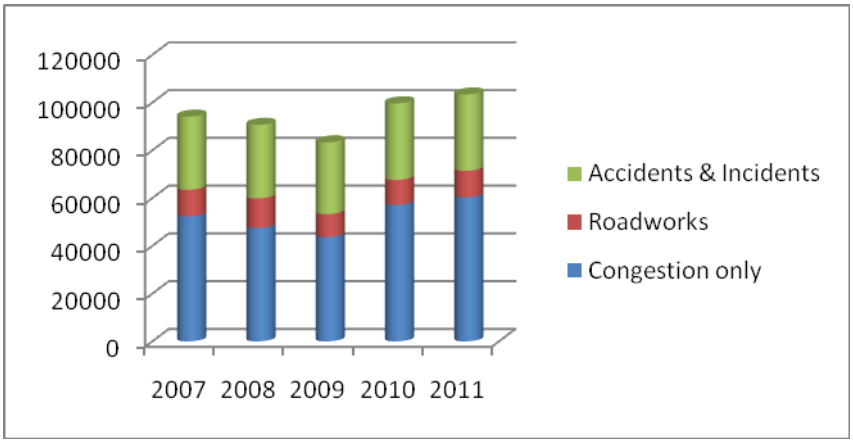
   - Many LAs manage very small areas with sub-optimal resources. There would be service benefits and cash savings if groups of LAs were to combine the investment needed in services that are flexible and scalable – many UTMC authorities have started to use "cloud computing" but there is a resistance in some authorities and the Highways Agency to not having " an asset to own ourselves in case things go wrong"
   - Promote more joining up of the HA and LAs to improve traveller services (*eg* County Council controlled variable message signs should provide information on congestion on nearby Motorways, rather than blank messages as now . This will need to ensure adequate revenue funding streams, to ensure that systems are updated and maintained at a frequency appropriate to developments in traffic and IT.

Above all, provide a central government led template for how existing road assets and technology, new and old, can support interventions to reduce congestion and carbon impacts. Some of the "medicines" – like SCOOT – have long proven their effectiveness, but local traffic managers need to know which new ones to prescribe alongside them and how to make them work locally. So we need the equivalent of NICE1 for congestion that also spreads knowledge and skills to new people entering the profession.

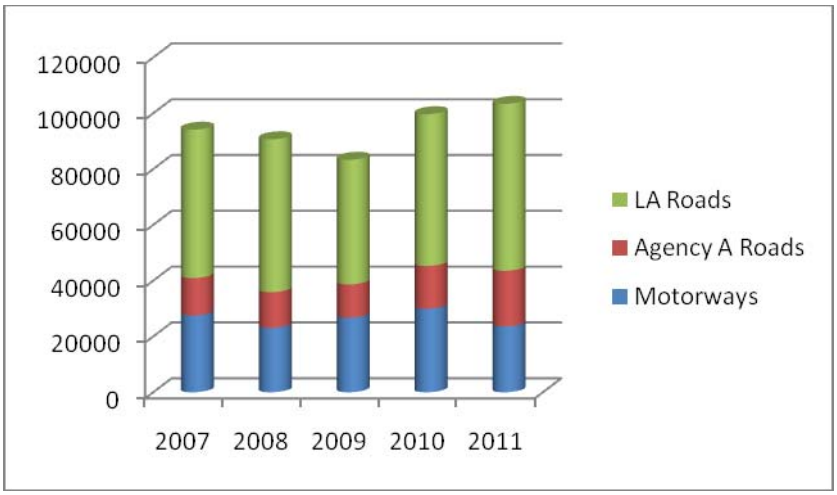
May 2011

[1] National Institute for Clinical Excellence

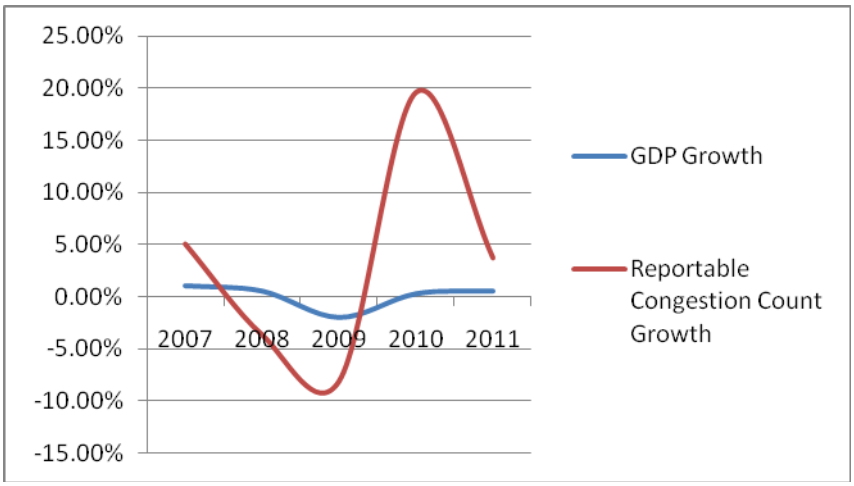
Annex 1: The causes of, and trends in, congestion across the UK – quarter on quarter 2007-2011



Q1s 2007-2011 reportable UK congestion incidents by type

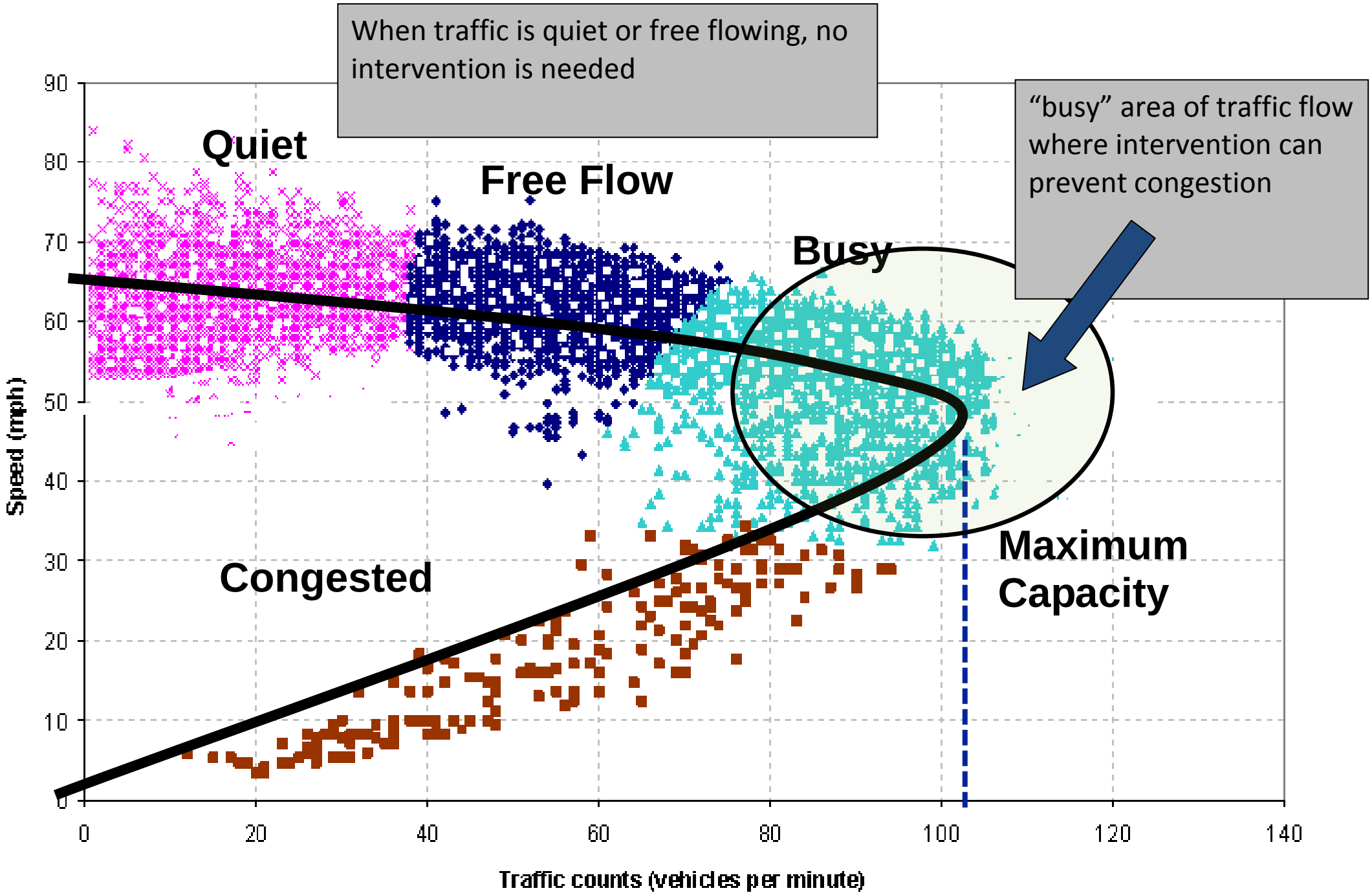


Q1s 2007-2011 reportable UK congestion incidents by road type



Q1s 2007-2011 Annual growth in reportable UK congestion incidents vs GDP growth

Data supplied by Trafficlink for all UK roads for individual numbers of validated reports of congestion – ie traffic jams impacting the public


When traffic is quiet or free flowing, no intervention is needed
"busy" area of traffic flow where intervention can prevent congestion
Quiet
Free Flow
Busy
Congested
Maximum Capacity
Speed (mph)
Traffic counts (vehicles per minute)
0
10
20
30
40
50
60
70
80
90
0
20
40
60
80
100
120
140

Written evidence from the Transport Research Laboratory (TRL) (ETM 07)

The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to day's road user of the highway code.

1. Safety for all road users is the highest priority for traffic management. The second highest priority is to achieve the most efficient roads that enable users to travel at their desired speed or if not, to have reliable journey times. This must not compromise the first priority. To achieve these priorities, new traffic management schemes must be intuitive such that they are adopted safely and appropriately by drivers. The majority of drivers do not take active steps to be trained in use of the road after licence acquisition and the developments in the licensing process (such as hazard perception tests and theory tests) mean that there is wide variety in the level of knowledge about use of the road across the driving population. Drivers become entrenched in their driving behaviour and may be not respond to traffic management features in the expected manner. Novel traffic management schemes must therefore be tested to ensure that the predicted behaviours are observed.

2. TRL has conducted numerous studies that investigate how proposed traffic management measures affect driver behaviour. Using the validated, high fidelity research driving simulator, drivers can be presented with new features in a naturalistic yet completely safe manner and their resultant behaviour examined in great detail. This enables traffic management designs to be tested in a manner that may be impractical, unsafe or too costly to test by any other means.

3. Examples of where this process has been applied include studies of the use of high occupancy vehicle lanes, hard shoulder running, single lane tolling, use of emergency refuge areas and behaviour through temporary traffic management schemes. As an example, the results of the hard shoulder running study demonstrated that drivers used the hard shoulder when it was opened as a normal running lane for longer and more confidently when a positive signal (a red X over the hard shoulder) was used to indicate when it was not open as a normal running lane. Similarly, the Highways Agency were provided with information about driver behaviour when entering, stopping within and leaving emergency refuge areas to improve their design.

4. The Managed Motorway concept uses a variety of tools to reduce congestion and improve journey time reliability. By using TRL's driving simulator, driver behaviour in response to different aspects of the Managed Motorway schemes has been tested providing the Highways Agency with confidence in designs that they may choose to implement.

5. The use of the driving simulator to conduct studies examining traffic management measures has enabled the Highways Agency to make efficient, evidence-based decisions about infrastructure developments before they are applied in the real world.

6. The driving simulator was also used in a study for Transport for London to examine the effects of video billboard advertising. The report demonstrated that drivers were significantly more distracted by video adverts and provided reliable evidence for TfL in responding to requests to install such advertising in conspicuous positions near busy roads.

7. The effects of fatigue on driving behaviour result in it being a contributory factor in a significant number of collisions. TRL have conducted reviews for the Department for Transport into the incidence, extent and effects of this problem.

Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times:

8. Over the past decade, significant advances have been made in the exploitation of on-road technology to tackle congestion on the strategic road network by making best use of the existing road space and managing traffic intelligently. The M25 Controlled Motorways and M42 Active Traffic Management pilots have proven successful at smoothing traffic flows and reducing congestion at hot spots on the network. The success of these schemes has led to a programme of Managed Motorway schemes to be rolled-out across the network in coming years.

9. The M25 Controlled Motorways scheme first introduced variable mandatory speed limits (VMSL) on a motorway. Monitoring and evaluation between 1995 and 2002 found that:
    1. Despite an increase in traffic levels, the amount of queuing has reduced and the number of shockwaves has decreased between 1995 and 2002 from typically 7 to 5 in the AM peak. Also noted is more balanced lane utilisation and a reduction in very short headways (References 1, 2)
    2. During the AM peak the total throughput has increased by 1.5% per year and peak 1-hour throughputs have reduced by 1% per year (Reference 3).
    3. On non-congested sections, VMSL will increase journey times, but leads to improved speed compliance and journey time reliability (Reference 2)

10. The M42 Active Traffic Management (ATM) pilot implemented VMSL in conjunction with dynamic use of the hard shoulder during periods of congestion or incidents. The scheme was opened for operation in March 2003, with full operation of 4-Lane VMSL commencing in September 2006. The outputs from a 12-month Monitoring and Evaluation period between 2006 and 2007 were published in 2007 (Reference 4) and include a comparison between the operation of 3-Lane VMSL between January and August 2006, and the case of no variable speed limits (VSL) prior to construction of the ATM scheme in 2002-2003. The key findings build on those reported for the M25 Controlled Motorway and are detailed in paragraphs 11 to 19 below:

Impact on traffic flows:

11. During 4-Lane VMSL, traffic congestion and the speed differential between lanes are reduced and there is a higher occurrence of free driving conditions (e.g. headways over 5 seconds). This indicates that 4-Lane VMSL leads to a lower workload for drivers. (Reference 4)

12. 4L-VMSL has improved the distribution of traffic between lanes, which is an indication of a better utilisation of the motorway. (Reference 4)

13. The operation of 4-Lane VMSL on the M42-ATM section has increased the observed capacity of the motorway by an average of 7% (compared to no VSL) and 9% (compared to 3-Lane VMSL). In general across the defined peak periods, analysis shows that there is spare capacity during 4-Lane VMSL operation. (Reference 4)

14. Speed limit of 50mph was the main contributor to modified traffic flow behaviour that could be exploited towards more efficient flow. 60mph has a rather moderate impact. 40pmh is used at high occupancies in interest of safety rather than flow efficiency.

Benefits to road users: Journey times

15. Due to the increase in demand and the introduction of variable mandatory speed limits with high compliance, there was an increase in average journey times of 9% between the no VSL and the 4-Lane VMSL cases. However, the analysis of secondary indicators has shown that 4-Lane VMSL prevented the occurrence of low speed levels and severe congestion. Therefore at the level of demand where it exceeds motorway capacity during no VSL (i.e. during recurrent severe congestion), 4-Lane VMSL will reduce the average journey times (Reference 4).

16. Compared to the 3-Lane VMSL case, 4-Lane VMSL has reduced average journey times during periods of recurrent severe congestion by up to 24%. (Reference 4)

17. Hard Shoulder Running (HSR) at 60mph reduces average journey times by 4% compared to HSR at 50mph. HSR at 60mph has increased average traffic speed by 5mph. (Reference 5)

Benefits to road users: Journey time variability

18. For 4-Lane VMSL, on average over all weekdays the variability of journey times has been reduced by 22% and 32% when compared to no VSL and 3-Lane VMSL respectively. (Reference 4)

Public perception of congestion

19. User consultation has shown that an extra 7% of users encountered no congestion on the M42-ATM section in 2007 compared to 2003. Further road user surveys conducted in connection with the pilot revealed that 68% felt more informed about traffic conditions. (Reference 4)

The impact of bus lanes and other aspects of road layout

20. Road capacity is limited and effectively shared by road users. At low flows delays to all vehicles are relatively small. However, as flow approaches capacity traffic delays and queues increase. The main limiting factor on capacity occurs at junctions where it is shared by more than one road. Bus lanes, high occupancy lanes, shared use lanes (e.g. with heavy goods vehicle) all have the same underlying purpose. This is to re-allocate the available capacity to specified “priority” vehicles included in the scheme. It will therefore aim to reduce the delay and increase speeds of these vehicles. Further, of particular importance to bus services, is the improvement to reliability of journey times. One of the main aims of such improvements is the relative improvement of the mode which can increase use, i.e. bus patronage.

Effect of bus lanes

21. An important aspect of a bus lane is the distance it is set back from the junction: i.e. the distance between the end of the bus lane and the junction’s stop line. If it is too close to the

junction then although buses will gain a journey time advantage, other traffic will be greatly delayed owing to the reduction in junction capacity, and this can be counter-productive as if the non-priority traffic queue increases beyond the start of the bus lane, it can prevent buses using the lane. Too far back and the bus lane will result in little benefit for buses. There is therefore a balance to be found.

22. The results in paragraphs 23 to 27 have been collated from previous research to indicate the ability of such schemes to deliver benefits to priority vehicles and their effect on other non-priority road users. Reference 7 was a literature review on the subject.

23. Three major changes were made to the road network along Shepherd's Bush Green Road in 1993, including a bus lane, pre-signals and a bus gate. Afterwards, buses mainly ran closer to their timetables over the section of the routes surveyed, and there was less variability in departure times. Improvements of up to 55.3% (1.5 minutes) in the difference between actual and scheduled departure times were observed (Reference 6).

24. Bus lanes do not necessarily deliver observable improvements to bus journey times or reliability. A scheme in Birmingham found no significant improvements in bus arrival times at their destination, or improved regularity in bus headways were found (Reference 6).

25. Overall, bus priority schemes in the United Kingdom have previously been found to have only managed to reduce bus journey times by one or two minutes, and have not made them faster than travelling by car (Reference 6). Changes in patronage due to a bus lane alone were found to be generally small in a literature review. In six references where it was not affected by other factors the lane only stemmed an overall decline in two cases and increased patronage by 5 to 6 percent in three others (Reference 6).

26. However, large scale bus priority measure along a corridor have been found to create journey time improvements. A scheme on the A47 Hinckley Road in Leicester introduced bus lanes over 4.5km (Reference 7). The bus priority measures had a minimal effect on car journey times; during the morning peak they dropped by 5% in the inbound direction and during the evening peak they increased by 2% in the outbound direction. But there were significant improvements in bus journey times; a 22% drop in the AM peak (from 23 to 18 minutes) and 23% in the evening. Limited stop park and ride buses can cover the distance to and from the city centre nearly one and a half minutes faster than a car.

27. A combination of bus improvements can have a greater effect. The West Midlands Bus Showcase included introducing bus lanes in addition to increasing service frequency, improving bus stops, introducing real time information and strict enforcement of stopping restrictions. The effects of these enhancements have varied between routes, but bus patronage increased a maximum 38%, and there was a 5 percent mode shift from the car (Reference 8).

Shared use of bus lanes

28. Permitting heavy goods vehicles into two bus lanes in London had no effect on bus operations or safety: the conditions observed were low bus flows (up 20 per hour) and moderate heavy goods flows (up to 60 per hour) and 55% of link capacity in use. However, many heavy goods vehicle drivers did not use the lane as it did not offer a journey time saving (Reference 9))

29. Motorcycles were permitted to use bus lanes in London. This should permit them the same benefits as buses. The scheme was monitored, and it was found that bus speeds were unaffected and motorcycle speeds increased, and there was an increase in the percentage of motorcycles exceeding the speed limit. Also, collisions involving motorcycles and cyclists had increased, which were generally with cars and through poor observation.

Other aspects of road layout (with respect to buses)

30. Research into the effect of removing bus lay-bys found that buses were able to stop close to the kerb at virtually all stopping events at some sites, and this was accompanied by fewer passengers needing to step into the road when boarding and alighting. Passengers were able to board the buses faster. Fewer buses were hemmed in by traffic and overall the reduction in bus delay at a stop ranged from 2 seconds to 4 seconds depending on traffic flow. The variation in the stop time of buses was also reduced (References 10).

31. Research into introducing bus boarders found the percentage of buses stopping close to the kerb increased, and resulted in significantly fewer passengers stepping into the road when boarding and alighting (Reference 10). There was a slight reduction in boarding and alighting times of 0.1 seconds and fewer buses were hemmed in by general traffic at the full width boarder sites. Overall bus delays were reduced by 1.3 to 1.8 seconds.

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January 2011

Written evidence from David Metz (ETM 08)

Summary

1. The main problem with traffic congestion is the uncertainty of journey time. The best way of tackling this is to provide sufficiently good predictive journey time estimates to drivers before they set out. Such an approach is increasingly feasible, taking advantage of a variety of technology developments and commercial initiatives.

Prevalence and impact of traffic congestion and likely future trends.

2. The extent and impact of traffic congestion is less than is usually supposed. Recent surveys on public attitudes to road congestion commissioned by the Department for Transport (DfT) find that over four in five adults thought that congestion was a serious problem in the country. However, only a quarter reported that congestion was a problem all or most of the time on their most frequent journey, on motorway journeys or on all journeys.[1] DfT's measure of inter-urban congestion – journey time reliability – has been flat over the past five years at around 4 minutes delay per 10 miles.[2]

3. Trade associations often talk up the impact of traffic congestion on businesses, perhaps because this is a non-contentious issue for their members. For instance, the CBI cites an annual cost to business of £7-8bn.[3] However, congestion is found to be responsible for only about a quarter of all delays in road freight transport, and only a quarter of logistics managers regard traffic congestion as the main cause of unreliability.[4] There is little evidence that congestion has caused companies to restructure their manufacturing and/or logistic systems. Companies have been able to adapt their operations to the slow growth of congestion over time, taking advantage of IT developments and utilising the skill and resourcefulness of logistics managers. So the costs of congestion should not be over-emphasised.

4. As regards future trends in traffic and congestion, personal daily travel, as measured in the National Travel Survey, has been steady since 1995 at 7000miles and 1000 journeys per person per year (excluding international aviation), and there is no reason to expect this to increase in the future.[5] Road freight (tonne-km) also ceased its rising trend in the mid-nineties.[6]

Alleviation of traffic congestion.

5. Experience has shown that it is not possible to build our way out of congestion. Road users take advantage of the higher speeds initially possible on widened roads to travel faster and thus further in the time they have available. The National Travel Survey shows clearly that average personal travel time has

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[1] http://www.dft.gov.uk/adobepdf/162469/221412/221513/roadcongestion.pdf

[2] http://www.dft.gov.uk/pgr/statistics/datatablespublications/roads/congestion/latestinterurban/interurban2010a.pdf

[3] http://www.cbi.org.uk/pdf/20100315-cbi-tackling-congestion.pdf

[4] http://cfit.independent.gov.uk/pubs/2010/tco/think05/index.htm

[5] D Metz (2010) 'Saturation of demand for daily travel', Transport Reviews 30(5), 659-674

[6] DfT Road Freight Statistics 2009

remained unchanged at about an hour a day for over thirty years. Hence the benefits of investment in road infrastructure have been taken as greater access, not time saving. The increased length of trips adds to traffic, so that congestion is little changed in the long run.

6. Road pricing is seen as politically difficult. So what options are there to alleviate traffic congestion?

7. When asked in the surveys commissioned by the DfT why motorway congestion is a problem, the main reason given is that it makes journey times uncertain. The most common action taken to avoid such congestion is to set out at a different time from the preferred time.

8. Accordingly, the main problem with traffic congestion is uncertainty, not speeds slower than free flow. Such uncertainty could be reduced by better information about expected journey times in advance of the trip, without the need to tackle congestion as such. Road users would take advantage of better information by allowing the necessary amount of time, or by changing the starting time (as they do at present, but based on better information). The aim would be to put the generality of road users in the position of freight hauliers using the latest technology (see para 3 above).

9. There are a number of technological developments that are facilitating the prediction of journey times under congested conditions, in particular, digital maps, GPS positioning of vehicles, devices for locating slow moving traffic, and computational algorithms for predicting future traffic flows.[7] Existing services to road users provide optimal routing and estimated journey times, mostly based on historic traffic data, but increasingly using real time data. There are now offerings that include predictive traffic information.

10. The predictability of journey times depends on the variability of traffic flows. Advantage can be taken of developments in the management of the road network, including variable speed limits, ramp metering, and swift incident management. These measures promote the smooth flow of traffic, both to optimise system efficiency, the traditional reason for introduction, but as well to improve the accuracy of traffic forecasts.

11. There is a significant amount of activity in both private and public sectors aimed at providing better information to travellers, but uptake is slow. Building on current experience, there is a scope for a governmental initiative to foster the development of technology applications that would lead to the more efficient use of the road network. Research is needed to develop models which might be used to estimate economic benefits, and data in respect of behavioural responses to traffic information that would be needed to calibrate such models. Accordingly, there would be a case for a research initiative designed to advance our knowledge of these matters, as well as to explore a public/private approach to deployment.

Recommendation

12. A government initiative would be desirable to assess the benefits to road users of predictive journey time information and to explore a public/private partnership approach to deployment of the relevant technologies.

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[7] http://www.limitstotravel.org.uk/documents/Metz_PN_draft_22-10-09.pdf

January 2011

Written evidence from London TravelWatch (ETM 09)

1 Introduction:

London TravelWatch is the official body set up by Parliament to provide a voice for London's travelling public, including the users of all forms of public transport. Our role is to:

- Speak up for transport users in discussions with policy-makers and the media;
- Consult with the transport industry, its regulators and funders on matters affecting users;
- Investigate complaints users have been unable to resolve with service providers, and;
- Monitor trends in service quality.

Our aim is to press in all that we do for a better travel experience all those living, working or visiting London and its surrounding region.

2 The Inquiry

London TravelWatch welcomes the Transport Committee's inquiry into effective road and traffic management, in the light of the Government's decision not to introduce road pricing on existing roads (except in relation to HGVs).

London TravelWatch's non- rail remit covers only the Greater London Authority area and so this memorandum only considers urban road and transport networks.

3 Should Government and local authorities intervene to alleviate congestion?

Although it is difficult to make objective statements about acceptable levels of congestion we know that it is an issue for Londoners. The most recent research into the views of Londoners is the 2009 Londoner survey[1] which asked two questions (Appendix A) about Londoner's views on traffic and congestion. The responses demonstrate that Londoners see tackling congestion as a fairly high priority.

London TravelWatch's own most recent research amongst bus passengers was reported in March 2010: *Bus passenger's priorities for improvement in London.* The report can be found at *http://www.londontravelwatch.org.uk/document/4152/get*. This research demonstrated that bus passengers top concern was punctuality of bus services, followed by frequency. Both are affected by road traffic conditions.

Additionally we know from Transport for London (TfL) research[2] that forecast levels of population and economic activity will lead to higher travel demand, some 4 million more journeys by 2025.

The work undertaken as part of the development of the Mayor's Transport Strategy[3] demonstrates that congestion levels will rise in London by 14% by 2031 even if all of the policy measures and infrastructure suggested is delivered. London TravelWatch has been previously told that rising levels of congestion will impact on bus journey time schedules[4] of the order of 13% in the planning period 2006 to 2016, see Appendix B.

London TravelWatch believes addressing present and forecast congestion on London's roads is important for its social, environmental and economic development and that Government and local authorities can and should intervene to alleviate congestion. Though without road user charging, as one of the tools at its disposal, it is difficult to understand how congestion on London's roads will be managed given the increasing population and economic activity in London and the south east.

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[1] **http://www.london.gov.uk/get-involved/consultations/annual-london-survey/2009**
[2] **Transport 2025, - Transport vision for a growing world city, Mayor of London (previous administration)**
[3] **Mayor's Transport Strategy, public draft, October 2009**
[4] **Presentation to London TravelWatch by the TfL bus priority team, May 2007**

Like all urban areas, London's streets perform many functions in addition to their transport function: business is transacted; leisure time spent and utilities run through them. Tackling road traffic congestion cannot be accomplished without consideration of all these uses of London's streets. Effective road and traffic management is clearly complex in an urban context, particularly in a London where demand for travel is high and set to rise.

London TravelWatch supports road user / congestion charging. We have seen congestion levels reduce in the central area and consequential benefits delivered in London for all users. Following on from the introduction of the central area scheme bus performance, as measured by TfL,[5] improved, cycling rates (measured both by DfT and TfL) started to rise dramatically.[6]

As such we are disappointed that progress is not being made on the wider implementation of road user / congestion charging, albeit using more sophisticated technology than the central London scheme. That said, the Mayor's Transport Strategy accepts the possibility of the wider use of congestion charging at some point in the future. This is welcome.

In the absence of charging in London in the short and medium term we believe it is therefore necessary that local government, both the GLA and the London boroughs continue to implement traffic management schemes that tackle congestion and make the best use of the available road space by:

I) Prioritising the bus
II) Integrating land –use planning with transport
III) Managing demand by parking controls and pricing
IV) The re-allocation of road space to the sustainable modes
V) Improving the public realm to promote the sustainable modes
VI) Managing demand by improving and promoting the alternatives to the private car

4 Effective traffic management in London

4.1 Prioritising the bus

The improvement in the performance of London's bus network has been, without doubt, London's greatest transport achievement. Not simply because passengers can now much more reliably expect the bus will turn up on time, but because the bus service in London covers the whole of London, it is almost universally accessible and it operates 24/7, 364 days a year. **No other transport network in London can claim any of this.**

The reason for improvement has been fourfold:

- Operator contracts that include financial incentives and penalties
- A high level of public investment and pro-active management from TfL
- The central area congestion charging scheme
- A decade of development of bus priority schemes

TfL have produced the graph below to demonstrate how space efficient the different modes are. Clearly the bus outperforms all other vehicular modes. It is this that underpins the rationale for bus priority in London where there is limited road space and very little prospect of creating more – the bus makes best use of existing road space.

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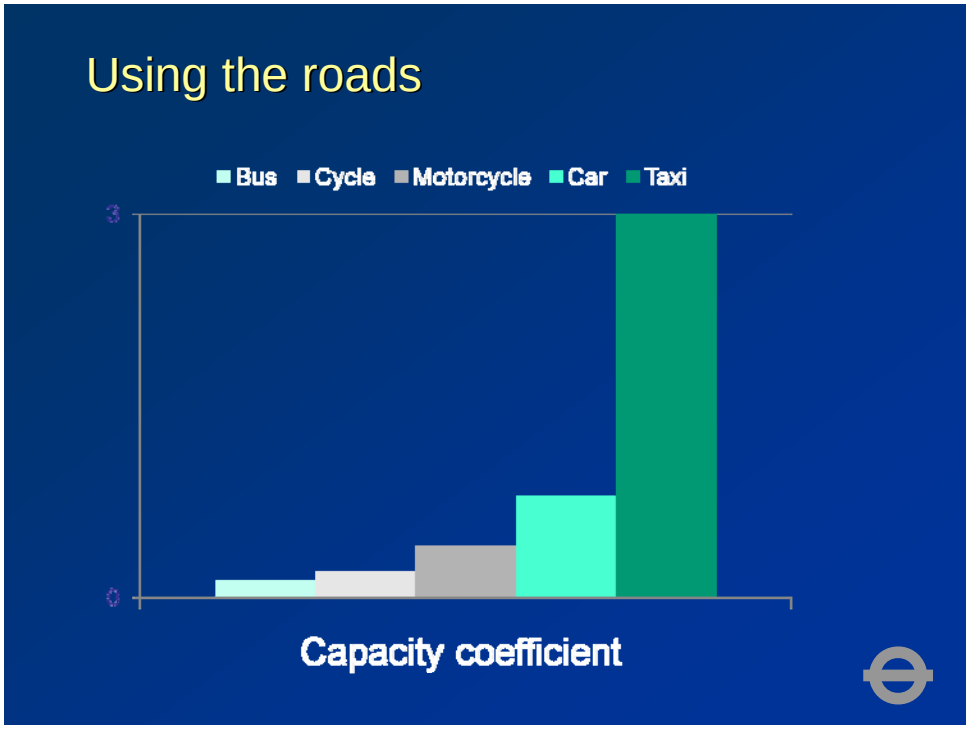
[5] TfL's Congestion charging, 6th annual impacts monitoring report, July 2008, See Appendix D
[6] http://www.tfl.gov.uk/assets/downloads/corporate/travel-in-london-report-3.pdf, figure 2.11 and Appendix C



[Taken from a presentation to London TravelWatch in October 2008 by TfL's Head of Traffic Manager's Office]

Bus lanes, bus only roads are effective, but only the most visible form of bus priority. Traffic signals that detect buses are effective, as are bus gates. Simply introducing waiting controls on bus routes where there are delays to buses and introducing parallel bus stop clearways, in order that buses and their drivers can properly pull in at stops are also measures beneficial to bus performance.

4.2 Integrating land–use planning with transport

Transport is a means to an end. Continuing policies that focus high trip generators in town centres or at locations well served by public transport is vital.

London TravelWatch has done much work looking at hospital travel. It is clear that the travel consequences of the locational decisions of hospital authorities has often not been considered. This has resulted in hospital sites with high travel demand that will always be poorly served by public transport[7].

Capping parking in new development that is highly accessible to public transport and encouraging low car ownership in high-density urban areas will help reduce congestion.

4.3 Managing demand by parking controls and pricing

Parking controls reduce the number of short trips and encourage the use of the more space efficient modes. It can reduce demand for kerb space where it is high and thereby enable the prioritisation of moving over stationary traffic. It will improve the local environmental quality and thereby improve the pedestrian environment.

4.4 The re-allocation of road space to the sustainable modes

In London transport users have benefited in a variety of ways from the re-allocation of road space. This can take the form of bus priority, more pedestrian crossings or redesigning traffic junctions and systems such that cyclist feel safer for example, etc.

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[7] A good example is the relocation of the Queen Elizabeth Hospital, Woolwich

4.5 Improving the public realm to promote the sustainable modes

Historically our streets have been designed by traffic engineers and traffic models. Accommodating motor vehicles has been the priority. This has led to efficient traffic schemes, but unattractive and hostile streets for pedestrians and cyclists. Looking again at how streets are designed and considering the needs of pedestrians and cyclists will, London TravelWatch believes, lead to higher levels of cycling and walking and thereby relieve traffic congestion.

4.6 Managing demand by improving and promoting the alternatives to the private car

TfL and London's local authorities have done some excellent work by raising travel awareness and thereby encouraging modal switch to the more space efficient modes. It is not an area being directly investigated by the Transport Committee, but is raised here in order to caution that, whilst we support such programmes, research by the DfT[8] indicates that the benefits of such measures need to be 'locked-in', i.e. there needs also to be complementary traffic management measures, such as bus lanes, to ensure road space released by these softer measures is not simply taken up by new, additional private car journeys.

5 Traffic Management Act 2004

The Traffic Management Act 2004 has led to mixed outcomes in London. It has certainly meant better co-ordination of streetworks and other possible disruption to traffic. There is more information available to users through TfL's LondonWorks website[9].

However, it has led to less progress on traffic management schemes that might promote the the use of the more space efficient, sustainable modes and thus reduce congestion in the medium and long term. This is because TfL's approach to the Act was to adopte a Network Management Plan policed by a Network Assurance team. The approach is traffic engineering / road capacity led and has put more hurdles in the way of introducing schemes that may, in the medium to longer term address congestion. The approach has favoured schemes that maintain motor vehicle capacity as opposed to promoting people movement, by, for example equating one bus to two private cars in the models used. This makes no sense to us..

In contrast the London Borough of Camden's Network Management Plan[10] takes a much more rounded approach than TfL and notes:

> "Network management is one element of an authority's transport activities…."

6 Summary and Conclusions

Londoners regard tackling traffic congestion on their streets as a high priority. London government should continue to prioritise this and implement schemes of traffic management to address the issue.

Against a back drop of rising travel demand and without the extended use of congestion / road user charging it is difficult to see how improvement may be achieved.

That said, the approach London has hitherto taken has been effective and remains valid. It is in our view the best approach, alongside investment in public transport

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[8] **DFT reference http://www.dft.gov.uk/pgr/sustainable/smarterchoices/ctwwt/smarterchoiceschangingtheway5769**

[9] **http://public.londonworks.gov.uk/roadworks/?x=S9XWSyIbXEFxfhn-IkAk9A**

[10] **Camden's Network Management Plan : http://www.camden.gov.uk/ccm/cms-service/stream/asset/?asset_id=397883**

infrastructure, that will improve the quality of life of Londoners, improve the economy and respond to environmental constraints.

Appendix A

Two questions taken from the Londoner Survey, 2009

Q56 PRIORITIES FOR LONDON

SHOWCARD What two or three things do you think should be the top priorities to improve London as a place to live?

	%
Crime and safety	**37**
Policing	**33**
Education and training	**22**
Health service	**17**
Improved public transport	**17**
Traffic congestion	**16**
Local environment	**16**
Affordable housing and property prices	**15**
Job creation	**14**
Youth Opportunities	**8**
Economy	**9**
Businesses	**2**
Climate Change	**2**
Other	**5**
None of these	**4**
Don't know	**5**

Q34 TRANSPORT

SHOWCARD Looking at this card, which, if any, of these aspects of transport in London do you think are most in need of improvement?

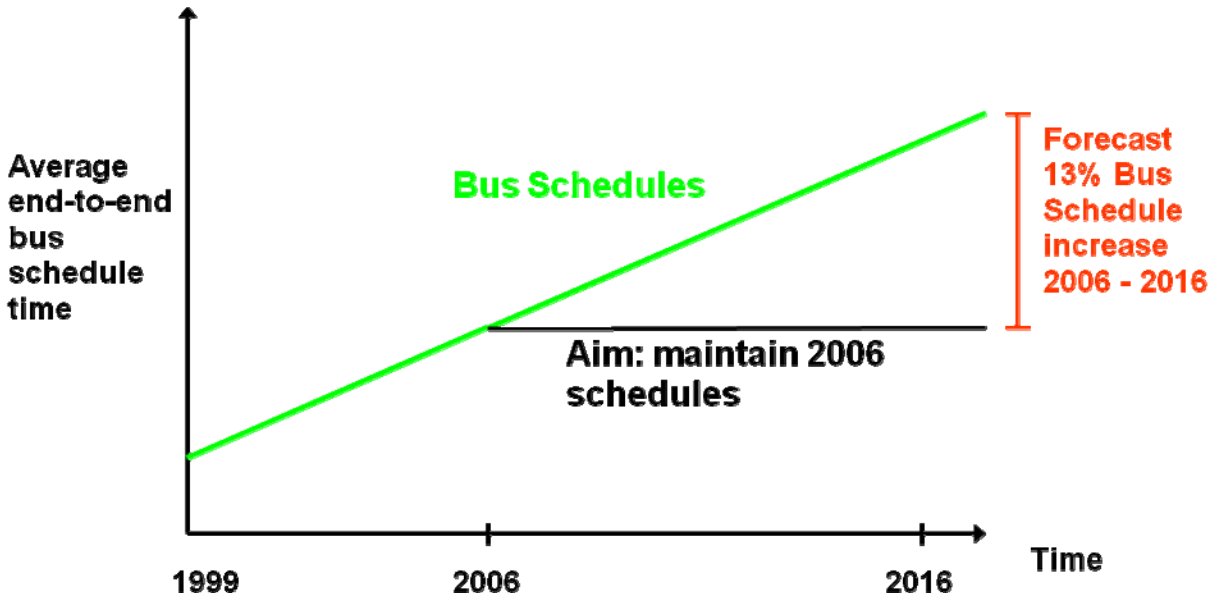
	%
Cheaper bus and tube fares	**36**
More reliable buses and tubes	**32**
Reducing traffic congestion	**31**
Measures to reduce overcrowding on the tube	**17**
Measures to reduce overcrowding on the buses	**15**
Less pollution from traffic	**12**
Improved personal safety on buses, the tube and trains	**12**
A more integrated/cohesive transport system	**11**
Measures to reduce overcrowding on the trains	**11**
More investment in improving London as a place to cycle	**8**
More investment in improving London as a place to walk	**5**
Other	**5**
None of these	**16**
Don't know	**6**

Appendix B

Slide taken from presentation by the TfL bus priority team, May 2007

Congestion on the network is increasing, impacting on bus journey time and reliability

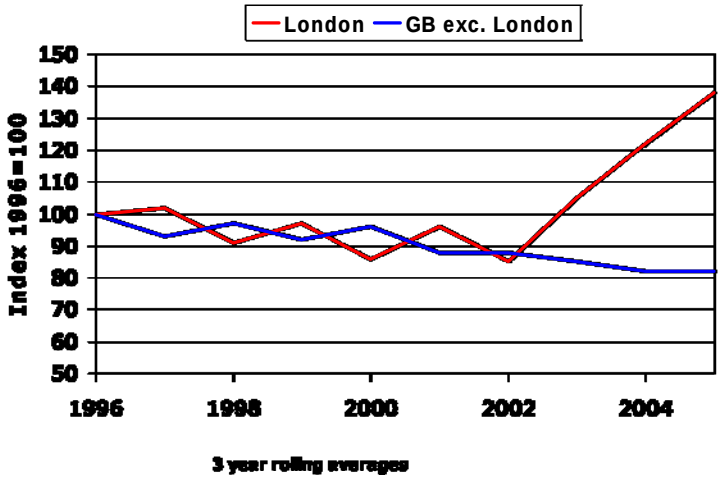
Bus schedule journey time is expected to rise by approx 13% over the next ten years.



Appendic C

Slide taken from the DfT National TravelSurvey

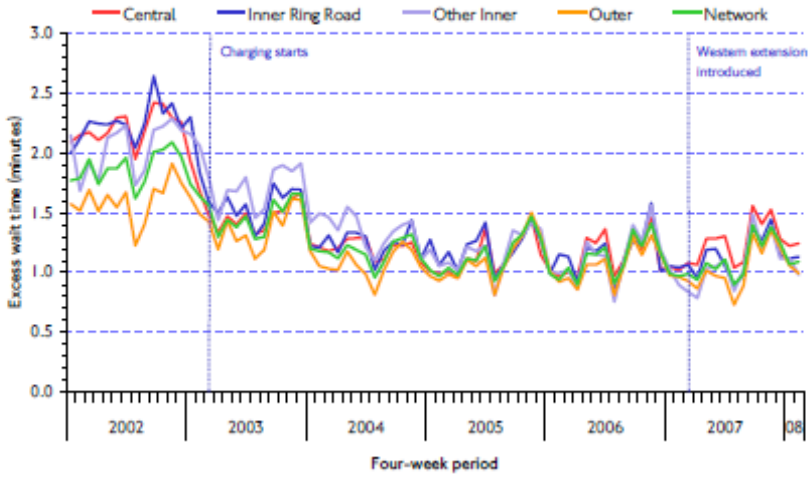
Trends in distance cycled, London and rest of GB



Appendix D

Taken from TfL's Congestion charging, 6th Annual Impacts Monitoring Report, July 2008

Figure 5.7 Bus excess waiting time – high frequency routes in and around the original central London charging zone. Weekday charging hours, 2002 to 2008.



January 2011

Written evidence from Passenger Focus (ETM 10)

Summary

A As a consumer organisation Passenger Focus brings an evidence-based approach to all of our work, researching the views and experiences of bus passengers, publishing our findings and discussing them with bus operators and local authorities with a view to promoting improvements.

It is clear from our research that improving punctuality is the highest priority for bus passengers. In March 2010 we published a report on *Bus passenger priorities for improvement*, reflecting the views of 3,800 bus passengers. Passengers were asked to rate 30 criteria. The statement "more buses are on time or within five minutes of when they are scheduled to arrive" came top.

B More people will choose to travel by bus if it is made more attractive to do so. Our research into *Barriers to Bus Use in Milton Keynes* indicates the range of improvements that would be required to get more people to travel by bus. One of these barriers is poor punctuality; across the country, getting more buses to turn up on time is the single most important improvement that passengers are looking for.

C The amount of traffic on the road is the biggest single reason for passengers being dissatisfied with the length of time their journey is taking. There is a need for more and better information about the punctuality of buses to be put in the public domain.

D Passenger Focus is in the process of developing a project designed to help the bus industry and transport authorities to work together to bring about improvements in the punctuality of local bus services. We aim to understand more about what is holding up the bus and the practical impact of different approaches to regulate and reduce street works, and also to review the impact of bus priority measures.

E While the average number of passengers travelling on each bus has fallen to just over 10, the typical bus makes a contribution to tackling congestion, a contribution which could be increased if existing passengers can be retained and new passengers persuaded to leave their cars behind and take the bus instead.

1 Introduction

1.1 Passenger Focus is the statutory watchdog for bus passengers in England (outside London). Under the Passengers' Council (Non-Railway Functions) Order 2010 it has a duty to keep under review and investigate bus services and facilities.

1.2 We bring an evidence-based approach to all of our work, researching the views and experiences of bus passengers, publishing our findings and discussing them with bus operators and local authorities with a view to promoting improvements.

2 Growth of the car, decline of the bus

2.1 Over the last half century we have witnessed a dramatic growth in the use of the private car at the expense of the public bus. According to Government figures, in 1952, 92 billion passenger kilometres travelled by bus and coach in Great Britain, representing 42% of all passenger kilometres (compared to 58 billion by car, representing 27% of the total); rail passengers travelled 38 billion kilometres, representing 18% of the total). By 2007, the most recent year for which there are complete figures, the bus and coach figure had dropped from 92 billion to 50 billion, representing a low of just 6% of all passenger kilometres (although the actual number of kilometres has risen from a low of 43 billion in 1995 and 1996). Over the same period, car journeys have increased their share of passenger kilometres to 84% (685 billion passenger kilometres), while rail passenger journeys increased to 59 billion kilometres, representing 7% of the total. Rail journeys had declined to 31 billion kilometres in 1982, but have since surged ahead of bus and coach.

2.2 At the same time, the average number of passengers travelling on each bus has been falling, resulting in a less efficient use of road space. In October 2009 TAS published a report on *The Economics of Bus Operation and the Prices People Pay*. This found that the average load on each bus has fallen from just under 27 people in 1955 to just over 10 in 2007/08, although this average masks very considerable variations with high loadings on radial routes in cities at busy times.

2.3 However, even at these average loadings, the typical bus makes a contribution to tackling congestion, a contribution which could be increased if existing passengers can be retained and new passengers persuaded to leave their cars behind and take the bus instead.

3 Encouraging modal shift from car to bus

3.1 Passenger Focus is a consumer organisation. We do not campaign for people to be discouraged from travelling by car. If bus travel is made more attractive, more people will choose to travel by bus. By sharing our research with bus operators and local authorities we hope to bring about such improvements.

3.2 In July 2009, we published *England-wide concessionary bus travel: the passenger perspective*[1]. The full report is available at: http://www.passengerfocus.org.uk/bus/news-and-publications/document-search/document.asp?dsid=4409. We found strong evidence that concessionary bus travel has encouraged greater bus use by pass-holders, particularly in their local area; the vast majority of these additional bus journeys represent modal shift from car to bus:

- over a third (39%) said they travel more by bus within their local area since they obtained a concessionary pass.
- in comparison, about one in eight (13%) of pass holders reported making more journeys by bus outside of their local area following the introduction of the free national bus travel entitlement.
- amongst pass holders who were using their pass to travel outside their local area, 35% were undertaking journeys by bus that they had previously made by car.

[1] England-wide Concessionary Bus Travel: the Passenger Perspective, passenger Focus, July 2009

12% were making journeys by bus that they had not previously made by any means, prior to the new concession.

3.3 In December 2010 we published *Barriers to Bus Use in Milton Keynes*, a piece of qualitative research among non users and lapsed users[2]. The full report is available at: http://www.passengerfocus.org.uk/bus/news-and-publications/document-search/document.asp?dsid=4811. Many found actual bus journey times faster than expected and valued being able to get off right in the city centre rather than having to look for (and pay for) a parking place further away, but the time getting between their home and the stop, and waiting for the bus, gave car travel a significant advantage. The report catalogues a wide range of other barriers which, if overcome, would result in modal shift, which would help to tackle congestion through a more efficient use of road space.

4 Punctuality of buses

4.1 It is clear from our research that improving punctuality is the highest priority for bus passengers. In March 2010 we published a report on *Bus passenger priorities for improvement*, reflecting the views of 3,800 bus passengers[3]. Passengers were asked to rate 30 criteria. The statement "more buses are on time or within five minutes of when they are scheduled to arrive" came top. The full report is available at http://www.passengerfocus.org.uk/bus/news-and-publications/document-search/document.asp?dsid=4393

4.2 It is also clear that passengers are less satisfied with the punctuality of buses than they are with many other aspects of bus travel. In July 2010 we published the results of our first *Bus Passenger Survey*, reporting on the views of 18,500 passengers across 14 areas of the country[4]. The full report is available at http://www.passengerfocus.org.uk/bus/news-and-publications/document-search/document.asp?dsid=4386
Key findings were:

- Overall passenger satisfaction with their bus journey ranged from 84% to 92%
- The proportion of passengers satisfied was generally lower for the length of time spent waiting for the bus (68%-82%) and whether the bus arrived on time (67-84%)
- Passenger satisfaction with the length of time their journey took ranged from 76% to 86%

4.3 Poor punctuality also represents a barrier to persuading more people to leave their cars behind and take the bus instead. The perception that buses could not be relied

[2] Barriers to Bus Use in Milton Keynes, Passenger Focus, December 2010
[3] Bus Passenger Priorities for Improvement, Passenger Focus, March 2010
[4] Bus Passenger Survey, Passenger Focus, July 2010

on to turn up on time put off a number of the passengers we talked to in Milton Keynes, making some of them feel that this made them unsuitable for going to work or other time-critical journeys.

4.4 It is hard to comment objectively on the punctuality of buses since, in contrast to the rail industry, the publication of punctuality data is poor. However, the Department for Transport has compiled tables from data submitted on national indicators (NI) by local authorities to the Department for Communities and Local Government. NI 178 covers the punctuality of buses. The most recently available figures relate to the year 2009/10. These show that:

- for timetabled services, seven out of 81 local authorities (all of them unitary authorities) failed to achieve the absolute minimum threshold established by the traffic commissioners of 70% of services arriving at intermediate timing points no more than one minute early or five minutes late, while only three achieved the standard of 95% on time.

- for frequent services (those that are scheduled to run at least every ten minutes) just over half of the authorities completing returns achieved the traffic commissioners' target of keeping excess waiting time (the average time that an intending passenger waits longer than the average scheduled wait) down to 1¼ minutes or less, with just under half failing to achieve the target.

4.5 However, punctuality data is only published by local authority area. In order for it to be really useful, data needs to be made available disaggregated down to route level. It is surprising, and disappointing, that bus operators (and local authorities) are not required to account publicly for their performance in exchange for the £2.5 billion p.a. of public money from which they benefit. In the meantime, it is important that the Government continues to collect and publish punctuality data against NI 178.

4.6 Neither are we able to draw on published data on the impact of congestion on bus punctuality levels, since in contrast to the rail side, reasons for delays are not published. However, we do ask about the role of traffic congestion in holding up the bus in our *Bus Passenger Survey*. Across the 14 areas we surveyed, 41% of all those dissatisfied with the length of time the journey took identified the amount of traffic on the road as a reason for their dissatisfaction (46% across the four PTE areas surveyed, 58% in Greater Manchester, 51% in Cambridgeshire and in West Yorkshire) – more than any other single reason identified.

5 Improving punctuality of buses

5.1 In order to address this gap in understanding, Passenger Focus is this year developing a project designed to help the bus industry and transport authorities work together to bring about improvements in the punctuality of local bus services. Our intention is to select a sample of bus routes across the country and to analyse the available data with a view to identifying exactly when and where the bus is being held

up, and by what. Working through reinvigorated local Punctuality Improvement Partnerships we would then move on to develop joint action plans to tackle the problems. We would intend to publicise the conclusions and disseminate the lessons widely.

5.2 As part of this work, we aim to study the impact of bus priority measures of all kinds and the scope for extending them. Our position on bus priority measures is:

- We support in principle any measure which reduces bus journey times and makes them more predictable and attractive.

- Bus priority measures, such as well-enforced bus lanes and priority for buses at junctions, may offer these benefits if deployed in the right place at the right times; this will usually be in urban areas, on principal routes, where traffic congestion is likely to be at its worst

- Bus priority measures should be justified by projected and actual improvements in journey time, when compared with journey times on the same routes without the measures; and time should be given for enforcement regimes to settle down before they are reviewed. There should be full transparency of the evidence used as the basis for introducing or withdrawing bus priority measures over the whole catchment area of the affected bus services

- Bus lanes should be clearly marked. Clear and prominent signs should indicate times of operation and vehicles permitted in the bus lane during those times

- To be fully effective, appropriate sanctions need to be introduced for driving or stopping in bus lanes, and these need to be enforced when infringements take place. Cameras mounted on buses, and camera cars, have proved very effective in deterring unauthorised parking at bus stops and in bus lanes.

- Other measures designed to make bus journeys faster and more predictable should be considered, e.g. smart ticketing and changes to vehicle design to speed up boarding, improving junction design, improved coordination and management of road works, enforcing traffic offences. Any bus priority measures should be justified.

- Whether or not other vehicles – e.g. cycles, motorcycles, taxis, HGV, shared occupancy vehicles – should be entitled to use a priority lane should depend on their impact on the speed of the bus and predictability of bus journey times

- We welcome bus partnerships where, for example, local authorities install bus lanes while bus operators invest in new vehicles. Punctuality Improvement Partnerships with properly monitored targets can be a useful way of formalising joint plans.

- Bus priority measures should ideally enjoy a measure of public acceptability. The reasons for decisions about bus lanes - following public consultation or otherwise – should be transparent.

- Parking and loading restrictions should be introduced where vehicles are likely to obstruct traffic flow including buses, with appropriate sanctions, and should be

enforced. Where possible, parking should be provided off-street or inset into the pavement, to maintain road capacity and minimise obstruction.

5.3 We also hope to use the project to understand more about the practical impact of different approaches to regulate and reduce street works.

January 2011

Written evidence from Surrey County Council (ETM 11)

We are grateful to the Transport Committee for investigating effective road and traffic management. Surrey County Council believes that this is one of the most important tools we have to tackle congestion, reduce the impact on the environment and make journeys easier for both the public and businesses.

Surrey's highway network is extremely busy. The county contains a long stretch of the M25, as well as parts of the M3 and M23. We experience a large amount of through traffic, especially vehicles bound for London, Heathrow and Gatwick, all of which are close to our borders.

Despite these pressures, traffic levels in Surrey have barely increased over the past decade. We seem to have reached a level of traffic saturation which is getting appreciably neither worse nor better. The advantage of this situation is that Surrey residents and employers are becoming increasingly sophisticated in the way that they travel and do business. We have high levels of working from home and flexible tele-working. We know when the busiest periods occur and generally we aim to avoid them. Surrey residents use trains and buses more than the average.

The disadvantage of having a saturated road network is that we do not have spare highway capacity to deal with unforeseen problems, such as accidents, road-works and poor weather. On a "normal" day, our road network works tolerably well. But when problems occur they can have long-lasting consequences and cause very long delays. A blockage or a lane closure on the M25 can mean that an unsustainably high level of traffic often diverts onto local roads.

The county also has a number of congestion hot-spots where antiquated and overloaded road layouts cause bottlenecks in the highway system. For example, there is considerable peak time congestion at most of the junctions with the M25. Most of the county's small to medium sized towns do not have bypasses. As a result, each town can suffer from high levels of congestion due to the high level of through traffic flowing through the centre of town. We also have severe congestion problems around some of our level crossings.

Because of this, the issue of congestion is one of the top concerns of local residents and businesses. However, we do not believe that building more highway capacity is, on its own, the right solution to the problems of congestion. A new road or the widening of an existing road can generate considerable additional traffic and put more pressure on the surrounding road network. Road building needs to be carefully assessed and targeted, for example to ease bottlenecks without generating higher levels of traffic and therefore congestion.

Our policy approach to transport is that journeys must be effective, safe, sustainable and reliable:

effective transport means transport that succeeds in getting people to their objectives, whether this is to travel to work, school, leisure or shopping. We must not forget that transport is, first and foremost, about allowing and helping people to meet their travel needs.

safe travel is important to reduce the number of people killed and seriously injured on our roads.

sustainable transport emphatically does not always mean a modal shift away from the car. For many journeys, the car remains the most practical means of transport. We do encourage mode shift where journeys can be made by alternative means, such as when short journeys could most sensibly be made on foot or cycle. When car travel is unavoidable,

we are working to encourage people to make shorter journeys, to travel outside the peaks and to choose more efficient vehicles, including electric cars.

reliable transport is transport that is relatively consistent, when journeys take approximately the same amount of time on different times. This enables our residents and businesses to be able to have faith in the transport system and to plan their lives more effectively. This approach places much more emphasis on journey time reliability than on speed of journeys. We believe that our customers would prefer journeys that they could rely on rather than infrastructure improvements which shave a few seconds off their journey time.

Surrey's approach to congestion is therefore to look for a mix of traffic management solutions. This includes demand management, integrated land use & transport planning, network management, traffic management, freight & goods management and behavioural change.

Our activities are coordinated by a dedicated Network Management Information Centre, located in Leatherhead. We would be delighted to welcome the Transport Committee to visit this centre and see first-hand how we use technology to manage traffic.

We place a high priority on proactive network and traffic management to deliver reliable journey times and assist the network to recover from major disruption. Not only does this approach help to keep traffic flowing, but it can also be used to manage demand from other network users such as buses and pedestrians. At the same time, it provides up-to-date information to both those already travelling and those planning their journeys, whether this be deciding either when to leave for the commute home or when and how to travel for irregular or one-off trips.

Key to this approach is proactive partnership working, and Surrey is fortunate to already have good working relationships with other agencies such as the Highways Agency and the Police. Transport is coordinated by Transport for Surrey, an innovative voluntary partnership to bring together different transport partners with the common interest of improving transport in the County.

Surrey County Council has been working with the Department for Transport and the Highways Agency on a demonstration project known as Integrated Demand Management. This project was designed to coordinate the traffic management of the national road network (principally the M25) and the corresponding local road network. This involves aspects such as:

- real-time monitoring of the whole network;
- a more complete shared picture of the whole network in terms of road works, events and incidents, and congestion and performance;
- the development of operational processes and plans and strategies to control traffic and to inform network users to optimise available capacity;
- a common agreement as to how the two organisations will work together to manage the network proactively.

If successful, this demonstration project would deliver a low-cost toolkit of traffic management measures which could be applied more widely across the country.

At the time of writing (January 2011), we do not know if this project has secured ongoing funding following the Comprehensive Spending Review.

January 2011

Written evidence from ADEPT (ETM 12)

The House of Commons Transport Select Committee is looking to examine how roads and traffic can be better managed in order reduce congestion, encompassing both the major road network and urban roads, written evidence has been requested on:

The prevalence and impact of traffic congestion and likely future trends:

- The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so.
- The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code.
- Intelligent traffic management schemes, such as the scheme operated on the M42, and their impact on congestion and journey times.
- The effectiveness of legislation provision for road management under the New Roads and Street Works Act and the Traffic Management Act 2004.

ADEPT Response

The existing highway network has a finite capacity and so the projected growth of population and vehicle ownership in future years must inevitably lead to concerns about traffic congestion given the limited opportunity to build new roads. With this background any move to reduce congestion would have to be grounded in a strategy that linked better use of the existing road space, the use of technology to manage traffic and inform travellers, improved driver behaviour and continued encouragement of modal shift and changes in working practices. On top of this there must be greater collaboration between Local Highway Authorities and the Highways Agency to improve the resilience of the total road network in collaboration rather than isolation.

One key area for the management of congestion is proper and appropriate consideration during the planning process. Where the two tier structure of Local Government exists it means that the Local Highway Authority is only a statutory consultee in the planning process. The judgement regarding the balance between the value of the development and its impact on the local highway network is with the Local Planning Authority. The Traffic Management Act places a duty on the Local Transport Authority to ensure the expeditious movement of traffic but this duty does not lie with second tier authorities where they exist. Consideration should be given to investigating this relationship and a possible role for the Traffic Manager, a statutory role in the Traffic Management Act, in having the power of veto on a planning permission or, alternatively ensuring that the Traffic Management Act Duties apply to Planning Authorities as well.

Turning to the existing situation, anecdotal evidence suggests that for the majority of road congestion is a time limited impact based around either peak demand for road space or the impact of planned or unplanned events, although there are also seasonal effects in those areas that are popular tourist destinations. However, this congestion comes at a significant cost to UK plc and society needs to work together to find solutions that can, at the very least, limit these implications. Work undertaken in Manchester and in Cambridgeshire to look at the benefits of charging for the use of road space at critical periods of the day showed significant potential benefits in terms of controlling congestion, however, the public and political will has not been there to look at revised funding models that would support this approach. The real challenge is that to move to a charging model without increasing the perceived contribution to highways through such things as road tax, fuel duty and VAT would require a different tax model that recognises the contribution that these taxes make to other services that the community enjoy.

Government and local authorities need to play a key role as community leaders help alleviate congestion. This may take the form of using professional experience to improve the use of road space though solutions such as innovative junction design, using lanes in different directions to recognise and mitigate tidal flows into and out of major conurbations, managed motorways, and enhanced provision for specific modes of transport such as buses or cycles. It is important to recognise that no one solution fits all communities and environments and so the Government and local authorities need to take a lead in identifying what the most appropriate solution is for any given situation.

For planned events, such as roadwork's the key element is timing. Careful consideration of the impact of any reduced capacity on the network and the timing of that reduced capacity is key to limiting the impact on the travelling public. There are already many good examples of how the Highways Agency, local authorities and Statutory Undertakers adjust the timing of their works to limit the impact on the network and the use of tools such as lane rental has helped develop this line of thinking. However, there is still further work that could be done in this area to ensure that the impact of works on the traveller is fully considered in the timing and duration of works.

For planned events off the highway, such as football matches or concerts, detailed traffic management plans have been in existence for some time and the general practice of mitigating the impact of those travelling to and event on the rest of the travelling community through plans and management on the day has been successful in the majority of cases. The cost of managing traffic, in all its guises, for such events is not small and should be carried by the event itself rather than passed onto the Police and the Highway Authority.

Turning to unplanned events there is a need to significantly reduce the time over which such unplanned events are affecting the network. Clearly, emergency events such as gas leaks need to be addressed as a matter of urgency and the statutory undertaker needs to ensure that their equipment is made safe and does not present further risk to the public. But the removal of broken down vehicles and the impacts of road traffic accidents on the rest of the travelling public need to be examined. The current approach identified in the Police Investigation Manual results in roads being shut for considerable periods of time while the Police investigate a crime scene. Clearly, it is important that the Police are able to collect all the evidence they need but there are examples of technology being used to reduce the time that the travelling public are inconvenienced which need to be considered further. We need to review how other countries deal with unplanned incidents such as breakdowns and road traffic accidents to see if we can reduce the time that the network is restricted. The Highways Agency is already undertaking some actions such as using screens in an attempt to reduce the impact of rubber necking at accident sites.

In the urban environment driver behaviour can have a significant impact on congestion. Inappropriate parking, especially around junctions causes difficulties across the country. As well as causing difficulties for larger vehicles such as buses there is also a safety issue with the potential difficulties caused to fire engines and similar. Whilst this issue could be addressed by the implementation of many Traffic Regulation Orders and the associated enforcement improved driver behaviour and adherence to the advice in the Highway Code would be a cheaper solution.

Many of the driver behaviours that cause congestion are the result of impatience and haste. The use of average speed cameras on the A14 between Huntingdon and Cambridge has had a marked effect on both the congestion and the accident rate on that road and variable speed limits on the M25 has been similarly successful. Impatience at

traffic signals and roundabouts are equally damaging in the urban environment and the potential solution to this is the delivery, by the Department for Transport, of the power to enforce moving traffic offences to local authorities. This is a key element of the Traffic Management Act that has not been implemented but could have a significant effect on congestion in urban areas.

As technology moves forward more work must be done in this area to assist drivers in their decision making. Whether it be checking proximity to adjacent vehicles to avoid collisions, enhanced congestion advice or the use of data to help travellers change their mode on specific journeys based on real time comparative information. There is already significant investment in information technology for the strategic road network but there are real opportunities to look at the "last five miles" of journeys and see if this is an area where congestion can be managed. As well as improving reliability for individuals journeys and for such things as just in time deliveries work in this area could have a significant impact on bus punctuality and, therefore, assist with modal shift.

In general terms the Traffic Management Act has been a successful piece of legislation, although it has not been cost neutral to Local Highway Authorities as originally envisaged. It has highlighted the importance of managing congestion and has been a vehicle that ADEPT members have used to encourage the sharing of best practice. The take up of Permit Schemes, to better co-ordinate works on the highway has not been universally taken up. Authorities, such as Kent, have made good use of the opportunity but the investment required to implement these schemes, the real cost to all involved and the success derived from them needs to be properly reviewed.

Local Highway Authorities need to ensure that any emergency works, undertaken by either a Statutory Undertaker or themselves truly is emergency works rather than an attempt to bypass the road space booking and works co-ordination system. In addition Statutory Undertakers and Highway Authorities need to work closely together to ensure that opportunities to minimise disruption through joint working and through enhanced reinstatements are not missed.

In summary, the ability to have reliable transport links is a crucial enabler to a successful society. The cost of delay and disruption on the highway network is significant and is carried by the tax payer either through increased prices or reduced quality of service. The understanding of the cost of congestion amongst professionals has increased significantly over the last decade and working practices have adjusted to minimise the impact of planned events and to encourage modal shift and changing working practices, such as home working and flexible hours. There is still some work to be done in reducing the impact of unplanned events on the network and in particular the significant periods of time that a road can be closed as a result of a serious or fatal personal injury accident. The use of technology needs to be further investigated to ensure that its full potential is realised both as a decision making tool both before and during a journey. It is important that congestion that affects the last five miles of a journey is considered as further solutions are developed. The use of technology can play a very important part in this, particularly in medium to large conurbations but this will require investment and new models to deliver that investment need to be investigated further.

Finally, there are some simple actions that everybody can take to both improve the health and well being of the community and reduce congestion. Encouraging walking and cycling for short journeys, varying opening times for shops, businesses and schools, changing the way appointments are organised at Hospitals would all make their own small contribution to reducing congestion within urban areas. However, experience has shown that linking these sorts of changes to the benefits of the community with the

individuals needs can be difficult and in many communities across the country we are yet to find the level of congestion that would lead to such an approach.

January 2011

Written evidence from the Cambridge Cycling Campaign (EMT 13)

Our main points are:

• When defining the term traffic, all traffic should be considered, including pedestrian and bicycle traffic as well as motorised vehicles of varying sizes.

• Fear of cycling in traffic significantly reduces the mode share of cycling.

• A prolonged and significant investment in cycling infrastructure in urban and suburban areas can significantly reduce congestion in these area.

• Bicycling is a suitable transport mode for urban and suburban journeys of up to at least 10 km. Infrastructure that supports such movements must be considered in all road schemes.

• Prohibition of motor vehicle parking in mandatory cycle lanes is currently not properly enforced. Enforcement is essential if cyclists using such lanes in urban and suburban areas are to be confident about their own safety.

• When a collision occurs between a motor vehicle and a bicycle, the driver of the motor vehicle should be made liable on the grounds that they are operating a much more dangerous machine which they should control.

Introduction to Cambridge Cycling Campaign

Cambridge Cycling Campaign is a charity that provides a voice for cyclists in Cambridge and the surrounding area. We lobby for better and more convenient conditions for cycling, safer roads, and more people on bikes. We work closely with the local transport authority, Cambridgeshire County Council, and the local city and district councils to ensure that the views of knowledgeable cyclists is considered during transportation improvements.

Cambridge has approximately 40,000 regular bicycle riders in the area, with mode share of towards cycling increasing while that for cars within the city centre has been decreasing. This has also been associated with significant investment in cycling in the area, and restraint for private motor vehicles. For example, a journey that would take just 5 minutes on a bicycle can take 15 minutes in a car, without considering the time required to park the vehicle. Bicycle journeys from most surrounding villages are faster than bus services and car journeys in rush hours. The recently improving bicycle infrastructure has therefore been encouraging drivers out of motor vehicles and into the cycle lanes. Limited city-centre car parking facilities and an excellent park and ride system also encourages modal shifts from private motor vehicles. Cambridge has five multi-storey car parks in the town centre, two of which have a complete floor dedicated to bicycle parking. The only way to valet park a vehicle in Cambridge is to cycle to the Grand Arcade bicycle park and use the valet bicycle parking facilities. Cambridge railway station has approximately 1,000 cyclists using either the limited cycle parking facilities or who transport their bicycle on a train to their destination, a significant share of all passengers arriving at the station.

The Committee has asked for a number of points to be considered in this memorandum:

• the extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so;

• the extent to which road user culture and behaviour undermines effective traffic

management, including the relevance to today's road users of the Highway Code;

• intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times;

• the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004; and

• the impact of bus lanes and other aspects of road layout.

These points will be considered below:

The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so

Many other counties, most notably the Netherlands, Denmark, Northwestern Germany, but also Finland and Sweden, have both significant investment in bicycle infrastructure and high modal shares for bicycles. Denmark for example has a 35% modal share for bicycle traffic into Copenhagen. It should also be noted that Denmark has the least traffic congestion. It is our hypothesis that these two pieces of information are connected. Safe bicycle infrastructure, as typified by the Dutch and Danish infrastructure models, enable direct routing of bicycle traffic through urban areas while minimising conflicts with motorised vehicles. This will be a recurring theme through this memorandum.

We also will suggest that removing motorised vehicle traffic lanes and replacing them with cycle lanes will actually alleviate congestion. An example of this in Cambridge would be the Hills Road railway bridge. A few years back, this was a four lane road with pedestrian footpaths on either side. Bicycles were expected to cycle up the inclines with the motor vehicles that were legally able to travel at 30 mph. During recent road works, an experimental scheme was implemented to remove one of the traffic lanes in each direction on the upward slope and replace that lane with a cycle lane. The safety for bicycles using the bridge significantly increased and the scheme caused no traffic congestion. This scheme is currently being engineered into the completed bridge structure.

It is therefore suggested that space within the road environment should be taken away from motorised road vehicles and reallocating this space to bicycles will allow the latent demand for efficient and simple bicycle journeys. This could be done by narrowing traffic lanes and reallocating that space to cycleways, which also has a additional benefit of slowing traffic speeds. This could also be done by building dedicated segregated cycleways physically separated from fast flowing traffic. An example of this would be the cycleway alongside the Cambridgeshire Guided Busway which has already significantly improved the safety of children safely cycling to school, avoiding the dangerous A14 interchange at Histon that has no provision for cyclists crossing. However it should be cautioned that only high quality infrastructure will enable this benefit. Low quality cycling infrastructure, including very narrow cycle lanes, cycle lanes that lose priority to parked cars, or to crossing traffic at junctions is mostly a waste of money. For example, the Jane Coston cycle bridge from Milton to Cambridge, across the A14 has a segregated cycleway from the bridge to the Cambridge Science Park that has priority over side junctions including industrial facilities with significant

heavy goods vehicle traffic. Unfortunately, this is still let down by a single older junction that gives priority to a car-park for an office building over the cycleway.

It should also be noted that just building new high quality cycleways will not increase bicycle modal share without other investment in associated facilities. These include bicycle parking, at least on par with the spaces available for motorised vehicles and in high pedestrian trafficked areas. These should therefore be placed as close to the entrance to shops as possible, and not around the back of the store where bicycle theft would be more likely.

Bicycle parking should also be of high quality with Sheffield stands or similar placed sufficiently far apart from each other, and sufficiently far away from walls and roadways that pedestrians can pass safely and bicycles can be manoeuvred into position quickly. New housing should have space for parking bicycles, preferably as close to the front door as possible. Other buildings should also have minimum bicycle parking requirements. For example, doctors offices and hospitals.

Research has shown that people who regularly exercise, for example by bicycling to and from school or work, can significantly increase not only their productivity but can also reduce the number of days they are sick. Building cycling infrastructure also has very good cost benefit ratios. For example, the Cambridgeshire Transport Innovation Bid estimated the cost benefits for building the proposed bicycle infrastructure as returning £6 to the local community for each £1 that was spent. The early Cycling Demonstration Town results also show significant benefits. These benefits comes from increased health, increased productivity and reduced traffic congestion in the area.

The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code;

At the moment, when a bicycle hits a car the bicycle rider will typically come of worse whilst the car driver will typically have no injuries. A car driver today accepts that they hold no liability if they hit a bicycle. Various campaigns suggest that bicycle riders pay no road tax and therefore should not be on the road, even though there is no such thing as a road tax today. We believe that consideration should be made for 'Strict Liability', to be introduced to UK law. This could have significant beneficial changes to the behaviour of the average motorised vehicle drivers, especially when operating these vehicles near bicycles. This would also have a similar behavioural change for bicycle riders being aware of their operating risk when near pedestrians. If this consideration is ignored, then bicycles will be further marginalised and the traffic builds up thereby reducing the perceived safety of using the bicycle and therefore reducing the modal share of bicycling. This will only therefore increase traffic congestion that no level of traffic management would be able to prevent.

We believe that the fact that the Highway Code is written by the Driving Standards Agency places the emphasis towards only motor vehicles within this publication. We would therefore suggest that the Highway Code be moved to a different agency or government department to remove such bias.

Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times;

The A14 average speed cameras has been a great success in reducing the traffic problems on this section of road. However, in previous years, this road has had so much traffic use it because for some locations it is the only way of accessing the settlement. For example, Bar Hill is a village just north of Cambridge, within easy bicycling distance from Cambridge. It is only accessible by a six lane wide high-speed section of the Trans-European-Network called the E24, known locally as the A14. This section of road therefore provides part of the strategic network for both north-south traffic as well as east-west traffic. Interestingly there is provision for cycling along this section of road. At each junction there is a bicycle by-pass, requiring a bicycle rider to stop, wait for a gap in the traffic, and then cycle through the junction before returning to the inside lane of this three lane road with a 70 mph speed limit.

Unsurprisingly there is very little bicycle traffic from this village, even though thousands of people bicycle from similar villages in other locations where bicycle infrastructure exists. This section of the A14 also has significant traffic congestion and therefore journey time issues. A significant reduction in motorised traffic trips could be achieved if a high quality cycleway was constructed between this village and Cambridge. Other similar roads in the area would also benefit from parallel high quality cycleways; for example the A10 both north and south of Cambridge.

It is therefore suggested that no major road scheme be designed or built without high quality "non-motorised user" routes, including cycleways parallel to the route, and cycleways at all crossings. These crossings should not just be a non-signalized junction where cyclists are expected to dismount, walk their bike across a stream of high speed traffic. As an absolute minimum, rights of way that have been severed should be restored by use of such high quality safe crossings.

The impact of bus lanes and other aspects of road layout.

Bus lanes are an expensive allocation of road-space, sometimes at the detriment of other road users. For example, the installation of a bus lane in Milton Road, Cambridge, removed cycle lanes from both sides of the road. For example, in Cambridge, more people travel by bicycle than travel by bus, yet there are significant lengths of bus lane that have been built.

Unfortunately where bus lanes have been built, bicycles are expected to share this lane with the bus. For some bus lanes where significant numbers of buses use the lanes as well as bicycles, the buses cannot overtake the bicycles safely when the car traffic in the associated traffic lanes is stopped. Therefore buses are either forced to move at the speed of the bicycles, or they risk overtaking the bicycles too closely. It is therefore suggested that where bus lanes are built, separate bicycle lanes also be provided such that overtaking buses cannot impact on the perceived safety of the people using bicycles.

Bicycle lanes that just end, typically at the most dangerous locations, are a significant problem for an urban bicycle rider. Bicycle lanes and cycleways must be continuous to be effective. An example of this would be at Histon Road on the approach to the town centre of Cambridge. In some sections there is a very wide carriageway with a narrow cycleway along the side. This only helps to encourages cars to travel faster than the 30 mph speed limit, and a speed camera is located at this location because of poor road design. As cars approach the junction with Gilbert Road, two general traffic lanes are provided and the cycle lane disappears. Bicycles are obviously considered to be unimportant at this location.

Unfortunately, most bicycle crashes between motor vehicles and bicycles occur at junctions, in exactly the locations where bicycle infrastructure if provided just disappears. It is likely that these two facts are connected. It should also be noted that the right turn only lane at this junction has very few traffic movements, and therefore the road space could be easily reallocated to provide a cycle lane through this junction. It is therefore suggested that continuous coloured surfaces be provided through all junctions. This would clearly provide virtual bike lanes through junctions, i.e. something that emphasises the possible presence of bikes.

Another problem with traffic junctions is that most road traffic engineers attempt to increase the volume of motorised vehicles through junctions, because of the fear of traffic congestion. This will actually only increase traffic congestion as there is no alternative being provided. If the benefits of cycling are considered, then the number of people moving through the junction should be optimised, and not necessarily the number of motor vehicles. Bicycles take up significantly less space, and can move through an urban environment quicker than any other form of transport, public or private. They should therefore be given equal or greater consideration when designing road layouts and traffic signal timings.

It should be noted that each time a cyclist to forced to stop at a side junction or toucan crossing, they waste energy that is the equivalent to extending it by 100 metres. For example, a journey of 2 km that has just ten junctions that must be stopped at would use the equivalent energy required for a 3 km journey.

For example, along Kings Hedges Road there is a two lane road, and a guided bus route and a high quality cycleway. Unfortunately, at each of the entrances to the development to the north of the cycleway, the bicycle users are expected to come to a complete stop and press a button to activate a toucan crossing. This is because the road traffic that is entering the development is given a green light continuously except when a guided bus is crossing or a pedestrian or cyclist has activated the toucan crossing, or when turning traffic from the opposite direction is active. This significantly reduces the volume of people that this junction can cope with. The two-way shared use pedestrian and cycleway at this location is over 4 metres wide and could have a capacity significantly larger than the parallel roadway, yet is constrained by the traffic signal timings. The hierarchy of provision for bicycles suggests that reducing motor traffic speeds and volumes are the first two actions that should be taken to encourage cycling, yet junctions are designed to speed motor traffic through and hinder the movement of people using bicycles.

We believe that innovative junction signal timings could be trialled that for example have alternate cycle and pedestrian movements and car movements using a technology called allways-green. Toucan crossings should automatically detect approaching bicycles and change the lights in time for that bicycle to cross the roadway. Car drivers would not accept having to press a button to get the traffic lights to change, yet bicycle riders are expected to do so.

Wider bicycle infrastructure should be provided where possible. For example, most access to the commons in Cambridge when using a bicycle is through a narrow cattle grid and this causes bicycle traffic congestion. A new scheme to provide a dual bicycle-cattle grid has just been trialled, and this has significantly reduced this traffic congestion at a critical point.

We therefore make the following recommendations:

1. Bicycles be considered part of the solution for traffic congestion.

2. Road space should be taken away from motorised road vehicles and reallocated to bicycles.

3. Minimum cycle-parking standards, as used in Cambridge, should be adopted nationally.

4. 'Operating Risk' or 'Strict Liability' be applied to motorised vehicles impact on bicycles and pedestrians.

5. Major road schemes should be designed and built with high quality "non-motorised user" routes, including cycleways parallel to the route, and cycleways at all crossings.

6. Along with bus lanes, separate bicycle lanes should also be provided such that overtaking buses cannot impact on the perceived safety of the people using bicycles.

7. No overtaking within lane rules could be introduced that forbid the overtaking of nonmotorized vehicles within a single lane.

8. Continuous coloured surfaces be provided through all junctions.

9. Innovative junction signal timings be used to increase the number of people moving through a junction, and not the number of vehicles.

10. Toucan crossings should automatically detect approaching bicycles, with sufficient time to avoid slowing the cyclist.

11. High quality cycleways should be built to reduce traffic congestion for both motorised vehicles and bicycles.

We enclose links to three of our main publications: Cycling 2020, Cycling in New Developments, and Cycle Parking Guide.

http://www.camcycle.org.uk/planning/guidance/newdevelopments/

http://www.camcycle.org.uk/cycling2020/

http://www.camcycle.org.uk/resources/cycleparking/guide/

January 2011

Written evidence from the Institute of Highway Engineers (IHE) (ETM 14)

The Institute

The Institute of Highway Engineers IHE (formerly the Institute of Highway Incorporated Engineers IHIE) was founded in 1965 and is run by and for practical engineers and allied professionals.

IHE registers Chartered and Incorporated Engineers and Engineering Technicians with the Engineering Council and currently has almost 3,000 members who work in Central and Local Government, Consulting Engineers and supplying contractors. IHE members work in a wide variety of highway related disciplines including:

- Traffic Management
- Highway Maintenance
- Bridge Maintenance
- Infrastructure Design
- Traffic Signals
- Intelligent Transport Systems
- Development Management

The Institute is well known for its training courses, and specialist qualifications in development management, traffic signing, highway maintenance, road safety and signal control. We also accredit academic courses through the Joint Board of Moderators (JBM) with the ICE, IStructE and CIHT and maintain a public register of road safety auditors.

We are also developing specialist 'competence' based qualifications e.g. in road safety engineering, traffic signing, highway maintenance and signal control, several of which have DfT etc. backing.

The IHE is a full member of the Construction Industry Council, a member of the Adept training group and a member of the Parliamentary Advisory Committee for Transportation Safety (PACTS).

The IHE publishes good practice guidelines and was awarded the Prince Michael Road Safety Award in 2005 for its "Guidelines for Motorcycling" which is a compendium of good practice for road engineers in how to consider that particular group of 'vulnerable' road users.

Summary of Proposals and comments in the IHE submission

(i) Road congestion presents a significant cost to the UK economy. At a local level relatively inexpensive interventions can bring about significant reductions in journey time and defer the cumulative effect of delay (paragraph 1.1)

(ii) Interventions at junctions, particularly at bottlenecks, often have important consequences for congestion but there is no agreed method of evaluating the congestion consequences (paragraph 1.3)

(iii) Congestion is not currently a priority compared with the other local objectives. Managing road networks to reduce congestion could require a reversal of attitudes, and call into question many of the sorts of schemes currently prioritised by local authorities. (paragraph 1.4)

(iv) Alleviation of congestion requires measures at junctions to increase vehicle capacity. Even removing signals requires expenditure. Managing the road network involves reviewing bottlenecks and a national initiative would probably be needed to bring about this level of activity. (paragraph 1.5)

(v) Technology can play an important role in addressing congestion but systems require significant on-going maintenance which is rarely adequately allowed for in recurrent expenditure. (paragraphs 1.9 & 1.10)

(vi) Key to managing the network are skilled, trained, motivated, recognised and rewarded staff dedicated to improving our performance and management. It is imperative that local authorities and consultants address the growing skills gap and the demographic problem caused by experienced engineers leaving the industry. Authorities and consultants should be encouraged and rewarded for directing staff to improving the design and management of the road network and to recruit, retain and develop staff by re instating training and recognition of professional registration. (paragraphs 1.11, 1.12 & 1.13, 3.2)

(vii) Driving standards need to be improved. Most road users after they have passed their driving (or riding) test do not make any effort to keep up-to-date with current road signs, the law and the Highway Code. The Highway Code is thus largely ineffective as a means of engaging with the vast majority of road users. (paragraph 2.2)

(viii) Driver distraction has become a topic of great concern in recent years. However, there has been little research into the cultural change required to address this issue. Cultural and behavioural issues must be addressed to effect real change; much of our current activity is treating the symptoms of road user problems rather than curing them at source. (paragraph 2.4)

(ix) Good initiatives, such as ‘Bike Safe’, do exist but more needs to be done to encourage drivers and riders to adopt a life-long skills attitude and to regard a licence to drive or ride as a privilege. Financial incentives such as lower insurance premiums do exist but are rare and more could be done, possibly through the vehicle licensing mechanism. (paragraph 2.5)

WRITTEN EVIDENCE

In view of the short time scale this IHE response has been coordinated by the Presidential team and represents edited commentary and evidence from a small invited group of IHE members and friends thus it concentrates only on the areas of interest selected by the contributors.

1. The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so.

1.1 Prior submissions to the Select Committee on Transport have shown that the cost of congestion to the UK economy is significant. The Transport Select Committee Seventh Report (2005) referred to the CBI's estimate that road congestion costs the UK economy
£20 billion per year. Eddington in 2006[1] hypothesised that a 5 per cent reduction in travel time for all business travel on the roads could generate around £2.5 billion of cost savings. Whilst the "Predict & Provide" culture of road building has fallen from favour, none the less significant benefits should accrue from making better use of our existing infrastructure. Experience from IHE members suggest that relatively inexpensive interventions at local level can bring significant reductions in journey time and delay the cumulative economic effect of congestion.

1.2 Congestion arises wherever vehicle demand exceeds road capacity, the all important supply side of the equation. During the last 20 years or so, there has been minimal road building in urban areas, and managing the existing road network has been, and continues to be, the only way of controlling or managing vehicle capacity. Most everyday urban congestion occurs at signalised road junctions - the bottlenecks in the road network – and we are aware that there are calls for signals to be removed. However, junction design needs to address accident problems, provide safer crossing opportunities for pedestrians (particularly impaired pedestrians) and cyclists and to redistribute traffic queues and, although IHE supports shared space concepts (see our UK resource site: www.homezones.org.uk), it must be recognised that each site needs to be studied to identify the best solution and this costs money and takes expertise.

1.3 Modifications to improve safety, or conditions for buses, cyclists or pedestrians, may be implemented at relatively low cost but often results in reduced capacity for vehicles and increased congestion and there is no agreed way of evaluating these congestion consequences.

1.4 Far from alleviating congestion, much traffic management can have the opposite effect. Congestion is often not seen by local authorities as being a priority compared with other objectives, particularly now money is short, and it has recently been deleted as a Target by Government. Managing road networks to reduce congestion would require a reversal of this approach, and could call into question many of the sorts of schemes currently prioritised. Achieving a change of direction might require a national initiative making clear the importance of congestion on local roads.

1.5 Alleviation of congestion on local roads normally requires measures to increase vehicle capacity. Managing the road network would increasingly involve the review of bottleneck junctions and devising ways of getting more vehicles through. Again a national initiative would probably be needed to bring about this sort of activity start to make any sort of impact.

1.6 The design of schemes for junctions whether controlled or shared space, requires very specific skills and expertise in areas where the IHE is pre-eminent vis:

- Improving safety and conditions for buses, cyclists and pedestrians in ways which limit the effect on congestion
- Enhancing public space
- Identifying geometric layout improvements, and better methods of signal control to increase vehicle capacity.

1.7 Technology has always played an important role in congestion management in the UK and UK engineers are at the cutting edge in the development and deployment of this technology. As far back as 1969 the Transport Road Research Laboratory (now TRL) developed the TRAffic Network StudY Tool (TRANSYT)[2] a computer based tool for determining traffic signal timings for networks of junctions to minimise stops and delays. The development of TRANST led directly to the invention of Split Cycle Offset Optimisation Technique (SCOOT)[3] which is a dynamic traffic feedback and control system for networks of signalled junctions deployed by many local authorities throughout the UK and abroad. SCOOT systems require investment but benefits can be significant. Hunt et al (1982)[4] found that SCOOT could reduce average delays by up to 12% when compared with fixed time traffic signal plans. UK engineers continue to innovate in the traffic control and modelling arena and are credited with the creation of other significant tools such as Microprocessor Optimised Vehicle Actuation (MOVA)[5] which, at isolated junctions, can deliver reductions in delay similar and occasionally better than SCOOT, and LinSig[6] , an important modelling and design tool used in the UK. . DfT estimated in 1997 that, if MOVA was applied to all the isolated traffic signals in the UK, the savings in delay would be in excess of £220 Million.

1.8 The sophistication and deployment of technology varies amongst Authorities but many will have reasonable CCTV coverage and a means of collecting data on traffic patterns. Authorities should have a good understanding of local congestion hot spots and key events which trigger congestion. To variable degrees Authorities have communications links and equipment which allow the remote control of traffic signals, car park guidance signs (eg in Nottingham), bus priority (eg in Reading), tidal flow systems etc. The most advanced have invested in Urban Traffic Management & Control (UTMC)[7] systems which allow the integration of control and information systems and control via computer algorithms (including SCOOT).

1.9 Investment in technology is, unfortunately, often seen as a panacea for traffic problems, involving up-front investment with the promise of an automated solution. In reality systems are never fully automatic and investment needs to be carefully

planned with adequate resources made available for their management and maintenance. The need to provide for running costs is unfortunately often at best under estimated and at worst completely overlooked in an attempt to drive down revenue costs.

The majority of UK road junctions are probably not running at optimum capacity and this is almost entirely due to a lack of both staff and money (and political will) to model, adjust (and re design if necessary) existing junctions. In financially austere times it is particularly attractive to make better use of the investments we have already made. The key to getting more from our existing infrastructure is dedicated, trained and motivated personnel with a remit and the freedom to improve efficiency.

1.10 Local authority departments often seem to be in a permanent state of transition with restructures every three to four years. Restructuring usually involves staff rationalisation and requires those remaining to take on multiple roles. Their focus is thus diluted and, whilst they may receive some transitional training, they are given little or no support for professional development. Consultancies & Local Authorities are also facing severe financial difficulties and one of the first casualties is staff training. Around half the respondents to the IHE members' survey 2010 indicated that their employer was unlikely to fund any training in 2011. If the investment that has already been (and continues to be) made in smart technology is to be maximised, engineering skills must be sustained and developed.

1.11 IHE believes that whilst investment in new technology is important, we are none the less often failing to make the best of what we already have. To reap to the benefits of the investment already made in smart infrastructure we must recognise, train and support engineers and technicians to manage and maintain these systems. The demographics are such that experienced personnel are retiring (or being made redundant) and we have a skill gap emerging as a result of failure of local authorities and consultants to recruit, train and retain staff dedicated to the management and maintenance of our smart systems. A summary of sources of information on supply and demand is here: http://www.theihe.org/training/training-for-ieng-and-engtech/demand-and-supply/

1.12 A positive step in getting the best out of our current infrastructure would be to encourage (and reward) local authorities who free up engineers to concentrate on core activities and commit time and resources to re visit existing junction design and operation. One way to encourage recruitment, retention and development of specialist engineers would be to restore the link between salary grades and professional registration and support engineering personnel by funding training (including a return to day and block release courses).

2. The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code.

2.1 Road users are not passive entities, blindly obeying signs and driving rules - indeed, in many cases they understand neither the true meaning of the signs and road

markings provided to assist them, nor the rules and guidelines intended to ensure a trouble-free journey[10] . Current engineering, education and enforcement interventions assume that road users will react in a generally predictable, consistent way to external stimuli or controls. However, road user behaviour is determined by a large number of factors (including many completely unrelated to the journey being undertaken) which reduce the predictability of responses to interventions and may result in different behaviours in identical situations because of unrelated external circumstances.

2.2 Whilst drivers are quick to recognise common errors in others' road use, they seem incapable of identifying shortcomings in their own behaviour. A number of studies have demonstrated that the majority of drivers consider themselves to be 'above average' in their driving skills[8]; the corollary to this appears to be that those least in need of additional training are often paradoxically those most likely to seek it out. Whilst there is a general recognition that driving standards need to be improved, few make any effort to even keep up-to-date on evolving road signs and law. The Highway Code, it seems, has little value to road users after they have passed their driving (or riding) test and is thus largely ineffective as a means of engaging with them.

2.3 Road users are clearly conscious of some 'adaptive behaviour', recognising, for example, that driving behaviour will depend on the social situation and who the driver is with at the time[9]. However, there are elements of adaptive behaviour which are not so clearly recognised, particularly with respect to frequent journeys where familiarity breeds contempt. Many road users journey on auto-pilot and are unconscious of particular circumstances or adaptations. Changes to the road environment are rapidly assimilated and become part of the routine. Additional signs and road markings become part of the scenery over time - not a problem if driving behaviour has adapted appropriately, but counter-productive where a long-term change has not been effected. Peer pressure has a clear impact here, particularly with respect to vehicle speed - whilst excessive speed is generally recognised as a problem, 'moderate' speeding is tolerated and enforcement interventions which address this issue are not well-received.

2.4 Cultural change happens slowly. Driver distraction has become a topic of great concern in recent years, as cars assist the driver more and more, reducing the need to concentrate solely on driving, and the range of in-car non-driving distractions has increased. However, driver inattention is possibly a greater, unaddressed concern, linked to some of the adaptive behaviour concepts above. There is a widespread recognition of 'inattentional blindness' when focussing on some activities detracts from our ability to recognise abnormal situations[10] and this has even formed the basis of a TfL campaign to improve recognition of cyclists[11]. However, little research has looked at the cultural change required to address this issue; nor is it clear by what means change can effected These cultural and behavioural issues must be addressed to effect real change; much of our current activity is treating the symptoms of road user problems rather than curing them at source.

2.5 What is needed is a cultural change in drivers' attitudes. Drivers (and riders) must be encouraged to regard the possession of a license to drive on UK roads as a privilege and encouraged to make a life-long commitment to maintaining their skills. We must foster an attitude of pride in driving skills and a commitment to maintain and supplement knowledge of important safety related changes to legislation and enforcement. Previously a minor incentive was reduced insurance premiums for "Advanced Drivers" but this has largely been eroded by the increasingly competitive insurance industry. Initiatives do exist such as 'BikeSafe'[12] - a nationwide police-led motorcyclist casualty reduction initiative that is run by the majority of forces throughout England, Wales, Scotland and Ireland. Its engages with post-test riders in a conflict free environment to consider and analyse why motorcycle crashes are happening and it encourages them to foster a continual development attitude to riding including, for some, encouragement to share their skills by entering 'The Register of Post-Test Motorcycle Trainers' (RPMT)[13] which carries a financial incentive with respect to insurance premiums. The Institute of Advanced Motorists have also recognised the importance of continual development of riding skills with their 'Skills for Life Programme'[14]. Initiatives such as these should be encouraged and promoted and mechanisms explored to reward participants both through the insurance industry and possibly through the Vehicle Licensing charges.

3. Intelligent traffic management schemes, such as the scheme which has operated on the M42 and their impact on congestion and journey times.

3.1 By introducing hard shoulder running, the M42 Active Traffic Management (ATM) scheme [15] has more or less widened the motorway to 4 lanes in each direction. Not surprisingly, the equivalent of an extra lane in each direction has dramatically reduced congestion. This lower cost for of motorway widening is now the preferred way of tackling the most congested section of motorway throughout the country, and substantial schemes are under construction on the M1 and elsewhere.

3.2 Whilst M42 type schemes can tackle congestion on lengths of road between junctions, there are many junctions on the national road network where everyday congestion is a problem at peak times. Whilst the ATM schemes are extremely beneficial, IHE believes that if a small proportion of the funding allocated to ATM (currently valued at £5.6 Million per kilometer of motorway converted) was applied to existing junctions then significant improvements could be made. Again the traffic engineering skills of IHE members could be put to good use in tackling congested junctions using the best engineering and communication techniques.

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[11] 'MAYOR AND TFL ANNOUNCE AMBITIOUS PLANS FOR IMPROVING CYCLE SAFETY' : http://www.london.gov.uk/media/press_releases_mayoral/mayor-and-tfl-announce-ambitious-plans-improving-cycle-safety

[12] BIKESAFE: http://www.bikesafe.co.uk/

[13] RPTM :
http://www.businesslink.gov.uk/bdotg/action/detail?itemId=1082111909&lang=en&r.l1=1081597476&r.l2=1082103262&r.l3=1084755704&r.l4=1082111861&r.s=sc&type=RESOURCES

[14] INSTITUTE FOR ADVANCED MOTORISTS 'Do you want to be a better rider?':
http://www.iam.org.uk/do_you_want_to_be_a_better_rider_/doyouwanttobeabetterrider.html

[15] DFT Advanced motorway signaling and traffic management feasibility study
http://www.dft.gov.uk/pgr/roads/network/policy/mtorsigntrafmanagement/advancemotorsign?page=4

January 2011

Written evidence from Martin Cassini (ETM 15)

We complain about the traffic and blame other drivers, but could it be traffic *controls* that are the problem? Who is the better judge of when, or how fast to go - you and me at the time and the place, or lights and limits fixed by absent regulators? Is it reasonable to put the onus for road safety on children, or should it be the other way round? Accidents are not accidents - they are events contrived by the rules and design of the road.

I'm a TV producer, traffic writer and campaigner for traffic system reform. My coherent set of proposals will cut congestion and emissions, and make roads safe. I deplore most interventionist traffic management, which in my view is based on a fatal flaw and treats the symptoms but never the cause of our road safety and congestion problems. I'm also a scathing critic of councils' failure to act[1]. Last year I was a keynote speaker at a traffic conference, sharing the stage with Chief Operating Officer of TfL and Director of the Highways Agency. I could give you a version of my presentation which includes a two-part video, linked at the photos below. Part 1 explains the rationale and includes clips from my Newsnight report;[2] Part 2 shows before-and-after our traffic lights-off trial in Portishead.[3]

My 2008 Newsnight report called for trials to test the idea that we are better off left to our own cooperative devices rather than forced to obey a flawed system of vexatious traffic control. [4] The current system is a metaphor for disenfranchisement. My reforms, by restoring individual responsibility (and promoting the common good), amount to a metaphor for the Big Society. My campaign is pro-choice, pro-planet, but not anti-car. It *is* anti high-cost, counterproductive regulation. At multi-lane junctions at peak times, signals might remain necessary, but controls that usurp our judgement and dictate our behaviour should be used as a last resort, not the first. In 2009 I instigated a lights-off trial in Portishead which went permanent after journey times fell by over half with no loss of safety, despite greater numbers now using the free-flowing junctions. [5]

On the website below are links to some of my articles, e.g. Kind Cuts,[6] which gives an idea of the scale of the painless spending cuts that could be achieved from traffic system reform.

- the extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so

Interventionist measures are part of the problem, not the solution. The culture of intolerance stems from artificial priority - an engineering model. The sustainable solution lies in equality - a social model.

- the extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code

You have this the wrong way round; it's traffic (mis)management which undermines cooperative culture and sociable behaviour.

- intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times

I question the use of the word "intelligent" in relation to traffic management. Volume of traffic can be a drama. Volume + controls = crisis.

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[1] http://www.thisisbristol.co.uk/news/Lights-switch-stalled-city-council-bureaucracy/article-2592236-detail/article.html
[2] http://www.youtube.com/watch?v=lBcz-Y8lqOg
[3] http://www.youtube.com/watch?v=vi0meiActlU
[4] http://news.bbc.co.uk/1/hi/programmes/newsnight/7187165.stm
[5] http://www.thisisbristol.co.uk/news/Lights-Portishead-traffic-junction/article-1338839-detail/article.html
[6] http://conservativehome.blogs.com/thinktankcentral/2010/07/martin-cassini-no-need-to-raise-vat-there-is-a-source-of-cuts-to-dent-the-deficit-and-benefit-us-all.html

Since 2004, TfL resisted my calls for trials, though they changed their tune in April 2009, when Westminster agreed to a series of trials after seeing my video, "The case for a no-lights trial". In 2008, the GLA/Mayor turned down our trial proposals, and now are presenting some of the ideas as their own. But they fail to communicate (or understand) the wider context, hence the opposition from vulnerable road-user groups. Central to my thesis is that deregulation is not enough on its own. Other essential steps include culture change, legal reform and roadway redesign.

January 2011

Written evidence from the Passenger Transport Executive Group (pteg) (ETM 16)

1. Introduction

1.1. *pteg* represents the six English Passenger Transport Executives (PTEs) which between them serve more than eleven million people in Tyne and Wear ('Nexus'), West Yorkshire ('Metro'), South Yorkshire, Greater Manchester, Merseyside ('Merseytravel') and the West Midlands ('Centro'). The PTEs plan, procure, provide and promote public transport in some of Britain's largest city regions, with the aim of providing integrated public transport networks accessible to all. The PTEs are responsible to Integrated Transport Authorities (ITAs) made up of locally elected representatives of the areas served. Leicester City Council, Nottingham City Council, Transport for London (TfL) and Strathclyde Partnership for Transport (SPT) are associate members of *pteg*, though this response does not represent their views.

1.2. *pteg* welcomes the opportunity to respond to the Committee's inquiry into this important topic and would be willing to appear before the Select Committee, should the Committee wish us to expand on any of the points made in this response.

2. The role of public transport in alleviating road congestion

2.1. Effective public transport, which is able to move large numbers of people into and out of, and around, urban centres more cheaply and efficiently than private cars, is essential if congestion is not to thwart the economic recovery and future sustainable growth. Moreover, for the 33% of households in metropolitan areas who do not own a car[1], public transport also provides a vital connection to jobs, services and facilities.

2.2. Our analysis shows that public transport accounts for more than half of all morning peak trips into the largest city centres in England . If all these trips were to be made by car, traffic levels would double and cities would grind to a halt. Ensuring that public transport remains competitive relative to the private car along key radial corridors is therefore critical if we are to avoid congestion to spiral out of control in the future.

3. The extent of congestion in PTE areas and its impact on public transport

3.1. Data collected by the DfT since 2006 for the largest urban areas in England[2] shows that, with the exception of Tyne and Wear and Bristol, average speed (one measure of congestion) is substantially higher in London than in other large urban areas. In 2008-9, this indicator was 38% lower in Manchester, 27% lower in Merseyside and Leicester, and 17% lower in Nottingham, South Yorkshire and West Yorkshire.

3.2. This is not unrelated to the substantially higher levels of transport investment in London compared to other regions. In 2008/9, HMT estimated public spend on transport per head of population to be £641 in London and £287 in the North West. These figures also bust the myth that the most cost-effective transport interventions are all likely to be concentrated in London. Since it is likely to be easier to reduce congestion from a high than a lower level, there are likely to be a number of highly cost effective transport interventions to be made in large urban areas outside London.

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[1] Source: DfT, NTS 2009

[2] Individual PTE annual monitoring reports

3.3. But for public transport users congestion is no longer the only problem. Research by Passenger Focus and DfT shows that while punctuality and reliability are the priority for bus passengers these attributes now top the list of service factors that passengers are most dissatisfied with. As often stated by operators, reliability is also a key cost driver for the industry.

3.4. The attractiveness of bus and on-street rail networks is very much at threat from the sustained rise in congestion observed over the past few decades. But public transport also suffers more than general car traffic, in terms of reliability, from increases in congestion and poor traffic management.

3.5. This is due to the fact that:

- bus routes are fixed and hence cannot easily avoid congestion hotspots;
- traffic control systems are often optimised for average car speeds, and therefore out of sync with bus services which must stop to pick up and drop off passengers;
- bus lanes are particularly prone to parking infringements and kerb side street works, which can greatly reduce their role in improving punctuality;
- small schedule deviations can easily blow out of proportion and lead to severe bus bunching due to the accumulation of passengers at bus stops and the prevalence of on-board ticketing;
- unlike for private car travel, waiting time at bus stops makes up a significant proportion of generalised cost for bus users. Given that waiting time is conventionally weighted at twice in-vehicle time, any increases in waiting time due to greater unreliability have a disproportionate, and typically under-valued, effect on the attractiveness of bus networks;
- reliability (in the form of average deviation from scheduled times) is estimated to be valued three times more highly than in-vehicle time by bus passengers (Hollander, 2006). As a result, poor reliability severely undermines the attractiveness of bus networks and, in turn, contributes to further congestion.

3.6. So for public transport to be efficient, attractive and cost effective it must be fast, reliable, punctual and offer an all-round high quality service. Traffic congestion can badly impact on punctuality and discourage those people who have a choice to use the services. In turn, worsening public transport will lead to growing traffic congestion in what could risk becoming a self-reinforcing vicious circle. We would therefore argue that public transport should be an essential component of any strategy aiming to deliver more effective road and traffic management.

4. The role of PTEs in tackling congestion and improving the attractiveness of public transport

4.1. The PTEs play a key role in funding and promoting integrated and high quality local public transport networks in England's largest metropolitan areas. As the statutory body responsible for joint Local Transport Plans (LTPs), PTEs, in collaboration with their local authority partners, lead the way on investment in bus priority systems, such as bus lanes, bus gates and traffic signal control optimisation based on Automatic Vehicle Location (AVL) systems.

4.2. But better infrastructure is not always the answer and the PTEs have also put significant resources into demand management measures such as school and

workplace travel planning. We are also at the forefront in the provision of high quality public transport information. For example, South and West Yorkshire PTEs now run the most successful bus real time mobile information system (Nextbus) in the UK, which receives tens of thousands of requests on a daily basis.

4.3. PTEs also play a major role in improving bus reliability through voluntary Performance Improvement Partnerships (PIPs), a mechanism which sets punctuality targets and involves a commitment on both the part of bus operators and transport authorities to increased reliability.

4.4. The PTEs' broad role and strategic overview mean that we are able to identify the most effective combination of measures for tackling a specific local problem. However, many key functions affecting public transport remain outside the responsibility of PTEs. These include the operation of public transport services, enforcement activities and direct responsibility for highway infrastructure. Although we strive to work effectively with our partners and other key stakeholders, governance arrangements have, in some cases, got in the way of effective delivery.

4.5. The 2008 Transport Act and 2009 Local Democracy, Economic Development and Construction Act give urban areas the opportunity to review the way in which these transport responsibilities are governed and organised in Met areas in a way which meets local aspirations and circumstances.

4.6. By creating Mayors for the twelve largest Districts that don't already have them the new Government's Localism Bill will add a further dimension to debates around where transport and highways powers should lie in the city regions These Mayors will be able to acquire additional powers via the Secretary of State. In the conurbations journey to work areas, traffic flows, highways and bus and tram routes cross District boundaries and we believe that it will continue to be important that there is a strategic oversight for these networks at a city region level.

5. Evidence on the impact of bus priority measures in tackling congestion

5.1. One of the areas where PTEs, in collaboration with their district partners, are particularly active is the provision of bus priority measures directly aimed at reducing congestion and improving reliability. The success and value of this type of measure is often underplayed by many stakeholders due to gaps in the evidence base. For that reason, we feel it is important to highlight the results of a recent and comprehensive review by the International Union of Public Transport (UiTP) (2009)[3] . This work has shown that signal priority systems, when well optimised for bus services, can achieve as much as a:

- 9.5 second reduction in delay per bus per junction (Southampton);
- 24% reduction in overall bus travel time (Toulouse);
- 49% reduction in bus travel time variability (Sydney);
- 42% increase in bus patronage (Zurich).

5.2. Evidence from five cities (Cardiff, Gothenburg, Portland, Seattle and Los Angeles) has also shown a negligible impact on delays for other traffic although this obviously depends on local circumstances and the degree of bus priority provided.

[3] http://www.tfl.gov.uk/assets/downloads/businessandpartners/interaction-of-buses-and-signals-at-road-crossings(1).pdf

5.3. Overall, the UiTP work suggests that investment in traffic signal priority can be repaid in 3-16 months, which, assuming an asset life of 10 years, would give a benefit cost ratio between 7.5 and 40, which is extremely high by DfT standards.

5.4. This results are consistent with our own evidence. For example, an on-going PTE project costing £1m and aiming to operationalize GPS-activated bus signal priority at 100 junctions will be delivering an estimated £7m worth of benefits, mainly through reliability improvements.

6. The key role of demand management measures and the need for a broader approach to congestion reduction

6.1. Although it is often attractive, and may seem common sense, to target public funds at highly visible infrastructure measures these may not always represent the best value for money in tackling road congestion. Demand management measures and, in particular, what has come to be known as 'smarter choices' can prove to be more effective in reducing car use and hence congestion[4] . It is now commonly recognised that behavioural change tools are essential to complement capital improvements in order to achieve change.

6.2. For example, a trial of personalised travel planning in Merseyside has shown a 7% reduction in car use by participants. We have also found school and workplace travel plans to be a critical tool in managing peaked traffic flows around specific areas. However, pressures on local government budgets could potentially lead to the loss of funding for many of these revenue-intensive measures.

6.3. We welcome this government's initiative to set up the Local Sustainable Transport Fund, which can be used to fund both capital and revenue-based measures. However, this is a very limited and, potentially, short term funding pot. Our position is that in order to deliver the best value for money from all central government funding streams local authorities and PTEs need to have the flexibility to decide on the best mix of measures for their local areas, regardless of whether they are capital or revenue-based.

7. Threats to the funding and effectiveness of PTE initiatives

7.1. The contribution of PTEs to PIPs and LTPs typically relies on funding from the Integrated Transport Block (ITB), which has been cut by 50% in the coming year by the current government. Allied to a reduction in major schemes funding, and the withdrawal of the Urban Congestion Fund announced by the previous government, this is likely to severely curtail our ability to shield bus networks from rising congestion. At a time when government priorities seem to be to make the most of available capacity rather than to build new roads, this sort of short term thinking appears misguided and could backfire badly in the medium term. Although we applaud the creation of the Local Sustainable Transport Fund, this is unlikely to be sufficient either in magnitude or scope to make up for much of the loss of funding elsewhere.

7.2. Substantial central government funding reductions to police authorities and to local authorities in metropolitan local areas is also likely to have an impact on the effectiveness of existing public transport priority measures, given the role of these bodies in enforcement activity. Poorer enforcement (which may come as the result of

[4] http://eprints.uwe.ac.uk/13130/1/CfIT_Value_for_Money_Goodwin_Final2_clean_May_2010.pdf

revenue and staffing cuts) could negate many of the benefits of measures such as bus lanes, restricted access areas or banned turns.

7.3. One significant obstacle for gaining central government funding for larger public transport infrastructure schemes is the bias in the current appraisal framework towards car travel. One example of this is the lower value placed on work time spent on board a bus relative to that spent on a car. As a result, measures aimed at cutting car travel time will be assumed to have higher benefits than those aimed at cutting bus travel time, even if the time saving and number of journeys affected is the same. We would also argue that appraisal fails to adequately take into account that, alongside other measures, significant mode shift will need to take place if overarching climate change goals are to be achieved.

7.4. We understand the DfT is currently re-assessing the appraisal framework and would therefore call for the bias against bus schemes to be removed. But given the important role of public transport and demand management measures in reducing congestion we feel the DfT and government need to have a more fundamental look at how funding is allocated at a strategic level. For example, it makes little sense to cut the ITB in half and leave the Highways Agency (HA) budget virtually untouched by comparison. Should demand for car travel in urban areas begin to grow again as it has done in the past, there will be little the HA will be able to do to keep congestion under control

8. Wider operational and governance challenges and opportunities

8.1. A number of significant governance challenges remain in relation to the way in which the monitoring and enforcement of bus performance is currently organised and managed.

8.2. Although it is clear from some of the evidence quoted above that there are measures which are known to work, substantial challenges remain in understanding what is likely to work best in addressing the causes of bus punctuality and reliability in a given setting.

8.3. These include:

- A lack of resource for the English Traffic Commissioners for monitoring bus performance via VOSA monitoring officers. This problem was highlighted on numerous occasions in previous, and the latest annual, report of the Traffic Commissioners (TCs) . For example Nick Jones is TC for both the West Midlands and for Wales and in the current annual report he states: '*The Welsh Assembly Government has funded additional bus compliance officers and this allows most operators to be monitored more effectively and regularly. This, in turn, has led to remarkable levels of compliance which are far better than those seen in England. The Welsh Assembly Government deserves the credit for this as its funding has enabled effective liaison between the monitors and operators. Within England it is often claimed that it is difficult to run to time in a busy city or in difficult mountainous terrain – results in Wales show that that this is not the case. I often receive reports of compliance in excess of the 95 per target set by traffic commissioners*.'
- A lack of ready access by all interested parties to the Real Time Information (RTI) data which is the best source of information for identifying the causes of bus punctuality and reliability problems;

- The DfT's Punctuality Improvement Partnerships (PIPs) initiative, although valuable, has had a patchy impact hitherto (although we understand the current Government plans to refresh and relaunch it);
- There is a disconnect between the informal processes for addressing punctuality problems (including PIPs) and the formal process (via the Traffic Commissioners);
- Although there are some excellent examples of good practice (such as South Yorkshire's Public Transport Board, which brings together key stakeholders to facilitate shared objectives and partnership working) relationships between the key players in improving performance (public transport authorities, highways authorities, Traffic Commissioners, Passenger Focus and operators) are not always well developed and can be subject to mistrust and a blame culture;
- The powers and responsibilities of the different key players on performance monitoring and enforcement are complex and have developed in an incremental way (creating a series of anomalies).

8.4. We believe that better progress could be made if:

- The PIP initiative were to be reviewed, strengthened and re-launched (something we understand the DfT is looking at) and there was a more structured relationship between these non-statutory processes and the TC's statutory process;
- A joint review (led by Passenger Focus) should be undertaken of a sample of routes (with a wide range of characteristics) of the causes of performance issues to allow for a more informed debate on what are the causes and remedies for bus performance issues;
- Traffic Commissioners and Passenger Focus had access to the Real Time Information in order that they can make a more informed assessment of performance issues and to better focus any investigative or enforcement activity.

January 2011

Supplementary written evidence from the Passenger Transport Executive Group (pteg) (ETM 16a)

Report on the impact of the LTP2 congestion reward fund in South Yorkshire

1) INTRODUCTION

In 2007 the DfT asked 10 Metropolitan areas to produce a Congestion Delivery Plan (CDP) which would outline their ambitions for delivery of schemes that tackle congestion over the lifetime of the LTP2.

Against these plans the DfT made £60M available over 4 years, through the Congestion Reward Fund (CRF), which was based on the performance of each of the ten areas. This approach represented probably one of the most 'focussed' examples of recent output delivery performance and led to a much improved understanding of how congestion might be measured and tackled. The 'carrot' effect of achieving significant levels of reward funding led to the South Yorkshire partners prioritising congestion as a key transport issue. As a consequence all four South Yorkshire Local Authorities adopted the congestion performance indicator as a designated measure within their Local Area Agreement, in support of the then national PSA target.

At an operational level, the launch of the CRF encouraged South Yorkshire to integrate mainstream LTP activity with Network Management and the alignment of LTP investment with the network management duty. It focused prioritisation of schemes which were believed to have a direct impact on congestion at both 'hot spots' and along target route and corridors. Resources were also made available to achieve a broader understanding of the impact of congestion by investing in transport modelling in order to test strategies and schemes. Investments were also made in monitoring traffic flows on targeted routes in order to gain a deeper understanding of the causes and effects of congestion.

Typically, partners used improved monitoring processes on a regular basis for individual schemes and kept track of milestones. Estimated congestion benefits were calculated for each scheme prior to financial resources being allocated; and new Prioritisation Frameworks were adopted to ensure that schemes offering best value were prioritised. The CRF also offered a valuable way of progressing those 'enabling' initiatives not so easily funded from mainstream LTP and allowed an element of valuable revenue support activity to be introduced.

Where slippages occurred, visible explanations were available and mitigation measures put in place to deal with the slippages. In South Yorkshire and other locations, the Congestion Delivery process led to new, shared, LTP project management frameworks with all schemes assessed to ensure value for money. Quarterly updates were submitted on both financial and delivery progress and the concept of "whole route performance" developed to better understand how "internal transport interventions" had affected highway conditions. The variations in routes' performance were identified and as a result South Yorkshire has an improved understanding of why some routes are more susceptible to change than others. This was achieved by identifying the key strategic network within South Yorkshire, targeting specific routes and assigning "RAG-ratings" to the implementation and delivery of congestion tackling interventions.

Robust systems were introduced to review risks to delivery both in terms of scheme progress and resource requirement. These were discussed at Chief Executive and

with senior officers on a regular basis. A further impact therefore of the requirement to achieve much needed additional reward funding was that the risks to delivery for the congestion indicator became managed at a senior corporate level by each local authority which ensured that issues were prioritised and dealt with effectively.

2) OUTCOMES

Over the five years the Congestion indicator was measured, South Yorkshire not only achieved its LTP2 Congestion indicator target, but also reduced aggregated average person journey times by 5.2% (along the 18 defined routes); at the same time experiencing a 2.7% growth in "person miles". This led to South Yorkshire achieving its full £4m CRF funding allocation.

All but one of the 18 routes met respective journey time targets. A number of these were actually achieved against a higher background growth in "person miles" than predicted in our original CDP submission.

Through our development of "route proformas", the Congestion Delivery Plan process encouraged a better understanding of the relationship between interventions along route corridors and subsequent outcomes. This has been supplemented by the use of the **"strat-e-gis Congestion"** software system, which enables detailed analysis of journey times, average speeds and delays.

3) THE ALLOCATION OF CRF

In addition to modelling activity, CRF has been used in South Yorkshire to fund various revenue and capital projects, including Congestion Analysis work; a Key Routes Inspector; and on further development of the South Yorkshire Intelligent Transport System (syITS). Other funded projects include:-

- Smarter Choices initiatives (including iTRACE Travel Planning Management tool).
- Preparation work for a Utility Works Common Permit Scheme.
- Mobile ANPR parking enforcement in Barnsley.
- Bus hotspots schemes.
- Bus Key Route initiatives (including bus priority measures along Balby Road, Doncaster; and Rotherham town centre).
- Congestion Target Route packages of interventions on major arterial routes (including various traffic / demand management and Smarter Choices initiatives along the A61 Chesterfield Road and A625 Ecclesall Road, Sheffield).

The £4m CRF supplemented the mainstream Integrated Transport block settlements, and provided South Yorkshire with more flexible opportunities to fund revenue based activities in support of mainstream capital projects partners

4) NEXT STEPS

The Congestion Delivery Plan / CRF process provided South Yorkshire with an important catalyst to move forward and develop a "Strategic Network". This Strategic Network now forms a corner stone of the LTP 3 Transport Strategy; emphasising the contribution reliable networks make to our economic growth objectives. CRF has also provided partners with a better understanding of which interventions may provide the best outcomes in easing congestion and achievement of reliable journeys, through

evaluation of our best / worst performing routes and assessing where / why earlier predictions have not been realised (or have been exceeded).

We will be assessing our best and worst performing routes against the original predictions for impact. As we move into LTP3, we are developing the previous Congestion indicator into a new journey reliability measure and the focus on the performance of network in South Yorkshire will continue to be given a high priority for LTP3 investment.

This is a good example of a Central Government funding allocation aimed at one specific outcome. It encouraged local development of analysis, and delivery of key interventions to deliver an enhanced output – reduced congestion.

May 2011

Written evidence from the RAC Foundation (ETM 17)

About the RAC Foundation

1. The RAC Foundation is a charity which explores the economic, mobility, safety and environmental issues relating to roads and responsible road users. Independent and authoritative research, carried out for the public benefit, is central to the Foundation's activities.

Congestion

2. The Foundation welcomes this inquiry. Traffic congestion has a major adverse impact on economic activity and quality of life. It arouses much public concern as recorded in various surveys: for instance the Department for Transport (DfT) reports that in their most recent research on public attitudes "over four in five adults thought that congestion was a serious problem in the country and nine in ten said that it was important for Government to tackle the problem although both of these proportions have fallen slightly over the last 2 years"[1]. Reduction should be addressed as a priority in transport policy.

3. Whilst better traffic management (both by network regulation and in real time) has much to offer it will not go far enough in dealing with the pressure to be put on the main road network from expected growth. A longer term strategy is also needed.

4. Various measures are currently used to assess and predict congestion. Whilst these do indicate some reduction in recent years because of the recession, congestion is still widely prevalent. Road traffic growth must be expected to return as economic growth resumes and the population increases (official population forecasts show 20 per cent increase over the next two decades in some Regions) and, without more intensive attention to management of the network, congestion will worsen.

5. The Highways Agency creates "Stress Maps" showing the difficulties their network will experience in dealing with future demands, given current investment plans. The Eddington Transport Study (2006) set out in detail the implications for the whole road system of continuing with the then current policies, concluding that "if left unchecked 13 per cent of traffic will be subject to stop-start travel conditions by 2025". Our report Roads and Reality[2], looking at the period to 2041, forecast major extension of congestion on the strategic network in the absence of substantial improvement. (It also displays Highways Agency national stress maps relating to three levels of traffic growth; pp57-59.)

6. Recent work by HS2 Ltd in association with the DfT, in connection with the case for investment in high speed railways has estimated the severity of the increase in road congestion that is expected to obtain by the time high speed rail is operational (after 2025). It also demonstrates how little difference high speed rail will make: for instance only reducing traffic on the M1 by two percent (perhaps two years' growth), even though that is on the same line of route.

7. For many years network capacity has not kept pace with traffic growth. This trend will be exacerbated by the cuts announced in the Spending Review. Compared with the 2010-11 baseline, the average annual Highways Agency capital spend over the next four years will be cut by 35%. Highways agency resource spend is to reduce by 23% and local government transport resource spend is to reduce by 28% (all these figures are in cash terms and will be further eroded by the effect of inflation). Many of the schemes to be

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[1] http://www.dft.gov.uk/pgr/statistics/datatablespublications/trsnstatsatt/roadcongestion.
[2] Banks, Bayliss and Glaister (2007) *Roads and Reality* RAC Foundation, www.racfoundation.org

delayed or withdrawn by local government are capital or maintenance programmes for roads: some of them large schemes.

8. The Eddington report noted that many road improvement schemes would offer substantial benefits. When the economy has recovered, a long term strategy of improvement based on substantial addition of physical capacity will be necessary if congestion is to be reduced effectively. Like Eddington, the RAC Foundation believes that the ever-worsening problem caused by the difficulty of funding sufficient infrastructure adequately to serve the nation's growing needs can be solved if but only if the methods of charging for and administering our roads are changed to make them more similar to our other utility services[3].

Management

9. For major trunk roads other approaches will assist. For example, the A12 in Essex and Suffolk is a particularly busy non-Motorway which had become notorious for its unreliability. It depended for major capital funding on the East of England Regional Development Authority and large-scale physical improvements will not now be funded. But following an Inquiry[4] in 2008 an Alliance was created between Essex County Council, the Police and the Highways Agency. This began to demonstrate how careful attention to managing the road could significantly improve its performance. These measures included patrols to speed clearance after incidents, along with some limited changes in road layout. Sadly, following the Spending Review, £60m earmarked from the regional allocation has gone back into the fund allocated nationally by DfT; £60m earmarked from the Highways Agency goes back into their reduced funds; the initiative with patrols is being reviewed but politicians from both counties wish to keep it going in some form[5].

10. These experiences illustrate a general proposition: more systematic management of existing roads can increase their throughput, reliability and safety, but that will usually require more public expenditure.

11. We fully recognise that the economic situation must constrain public spending but the importance of reducing congestion warrants special attention. Where projects such as widening cannot be supported at present there is scope for more limited improvements. For motorways the previous programme of Managed Motorways should be reinstated and further extended.

12. Addressing congestion requires assessment of the causes—traffic flow levels, incidents, disruption from works or weather—their relative importance and hence appropriate solutions, having regard to availability of resources. Heavier congestion from traffic flows tends to lead to more incidents and hence more severe and extensive congestion, possibly spreading more widely if traffic is diverted to unsuitable roads. We recognise that proper procedures must be followed at incident sites but attention should be given to ensuring that roads are reopened as quickly as possible. A study for the RACF Foundation confirmed that there is much that can be and should be done[6]. Its recommendations were that

- Police authorities should maintain 24-hour cover by specialist accident investigation teams.
- Accidents should be investigated by the nearest team even if it is from a neighbouring force.

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[3] Glaister (2010), *Governing and Paying for England's Roads*, RAC Foundation.
[4] www.essexpartnershipportal.org/data/download_file/.../A12_report.pdf
[5] http://www.gazette-news.co.uk/news/county_news/8439279.A12_Alliance__We___ll_try_to_spare_the_axe/
[6] http://www.racfoundation.org/media-centre/road-accident-clear-up

- Thought should be given to removing the investigation role from individual constabularies and creating a national unit.
- The role of investigating an accident site and also managing it, is too much for one team and the responsibilities should be split.
- Recovery vehicles should be called in as soon as possible so they are on site when needed.
- The Highways Agency should establish a geographical database of the motorway network linked to roadside markers to be used in conjunction with laser scanning so debris can be referenced and removed more quickly.

13. It is not infrequent for major roads to be closed for many hours whilst the police collect evidence. To address this and in order to protect officers from the accusation that they had not done everything possible to collect evidence irrespective of disruption, it may be helpful if a protocol be agreed between the Home Office and DfT. For example: absolute priority to getting injured off site; officers not involved in these operations to commence investigation immediately; once injured away up to, say, four hours allowed for normal investigation; if this is proving insufficient due to special factors authorisation for an extension to be obtained from a senior police officer; any extensions to be reported to next meeting of the Police Authority with the reason.

14. Congestion figures prominently in the objectives of the organisations responsible for management. A key goal of the Highways Agency is delivering reliable journeys. Local traffic authorities have a Network Management Duty to manage the road network to keep traffic flowing efficiently, overseen by a Traffic Manager. DfT support this by helping to promote and share best practice. Local Transport Plans are required to address congestion in their goal of supporting economic growth. A substantial proportion of delays associated with congestion are in urban areas, and, for major urban areas, the Urban Congestion Programme and the associated Fund provide a structure and incentive for reducing congestion.

15. The capacity of the authorities to deliver on these objectives is crucially dependent on funding being secured and directed to the appropriate activity. Funding arrangements have changed following the Spending Review with a much simplified grant structure. Further, the Government has indicated its longer term intention to change arrangements with "decisions on local transport priorities ….to be taken out of Whitehall and placed in the hands of local people". (Philip Hammond statement 28 October 2010). There will be a need to provide for the involvement of local enterprise partnerships as they become established.

16. It is important that these changes do not lose sight of the continuity of the road network. Motorways and the trunk roads are managed from a national perspective by the Highways Agency. Other A roads and many B roads for which local authorities are responsible carry substantial amounts of traffic whose journeys are not within the boundaries of a single authority, in many cases passing through a number. On minor roads and in urban areas through traffic is generally less but can still be considerable. Maintaining a consistently effective road network requires some oversight of individual authorities' performance and strategies for improvement. This needs to be undertaken at central government level.

17. We have noted with interest the report from DfT, *Evaluation of the Urban Congestion Programme*[7]. We strongly support the aim of seeking to establish how strategies are developed and the effectiveness of the various measures used as a basis for future guidance. We note that a key driver identified was the potential availability of funding for

[7] WSP for Department for Transport (2010) *Evaluation of the Urban Congestion Programme Final Report* www.dft.gov.uk

congestion relief, both from the Programme Fund and the Transport Innovation Fund. We would argue that funding arrangements should include incentivising components where appropriate.

18. The report identifies some useful conclusions but also a number of difficulties. Further studies of this kind should be pursued to improve understanding of the effectiveness of measures in the particular situations encountered. An important question in this context is what factors can be most usefully measured in assessing the level of congestion and how to tackle it. We have looked into this in two studies, one taking a preliminary look at what analyses might be considered for the main road network and one looking at available information for the North West Region as a basis for trying to establish how this might be improved. The main conclusions are set out in the Annex, below.

Specific points

19. The Committee asked for views on some specific points.

- On intelligent traffic management schemes (such as the Managed Motorways, like the M42) we note that experience to date shows satisfactory operation with improved journey time reliability, reduction in numbers of incidents and lower emissions. Drivers generally are supportive. The approach is both less costly than physical widening and, because land acquisition is not necessary, faster. We support the extension of its use as quickly as possible.
- On managing roadworks we are concerned that existing arrangements are not fully effective in minimising the period of occupation and hence the associated congestion. The DfT is preparing for changes in the legislation to increase maximum penalty charges for overrunning agreed periods of occupation and to provide for a new approach with the introduction of lane rental schemes. We believe that both offer the prospect of reduced congestion. They will more-accurately align the incentives on those responsible for roadworks with the public interest.
- The provision of bus lanes to offer freer movement of buses when traffic is heavy inevitably impacts on other road users, reducing available capacity. We recognise that more reliable bus journey times can lead to modal transfer and hence some reduction in car use but would argue that making the most effective use of the capacity available requires careful assessment of the implications of features such as bus lanes on all road users and planning installation and arrangements for use, such as timing, to maximise benefit.

Summary

20. In summary, we argue that

- tackling road congestion must be addressed as a high priority within transport policy
- for the longer term substantial new physical capacity will be needed and a strategy should be developed for implementation in anticipation of the recovery of the economy
- in the short term public funding will be constrained and should be directed to lower cost measures: these can be effective
- commitment and delivery will need funding and appropriate arrangements for providing this
- current funding arrangements and those proposed for the longer term must recognise the continuity of the road network beyond local authority boundaries and include provision for central oversight
- where practicable funding should be linked to performance, as with the Urban Congestion Performance Fund

- a comprehensive review programme should be mounted to investigate the effectiveness of strategies and measures in use
- an important element of these reviews should be establishing what statistics provide the most useful and informative measures of the incidence and severity of congestion

21. On specific measures

- the positive experience of Managed Motorways warrants wider application
- the proposed new arrangements to control occupation for road works should be pursued
- proposals for bus lanes and similar interventions should be evaluated in terms of their impact on all road users

22. We would add a particular concern that a priority for attention should be developing new procedures for dealing with incidents which will allow roads to be reopened more quickly.

ANNEX

David Bayliss has produced two reports for the RAC Foundation which bear on the Committee's interest.

The first of these, *Monitoring the Performance of the Main Road Network*[8], reviews information currently available on the performance of the main road network in England and considers what indicators might be developed to give a more meaningful picture of conditions and how these are changing. The report makes recommendations for measures to be investigated with a view to establishing which are successful in showing variation by time and location in a way that is meaningful and useful to the public. The results should help to identify appropriate components for an effective monitoring regime.

The initial list of measures proposed for investigation is

- variations in travel times by time of day and day of the week by type of road and region;
- variability of travel times on key routes at peak periods (morning, evening, Friday p.m., etc.);
- average delays by region;
- average delays and variability (peak and off peak) on (say twenty) key routes;
- regional differences in average delays, lost time and journey time variability and
- occurrence of large delays (e.g. speeds less than 50% of free flow speeds for over an hour)

The second report, *Measures of Traffic Conditions in North West England*[9], deals with a similar exercise focussed on the North West and covering all elements of the road network. It notes that, although data on traffic speeds and congestion for the region have been published for parts of the area for some time, variations in coverage over that period have made it difficult to draw useful conclusions. It argues the need for greater standardisation and continuity, and for more extensive survey networks to give an appropriate level of resolution. It argues also that, for effective coverage of the region's road network as a whole, the balance of monitoring needs to shift to include more coverage of the non-trunk roads and urban areas. These reports have not been formally published, as they are working documents for a separate piece of forthcoming RAC Foundation research. They are however available to the committee on request.

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[8] D. Bayliss (2010) *Monitoring the Performance of the Main Road Network* RAC Foundation
[9] D. Bayliss (2010) *Measures of Traffic Conditions in North West England* RAC Foundation

January 2011

Written evidence from Campaign for Better Transport (ETM 18)

Summary of main points

- Individual travel choices (including mode of transport) are not simply correlated to rising income and car ownership, and can be influenced by policy measures
- Government should not just focus on congestion on the strategic road network but consider the source of traffic in towns and cities
- Future transport trends may be very different to previous decades with rising fuel prices, changes in information and communication technology and the need to cut carbon, and this should influence decisions on transport spending priorities
- Smarter choices/behaviour change programmes can have a big impact on congestion and the local sustainable transport fund should help mainstream these programmes across local government in England
- Spatial planning policies also have significant impacts on levels of congestion
- In the absence of road pricing, there are others tools for government to use to manage demand, including workplace parking levies, parking standards, requiring travel assessments of new developments, traffic management, reallocating road space, relative pricing of modes and taxation of fuel/vehicles
- Intelligent traffic management (managed motorways) will be more effective at relieving congestion than road widening but should also be an opportunity to consider dedicated coach and car share lanes
- Reallocating road space to other modes than the private car can lock-in benefits of policies outlines above and also support local shops
- Bus lanes can help develop bus patronage which can help in relieving congestion, and may also help manage road space more effectively

1. Traffic congestion and likely future trends[1]

1.1 Much of the discussion and debate on congestion focuses on congestion on routes between the main cities (the strategic network of motorways and trunk roads). As almost 90% of congestion is in towns and cities, widening these roads will simply move traffic into already-congested urban areas just that little bit faster. [2] Studies show that people are far more annoyed by urban traffic than by hold-ups on the motorways.[3]

1.2 If account is only taken of long-distance traffic, the solutions to congestion can appear very limited; with transport plans recommending extensive road building programmes, which just generate traffic and create more congestion. But if analysis is widened to include all those shorter trips and the cities at either end, then a very different pattern appears.

1.3 This is because the range of options is far greater when we consider the full range of journeys. For instance, there are many trips which use sections of the M1 and M6 for which alternatives are – or could be – available. Government studies over the past few years have

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[1] This section is partly based on *The Strategic Road Network Needs Strategic Policy Appraisal* by Phil Goodwin, Professor of Transport Policy, Centre for Transport and Society, UWE Bristol, published by Campaign for Better Transport July 2009

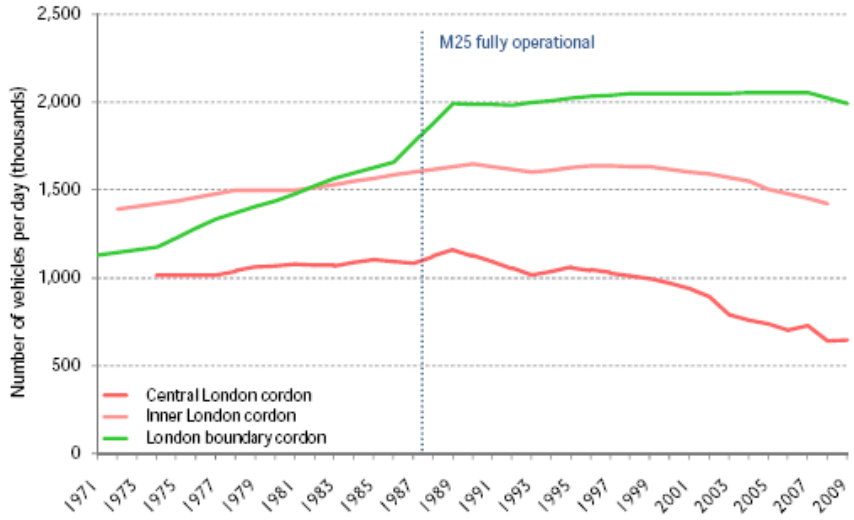
[2] See *The Eddington Transport Study*, page 79. Department for Transport, London, December 2006.

[3] Lyons, G., Goodwin, P., Hanly, M., Dudley, G., Chatterjee, K., Anable, J., Wiltshire, P. and Susilo, Y. (2008). *Public attitudes to transport: Knowledge review of existing evidence*. Department for Transport, London, July 2008

repeatedly found that it is possible to reduce congestion on the motorways by managing demand in urban areas.[4]

1.4 It is not just the biggest cities which need attention: there are plenty of smaller hot spots where targeted programmes could reduce congestion without the need for costly, and ultimately futile, road building. Improving public transport or providing workplace or school travel plans in areas surrounding heavily congested junctions can have a dramatic impact on journey times – and cost far less than building roads.

1.5 Increasing the capacity of the strategic road network also adds to traffic impacts on other roads, including in urban areas. Transport for London's report on transport trends in the capital over the past ten years[5] shows this in respect to the M25. Although the number of cars entering the capital had been rising steadily, it rose significantly in the late 1980s as sections of the M25 were opened to the public.



Source: TfL Road Network Performance.

1.6 The 'central London cordon' was also affected by the M25, peaking in 1989, before remaining roughly steady throughout the 1990s. Car trips then fell with the introduction of the Congestion Charge in 2003 and commensurate improvements to public transport. Between 2000 and 2009, car traffic entering central London fell 33%, as people left their cars at home and chose instead to walk, cycle or use public transport.

1.7 Away from the strategic road network, many by-pass schemes put forward to relieve congestion simply move the congestion further down the road, as the Highways Agency's own reports on post-opening project evaluation suggest.[6]

1.8 Future transport trends also assume that traffic will continue to grow at similar rates to that observed over recent decades. However, there are a number of trends, which may start to be observable already, which suggest that there will be significant changes. Firstly, energy

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[4] See for instance the MIDMAN Multi-Modal Study (2002), the South-East Manchester Multi-Modal Study (2001) and *Tackling Congestion, Delivering Growth*, commissioned for the Leaders of West Midlands Metropolitan Councils and Chairman of WMPTE (2008).

[5] *Travel in London*, Transport for London, December 2010

[6] See *Investing in Road Building: The Highways Agency's Billion Pound Traffic Gamble*, Campaign for Better Transport, January 2010

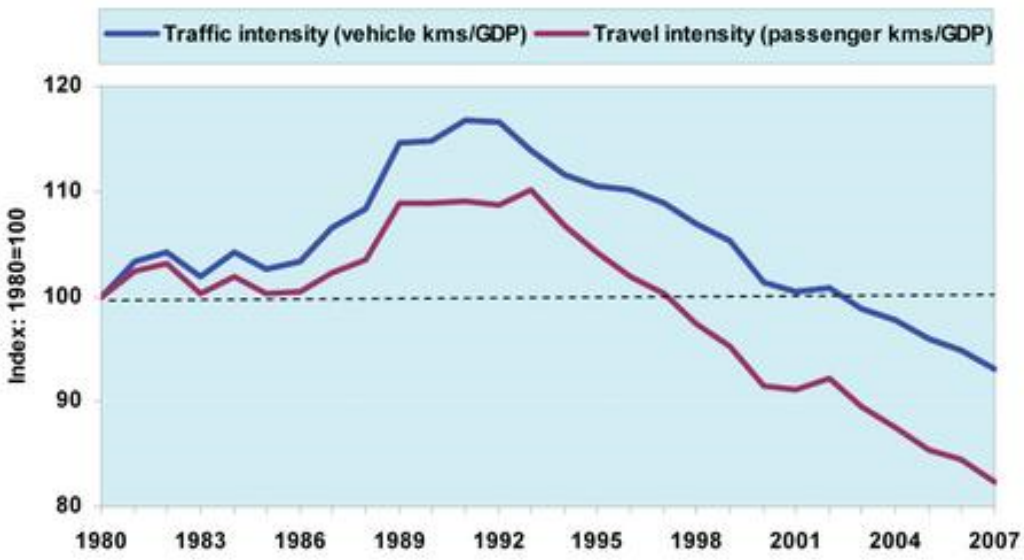
prices will rise, making travel more expensive (as we can already see with rises in fuel prices). This will also have a knock on effect in the long-term as the cost of transporting food or many goods around will outweigh the savings from using foreign labour.

1.9 Secondly, technology is likely to reduce the demand for much travel, especially long-distance business trips as teleconferencing becomes normalised.

1.10 And thirdly, the need to reduce carbon will reinforce both these trends, particularly as early reductions in carbon will have greater impact and avoid the need for much more severe cuts further down the line. The impact of, for instance, electric vehicles on reductions in carbon will take longer to have an impact.

1.11 This fundamental change in trends may already be starting to become apparent with a de-coupling of economic growth from traffic growth.

Trend 1.2b – Road traffic and travel intensity: 1980 to 2007, Great Britain



Source: Department for Transport and Office for National Statistics

1.12 Professor Phil Goodwin has suggested that we may be seeing a “peak car” phenomenon with, in the first instance, positive feedback mechanisms now reinforcing the trend away from increased trips by car in urban areas (as suggested by the recent Travel in London report from Transport for London[7]).

1.13 However, forecasts based on past growth matched against expected future rises in income are used the basis for justifying new road building schemes. Many of these schemes’ benefits derive from comparing the scheme with a “do-minimum” scenario based on forecast traffic growth with no other interventions. The time-saving benefits are therefore not actual improvements over current journey times but instead are the difference between worse times expected with the scheme and the “nightmare” scenario. These benefits therefore rely on the expectation traffic levels will continue to rise year on year over the 60 year span of the appraisal period.

[7] *Travel in London*, Transport for London, December 2010

2. Government and local authority interventions to alleviate congestion

2.1 Although we suggest above that long-term rising demand for car use is likely to fall, there are still the impacts of current congestion in the short- to medium-term. Although national road pricing may be off the agenda in this Parliament, local authorities can look to a range of demand management measures, particularly around parking. This can include parking standards (particularly for workplace and shopping parking), the pricing of parking and new measures like workplace parking levies.

2.2 Although the Department for Transport's business plan includes a goal to "tackle carbon and congestion on our roads", the suggested actions to deliver on the congestion side of this are very limited, mainly focussed on dealing with incidents and introducing a lorry road user charging scheme (which does not appear to be likely to lead to more efficient freight networks if, as seems likely, it is merely a time based scheme).

2.3 There are however a range of measures that the Government could progress to tackle congestion and the causes of congestion. Based on the report on the strategic road network from Phil Goodwin, we recommended in 2009 that the Government should:

- Take account of shorter trips and cities and their impact on the major road network when carrying out its transport corridor studies
- Produce wide-ranging packages of solutions, including projects to manage demand for road space in towns and cities, and encourage local authorities to implement them
- Earmark a proportion of transport spending for revenue programmes which would reduce the need for to build additional infrastructure

2.4 Additionally we suggested that the Government should introduce measures to tackle motorway congestion recommended in official studies, including:

- Rolling out 'smarter choices' programmes in the surrounding towns and cities, such as travel planning, information, marketing and advice, so that people can make informed decisions about how they travel
- Improving infrastructure and support for public transport, walking and cycling
- Adjusting the cost of different modes of transport to encourage people to walk, cycle or take public transport
- Reallocating road space to give priority to the most efficient, productive or socially needy road users
- Rolling out real-time information and control systems including dynamic traffic control (e.g. 'green wave' systems and intelligent traffic lights)
- Improving land-use planning so that essential services are closer to where people live and work, eliminating the need for long journeys on already busy roads
- Increasing support for advanced telecommunications systems, to help people work from home, shop online, meet via video-conferencing and improve the way councils manage transport systems

2.5 The main area of progress following from these recommendations is the Government's Local Sustainable Transport Fund, particularly if local authorities bids include smarter choices / behaviour change programmes. The evidence from the Sustainable Travel Towns shows that these programmes can have major benefits in reducing traffic, as well as cutting CO2. People's choices about travel can change and programmes to provide information and advice can deliver these changes in behaviour.

2.6 The Department should also look at the opportunities for behaviour change for medium-distance trips, for instance through more roll-out of workplace travel plans, particularly to cover business travel and longer-distance commuting, development of the coach network and better integration of rail stations with walking, cycling and other forms of public transport.[8]

2.7 Leisure travel plans also offer opportunities to address medium- and longer-distance travel. Ensuring that good public transport is available in, for instance, national parks will be important. The cuts in bus funding threaten to reinforce car travel as the default for accessing leisure facilities and rural tourism.

2.8 The Alternatives to Travel work by the Department for Transport also offers opportunities to reduce traffic, particularly from business travel and commuting. However, it is important that the alternatives to travel work programme includes the role of spatial planning, and the DfT and Department for Communities and Local Government should work together to address this as a principle to be embedded in the new national planning policy framework.

2.9 Changes to national planning policy and local plans (including neighbourhood plans) could have a significant impact on traffic levels, either to increase or reduce traffic. For instance allowing the development of out of town shopping centres in the 1980s was accompanied by large increases in traffic levels which embedded car use as the default option. This weakened alternative transport modes which became less viable as usage dropped and local shops and services declined with the increase in the number of our of town retal centres (accompanied by large free car parks).

2.10 The Masterplanning Checklist published by Campaign for Better Transport was a review of literature and showed that planning policy can be used to influence traffic.[9] The Commission for Integrated Transport's Planning for Sustainable Travel (using the National Travel Survey dataset) also showed how higher density, larger settlement size and accessibility to key services are all associated with lower car use.[10]

2.11 It is also important to lock in benefits by reallocating road space to more sustainable modes (inc walking and cycling) which can enable continued mode shift and can also support local retail economies as pedestrians, cyclists and bus users have all been found to spend more money in shopping areas in our towns and cities across the UK compared to those who travelled by car.

3. Intelligent traffic management schemes

3.1 Intelligent traffic systems can be a useful part of managing the motorway and trunk road network and are more effective than road widening schemes. Managing speed is an essential part of this. Alongside hard shoulder running, the Highways Agency should also look at opportunities for dedicated lanes for buses and coaches, and potentially car share/high occupancy vehicle lanes.

4. The impact of bus lanes

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[8] See for instance Medium-length Trip Patterns: Stage 1 - report & discussion paper, Commission for Integrated Transport, September 2010

[9] Masterplanning Checklist for Sustainable Transport in New Developments, Transport for Quality of Life for Campaign for Better Transport, October 2008

[10] *Planning for Sustainable Travel*, Commission for Integrated Transport, October 2009

4.1 Bus lanes can help as part of a package of measures to reduce congestion, mainly through modal shift but also, as in the case of the M4 bus lane, they may help smooth traffic flow. Local authorities should look to build wider support for bus lanes, particularly through working with operators to grow bus usage through affordable fares and frequent services. Bus lanes are not the only bus priority measure and giving buses priority at traffic junctions should also be used.

4.2 The M4 bus lane is a particular example which can help as part of overall traffic management. The M4 bus lane opened in 1999, and was introduced as a way of reducing delays caused by the Brentford flyover at Chiswick. The flyover narrows to two lanes from three, so highways engineers decided to move the point where traffic had to merge back to junction 3. The speed limit was also lowered to 40mph.

4.3 One year after it opened, the Transport Research Laboratory looked at the bus lane and compared journey times before and after it opened. Their findings showed how effective the bus lane was at cutting peak-time congestion.

4.4 Before the bus lane opened, a queue formed where the M4 narrowed from three lanes to two, with drivers queueing for up to ten minutes. After the bus lane opened, the queueing behaviour was replaced by intermittent stop-start driving behaviour (shockwaves), with car drivers typically stopping once or twice as they travel towards the elevated section, but otherwise travelling faster than before. It is this change in behaviour that enables both cars and buses to benefit from the bus lane scheme.

4.5 Despite claims that the bus lane was always empty, TRL found that "7% of the vehicles on the M4 into London use the bus lane, but they contain 21% of the people, including drivers." One in five people entering London via the M4 did so via the bus lane.

January 2011

Written evidence from *lift*share (ETM 19)

1. The following submission is on behalf of *lift*share, a social enterprise helping people travel more sustainably by sharing their car journeys.

2. Effective road and traffic management features highly within the transport agenda, because of the impact it can have on congestion, at the present and in the future. Tackling congestion has its clear merits and it can be argued that inaction would seriously restrict the future of the UK transport sector and the nation's economy. The economic cost of inaction against congestion could waste an extra £22 billion's worth of time in England alone by 2025[1]. In these straitened times opportunities for savings must be fully utilised.

3. The very real cost that congestion places on our economy means that the Government and Local Authorities should take every step to intervene and combat congestion. Public acceptance to intervention may vary as some methods such as the abandoned road charging could be viewed as a further weapon in the 'war on the motorist.' Whereas other measures such as car-sharing are likely to be more readily accepted as it acts to assist in reducing congestion but provides tangible benefits to those sharing. With fuel prices reaching record levels, the public will be glad of a measure that can help lift the financial burden of motoring. At current petrol prices it costs an extra £8.04 to fill up a small family car compared to January 2010, and a staggering £20.64 extra than January 2009[2].

4. The Local Sustainable Transport Fund (LSTF) will provide further reasoning for Local Authority intervention. The £560m fund will be open to bids that demonstrate value for money, deliverability and proof that they are affordable[3]. An independent research project undertaken by the Yorkshire and Humber Regional Rural Car-Share Feasibility Study (April 2010), has shown that having a *lift*share car-share scheme is a very cost-effective tool (at an estimated cost of just £0.017 per vehicle kilometre reduced) [4]. For every reduction in vehicle kilometre travelled there will be the associated congestion relief. With this in mind the Government should be encouraging all Local Authorities to enter bids that include car-sharing for the LSTF.

5. A key contributing factor to our congestion problem is the culture and behaviour of road users. Currently the focus is concentrated on convenience and travelling when the user defines. This mentality leads to single occupancy travel; in 2008, 60% of cars on the road had only one occupant[5]. Single occupancy journeys not only limit the efficiency of the car journey itself, but decreases the efficiency of the road network. A change in behaviour is necessary to try and make the more efficient use of the car a key theme for those making car journeys where no other options are available. Increasing occupancy would lead to a reduction in road traffic and therefore congestion.

6. It also stands to reason to begin to try and act on the base of the problem of congestion. Fundamentally it is our driving habits that create these pressure points and load the network with un-workable levels. Even new road network developments that have undergone designing to limit congestion can suffer a similar fate without the cooperation of the road users themselves. To solve the problem, they need to realise that some of their actions, such as single occupancy travel are the cause. It is therefore clear that the behaviour change of road users needs to be targeted as part of the drive to reduce congestion.

7. Intelligent traffic management schemes have been suggested as other means of reducing congestion. Intelligent traffic management tackles congestion through the introduction of new technology to make the best use of existing road space, whilst maintaining and hopefully improving road safety standards. This requires the installation of new infrastructure such as lighting, gantries, electronic and static signing and CCTV that are all managed in an off-site control room. This can be a costly investment whereas reducing congestion through the use of a well managed car-share scheme takes advantage of developed current technology minimising costs and decreasing lead times. There is also no need for any new infrastructure

and possibly more importantly the benefits from car-sharing are not limited to one stretch of road as is the case for intelligent traffic management schemes.

8. Yes, intelligent traffic management schemes do have a positive impact, but there is considerable cost and only a small locality receives the advantageous effects. These weaken the business case for the schemes and point towards car-sharing being a more attractive option. Car-sharing is not just restricted to a small section of the road network but is indeed one of the most versatile congestion reducing measures. Car-sharing can encompass the major road network and urban roads. Not to mention rural environments. Even in locations where walking and cycling schemes are not viable because of infrastructure limitations or excessive journey distances, car-sharing can still be successful. Car-sharing has equally been proven to improve road safety standards; 'when one or more passengers are present accident risk is reduced (approx. 25%). The size of the passenger effect is about the same as the sex-of-driver effect'[6].

9. An alternative method of approaching congestion is to manage the road layout, which in turn will modify the traffic flows. The introduction of High-Occupancy Vehicles (HOV) lanes provides real congestion benefits and journey time savings, particularly when general purpose lanes are congested. Only one year after the A447 Stanningley Road, Leeds was opened time savings were being realised by both those using the lane and other single occupant vehicles in the adjacent lane. Journey times fell by 4 minutes in the morning peak on a journey normally taking 10 minutes. And single-occupancy vehicles saw a 1 minute 30 second journey time saving when using the adjacent non-car-share lane [7]. What's more is that HOV lanes can 'lock-in' the congestion benefits as they act as a very visible reminder for the benefits of car-sharing. Commuters who see these lanes daily are more likely to partake in sharing in the future as they will be constantly reminded that those who are travelling with others receive the reward of being allowed to use the quieter lane and have a faster journey.

10. The closure of the M4 bus lane would provide the ideal opportunity to convert this to a HOV lane and reduce congestion on the 3.5 mile stretch where the bus lane is currently. This would also provide a high-profile example of promoting sustainable travel especially with the media attention this section of motorway has received. It will be a significant lost opportunity to relieve congestion and promote the seriousness that this Government takes in backing sustainable travel, if this lane is converted to a general purpose lane.

11. Future trends for congestion do not make desirable reading either. The Department for Transport forecast a long term continual growth in traffic, despite declines in traffic levels in 2008 and 2009[8]. This will further populate a network that in places cannot fully cope at present day levels. Secondly forecasts from the National Transport Model suggest that motor vehicle traffic in 2035 will be 43% higher than in 2003[8]. With the future of UK transport looking likely to be growing rapidly action against congestion will need to be swift.

12. In summary car-sharing has numerous reasons supporting its effectiveness as a method of reducing congestion. As a low cost, versatile option car-sharing has the potential to play a major role in reducing congestion in coming years. It is not only congestion relief that car-sharing provides but notable emission savings also. If the national average car occupancy can be raised from 1.6 to 2 people, the UK's CO_2 emissions from cars will experience a 20% reduction[9]. With the UK Government committed to a 80% reduction by 2050 this can provide a valuable saving.

13. Car-sharing is currently offering one of the strongest cases for how to suitably manage the roads and traffic to reduce congestion, so should feature in any plans that aim tackle this. Not to mention the other complementary benefits car-sharing can provide such as improving access, reducing social exclusion, decreasing demand for limited fossil fuels and a reduction in pollution.

[1] Eddington, R. 2006, The Eddington Transport Study: The Case for Action, *Department for Transport,* pp. 1-64.

[2] Calculations based on a 50 litre fuel tank capacity.

January 2009 Petrol price: 86.6 pence per litre (Source: AA Fuel Price Report January 2009)
Source: http://www.theaa.com/onlinenews/allaboutcars/fuel/2009/january2009.pdf

January 2010 Petrol price: 111.8 pence per litre (Source: AA Fuel Price Report January 2010)
Source: http://www.theaa.com/onlinenews/allaboutcars/fuel/2010/january2010.pdf

January 2011 Petrol price: 127.88 pence per litre (Source: *http://www.petrolprices.com/* Accessed 10th January 2011)

[3] Local Sustainable Transport Fund, Written Statement Norman Baker. Source:
http://www.dft.gov.uk/press/speechesstatements/statements/baker20101213

[4] Integrated Transport Planning - Yorkshire and Humber Rural Access to Opportunities Programme - Regional Rural Car Share Feasibility Study. Source:
https://www.liftshare.com/business/research.asp

[5] Department for Transport – Transport Trends 2009
Source: http://www.dft.gov.uk/adobepdf/162469/221412/190425/220778/trends2009.pdf

[6] Reiß, J., and Krüger, H.-P., 1995. Accident risk modified by passengers. In C.N. Kloeden, A.J. McLean (Eds.), Alcohol, Drugs and Traffic Safety-T'95 (213–221). Adelaide: NHMRC Road Accident Research Unit.

[7] High Occupancy Vehicle Lanes – Evidence on performance
Source: http://www.konsult.leeds.ac.uk/private/level2/instruments/instrument029/l2_029c.htm

[8] Department for Transport - Transport Statistics Great Britain: 2010
Source: http://www.dft.gov.uk/pgr/statistics/datatablespublications/tsgb/latest/tsgb2010roads.pdf

[9] Niches 2007 - Bührmann, S., 2007. Urban Lift-sharing Services, *Niches*, pp.1-12.

January 2011

Written evidence from MIRA (ETM 20)

1. Moving people and goods quickly, efficiently and cheaply is central to the future growth of the UK economy.

2. Evidence from the Department of Transport's “The Future of Urban Transport” report shows that the measurable costs of urban transport of congestion, road accidents and poor air quality are each in the region of about £10 billion per annum.

3. Present patterns of transport growth are unsustainable without strategic intervention into the intelligent management of existing infrastructure

4. Optimising urban, sub-urban, national and international transport infrastructures will be required. This can only be achieved through concerted and co-ordinated investment and intervention in existing and new transport infrastructures across all modes of road transport.

5. A high level systems approach by government and local authorities to addressing R&D needs is required in order to deliver Intelligent Transport Systems (ITS) that offer high value/payback and competitive advantage to the UK Transport Systems sector.

6. It has been proven that on several occasions inappropriate driver behaviour increases accident frequency, accident severity, reduces capacity, increases atmospheric and noise pollution, and can more generally reduce the quality of a local environment. Therefore, consideration must also be given to influencing driver behaviours for example through the use of advanced driver information systems such as intelligent navigation, speed adaptation and instantaneous emissions models which can encourage safer and greener driver behaviours and increase the efficiency of transport system capacity.

7. ITS technologies to address transport congestion management are relatively mature however targeted actions to address interoperability and fragmented market penetration are required. Areas for attention include

    - The optimised use of all forms of transport data
    - Data and infrastructure security
    - Interoperability of traffic and freight
    - Safety
    - Vehicle to vehicle Integration
    - Vehicle to transport infrastructure
    - Autonomy liability issues
    - National and international co-operation and co-ordination of ITS

8. Intelligent Transportation systems will undoubtedly play a critical role in solving congestion on both existing and new transport infrastructure. In the short term, by intelligently controlling existing infrastructure such as traffic lights, signage and speed, it will be possible to improve traffic routing and reduce congestion and its effects. For example sections of controlled motorways with variable speed limit signs have shown that co-operating vehicles can improve journey times, accident statistics and emissions at the same time.

9. Co-operative vehicle movement can also be achieved by using vehicle to vehicle (V2V) and vehicle to infrastructure (V2I) communications technologies. These systems have low fixed infrastructure requirements and can also be used to modify the behaviour of

road users in a co-operative fashion so as to influence the network in a dynamic way and optimise traffic flow.

10. The wide spread implementation of ITS will facilitate real time route planning to ensure the least congested routes are used reducing overall journey time, emissions and improving safety. Ultimately, by convincing users of the benefits of the co-operative use of the transport infrastructure it will be possible to implement systems for optimised selection of the most efficient and cost effect mode of transportation.

11. Government intervention is required on the standardisation of intelligent systems so the plethora of systems already implemented and any future complimentary or competing systems can operate in unison across regional, national and international boundaries.

12. Data acquired from ITS will also have a pivotal role to play in the planning and optimisation of future infrastructure and thus generating a greater return on investment. The availability of both public and private source data is required and Government has a key role to play in making this happen.

13. Legislation on the implementation and liabilities associated with semi-autonomous and autonomous vehicle technologies is required to enable the additional benefits offered through the use of such technologies to be realised.

14. A clear understanding of who benefits from the implementation of traffic management systems is required as this will have an impact on user behaviour. Whilst it is clear that ITS can enable multi-modal transportation systems to be connected, this needs to be done from the user perspective otherwise the public will not question the need for personalised modes of transport and congestion will not be addressed.

15. The business models for investment and revenue generation from ITS are complex and need to be better understood at a systems level to realise full economic advantage. The key is improving the connections between the different sectors and the different technologies involved in ITS, starting with R&D. Government has a key role to play in bringing this about.

January 2011

Written evidence from the Local Government Technical Advisers Group (TAG) (ETM 21)

Introduction

TAG wishes to thank the Transport Committee for this invitation to submit evidence to this new Inquiry. TAG has given evidence to the House of Commons Transport Committee on some closely related items:-

Taxes and Charges in October 2008
The Major Road Network in January 2009
Transport and the Economy in September 2010

It has also given evidence to the Department of Transport's Sustainable Transport Initiative (DaSTS); the NATA Refresh and the Eddington reviews. We have not repeated evidence from these submissions in this particular case as we believe the Transport Committee is well aware of most of the issues we raise. However there are some general points that do deserve mentioning to set the context of the rest of our evidence:-

- Transport is not a "good" in the traditional sense, but is derived from the need to achieve other "goods" - its purpose is to provide access so that goods can be delivered to premises by all modes and that individuals can achieve access to shops, social gatherings, employed work etc.
- While TAG has traditionally supported the principle of road pricing or trip-end pricing (through effective management of <u>all</u> parking spaces - covered in our evidence to the HOCTC Inquiry into taxes and charges), we now recognise that the Government has abandoned road pricing for the time being; this does not however prevent further trip-end pricing or indeed congestion charge-type schemes for defined urban areas. We fully recognise the difficulty for any politician to introduce methods restricting movement, especially by car, nevertheless effective demand management is critical in dealing with congestion and CO2 issues, technological solutions only will not solve the problems.
- The Government and the citizens of Manchester, in reaching the decision not to proceed with congestion charging/ road pricing (which showed extremely good benefit to cost ratios at traditional values of time), have implicitely 'declared' their view that congestion (or the value of time savings for cars), is of much less importance than is presently valued in terms of the Department of Transport's cost benefit analysis system. They have also questioned the fairness of such a system of taxation of individuals to improve a local economy.
- From industry the quoted problem of congestion is not the congestion per se but the unreliability of journeys – finer rather than high capacity coarse networks are likely to be more reliable.
- Traditionally congestion has been referred to mainly for vehicle and indeed car movement, congestion for pedestrians or public transport is also of similar importance, but is not addressed to the same extent in the transport planning industry.
- Moving specifically to road congestion Eddington identified that urban congestion was the worst example, with major inter city road congestion following behind that.
- For the largest urban areas, where major road congestion is likely to be the worst, *accessibility* to goods and services is usually very much higher than in

smaller cities or rural areas - for a given amount of travel time more shops, different people, factories, recreational centres etc. can be reached in less time than elsewhere.

- We would reiterate that there is no evidence that road building solves congestion problems except in the short term. Indeed there is considerable evidence some dating back to the 1920s to show that road building causes extra traffic and hence congestion where it is worst e.g. on approaches to city centres.
- If congestion and accessibility is a problem - the form and size of cities are just as important considerations as the transport system. Ensuring proper planning of new developments is absolutely critical. Such factors are also important in the attractiveness of the city for people to live and work.
- The types of vehicle being used in urban areas also needs consideration, larger freight vehicles are inappropriate in many of our cities and we need to consider better break bulk consolidation centres etc.

TAG's thrust on the general subject of effective road and traffic management is that capacity increases, especially if also speeding up traffic flow, are unlikely to effectively meet overall transport or traffic objectives for people or industry. While this is not always the accepted wisdom, our approach has been supported by the most revered transport analysts; unfortunately such approaches are often ignored by people looking for a quick fix to a problem. The original Buchanan 1963 report addresses the importance of managing the total traffic, particularly for larger cities by using road pricing, parking policy, restrictions, effective subsidies and provision of public transport etc. Similarly J M Thompson in his book "Great Cities, and their Traffic" in 1977 shows that the bigger the city the less favourable policies should be on car use and greater importance given to public transport etc.

TAG Responses to specific issues raised by the Transport committee

1: The prevalence and impact of traffic congestion and likely future trends.

From our introduction section above traffic congestion is worst in our cities, and specifically in our big or historic cities. It is normally worst in peak hours; the last few percent of traffic volumes cause the most congestion - peak traffic during school holidays is typically 5% lower and traffic congestion is largely solved in most places.

For future trends if we continue to build more roads to encourage more and longer-distance commuting traffic levels, congestion will get worse. Future predictions and models generally show increasing traffic volumes and hence increasing traffic congestion. This is not necessarily an inevitable outcome; many cities including London, Oxford and other historic cities have actually succeeded in achieving traffic reductions over the last few decades. Recent work by Professor Phil Goodwin seems to show that we might have even reached a 'peak car' position and that car demand and traffic could go down rather than up and hence congestion could be reduced.

Furthermore the evaluation of the Urban Congestion Programme, recently completed, suggests that recent reductions in congestion are not likely to be due to the impacts of the recession alone. Furthermore, although there is some evidence of "peak spreading", there is also evidence of modal shift and that the reduction in the road space available for private cars, together with other broader policies, including land use, have contributed to reduced congestion.

The importance of other means of communication and particularly using electronics, including telephone calls, video conferencing and indeed e-mailing, can potentially reduce the need to physically travel and so in practice could deliver traffic reductions in the future.

For goods traffic TAG has previously included in its evidence the importance of reducing some of the extremely long-distance goods vehicle traffic in Europe and reducing the volume of low-value goods being carried around the country rather than providing local distribution systems. Whereas, the modest reductions in heavy vehicle traffic in urban areas are welcome the significant increase in the use of vans remains to be explained and raises concern.

Despite the possibility of reducing volumes, providing more liveable cities actually requires a reduction in traffic volumes potentially maintaining the same level of congestion (as parts of the network are taken out of use for cars and given over to open space for pedestrians etc).

2. The extent to which the Government and Local Authorities should intervene to alleviate congestion and the best means of doing so.

Until individuals and businesses (including our Local Government business) start taking responsibility for traffic volumes and congestion any pro-active attempts by Government or Local Government to reduce congestion are likely to be severely reduced in their effectiveness.

Individuals and businesses need to realise that their own parking creates traffic on the road network and they should also be made aware of the effect of a small reduction in traffic volumes on relieving congestion. (We accept that in order to deliver the required C02 reductions, larger reductions in traffic volumes and measures to reduce the C02 output of transport are also essential).

While Government and Local Government continue to provide palliatives to temporally reduce traffic congestion, businesses and individuals will not realise or take the responsibility for their actions. Developers, particularly of out-of-town centres, initially capitalise on the extent of the road network that has been provided, and then, rather than forcing such developers to deal with their longer-term problems, Government and Local Government continue to make efforts to reduce the consequential congestion.

A classic example is perhaps Blue Water shopping centre where enlargements of the A2 and the junctions have been made so that more and more people can travel primarily by car to Blue Water, a better solution might very well have been to ensure that the extra traffic does not leave the site in sufficient numbers to cause congestion on the main road network and then the onus would have been on Blue Water to provide realistic solutions, or that retail expansion could occur back in town centres where other modes are easier to provide. (TAG apologises for using this specific real example in the South East but it is a good example where very substantial sums of public money have been spent, in part, to relieve congestion of a type of development which other policies are now discouraging).

Travel Plans, however, are arguably the most successful ways of reducing congestion. Companies and organisations usually only engage effectively in travel plans if they are forced to from a planning application or if they have a specific access or parking problem. If there are no traffic or parking problems many organisations would not freely engage in travel planning and indeed a number of high

profile companies have abandoned their effective travel plans when there is no longer perceived to be a need from the individual company point of view.

We consider that road capacity intervention by Government and Local Government for congestion problems is the wrong solution; however local and central Government can support those businesses introducing effective travel plans by providing advantages to sustainable travel such as:

- better, more direct pedestrian routes and crossings,
- bus and high occupancy vehicle lanes,
- work place parking charges,
- effective management of public parking stock.

Furthermore Government could consider changes to:

- the business rating system so that provision of parking space, which causes many of the congestion problems, attracts business rates in its own right;
- extending the workplace parking charge legislation to all parking spaces and particularly retail;
- levelling the playing field by removing the tax free perk of free parking places at work, or at least providing similar value benefits to those using sustainable modes.

The close integration of land use policies with wider transport policies should continue to be encouraged, with a strong emphasis on reducing the need to travel, getting the right development in the right place and the provision of limited car parking for all new developments. Access to all “local” services by the most sustainable mode of walking, cycling and local public transport should always be uppermost in any future planning.

It should be noted that the increased concentration of central areas for development has not resulted in the significant increases in car usage anticipated and should also continue to be supported through both local and national planning policy.

3. The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today’s road users of the Highway Code.

Opinion formers and decision takers are very often in the higher income groups including members of our own organisation as senior officers of Local Government, the press and other relatively privileged members of society. We often see problems from a car driver’s point of view, the situation is not generally seen from poorer members of society in poor housing, hemmed in by noisy polluting roads. Furthermore the cars that we drive very often isolate us from their pollution both air and noise and are indeed very much a status symbol for significant sections of the richer members of society.

Turning again to Travel Planning, a very important element of this activity is to change the culture of an organisation, e.g. removing a reserved parking space next to the front door, changing mileage allowances so that people with bigger cars have less privileges etc. These changes in culture have been quite successful in some of the largest firms with their travel plans.

Culture change has been achieved over the last 30 years on drink driving and smoking, there are signs that culture change on speeding is changing, people usually do not boast about driving in excess of 100 miles per hour as they might have done

20 years ago. Clearly enforcement also has a significant part to play both in signalling societies' disapproval and as tool to secure retraining where necessary by ensuring compliance.

Similarly driving in the centre of historic urban areas or London is now sometimes recognised as a rather selfish activity. Working towards greater culture change, by the leaders of our society showing an example, will help to deliver big changes in congestion, pollution and C02 levels and any efforts to support such culture change would have marked benefits. TAG members also have a very significant responsibility in helping this from our positions as senior officers of Local Authorities.

The most important part of effective traffic management is ensuring safety of all road users. There are a minority of motorists who deem to have the right to drive in an aggressive or antisocial way and believe and that they have right of way, such behaviour needs to become socially unacceptable. For such drivers the Highway Code has little meaning, many of whom will never read it after passing their driving test and the wider use of formal retraining should be considered.

4. Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times.

Traffic management systems which improve reliability for all traffic including pedestrians should probably be welcomed, however if such traffic management reduces measured journey times on a regular basis there is a danger that there will be substantial additional generated traffic which will cause extra congestion outside the measured area, just as happens when new or widened roads are provided. Furthermore if schemes actually encourage more traffic on an already fully used road there could be adverse road safety consequences; we have previously advised on different standards between road design and road safety. (Road design typically allows vehicle flows of up to 2000 vehicles per hour per lane, road safety advice would suggest that we should never exceed 1800 vehicles per hour per lane with infinitely short vehicles and absolutely even two second spaces.)

On the M42 itself, the extra capacity from the extra 33% of road width was "filled" within 12 months with a 33% increase in traffic volumes. The consistent and possibly lower speeds with the speed limit undoubtedly removed the instability, unreliability and hence reduced the worst congestion. Nevertheless the extra 33% of traffic must have started and completed their journeys off the motorway network where extra congestion, vehicle flows etc. have not been measured. Inevitably allowing extra longer distance car commuting has worked against other policy initiatives of reducing car traffic and reducing congestion in urban areas. The M25 widening to the west of London also had a 33% increase in traffic within 12 months from a 33% increase in capacity.

5. The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.

Provision for the local management of traffic is enabled in the New Roads and Street Works Act of 1991, but this is mainly focused on the opening and closing procedures and the quality of the resultant Highways once an utility has left the scene. This legislation has served the Local Authorities well, but clearly is focused on the safety at road works and the impact openings have on the structural integrity of the infrastructure. However, it is considered that more could be done to encourage better performance reducing disruption and congestion.

The Traffic Management Act 2004 has the ability to allow Local Authorities to take their role further in the practical management of the Highways as both Traffic and Highway Authority. A number of elements have been enacted through this legislation, however the main focus of the Act, that is Managing the operation of the network and reduce congestion is not being addressed with both Ministers and officials at the Department for Transport specifically not enabling section 6 of the Act, which would give LA's the powers to deal with moving traffic offences. Local Authorities now find themselves in a position that the Act provides for them to enforce (subject to regulations which have not as yet been produced by the Government) however the powers have not been enacted. However many Police Authorities have taken a view that the Traffic Management Act gives Local Authorities the powers, so they have now stepped back from enforcing the moving traffic offences covered in the Act.

Clearly London Authorities are taking enforcement action, but under the London Local Authorities Act, which will be replaced by the appropriate section in the Traffic Management Act. This needs both ministerial and civil service drive, which has been sadly missing for the past 6 years, to move the whole enforcement issue forward. Both TAG and Local Government Association have argued this point very strongly with both ministers and civil servants, so far without success.

Without these Powers the responsibility still rests with the Local Authorities, but they are unable to take the next major step in managing the highway network they are responsible for.

There are also matters of detail with the Traffic Management Act which are causing difficulties at an operational level. For example if a Distribution Network Operator (DNO, or Electricity Company) makes a supply to a property, then the DNO are responsible for obtaining the permit to open the road and lay the cables. If the supply is to a lighting column or traffic sign then the permit would relate to 'Works for Road Purposes' and the highway authority becomes responsible for seeking the permit, but without any ability to control or influence the work programme of the DNO. The detail of issues like this consume a significant amount of time and effort from already stretched local authority resources. When people are unnecessarily stretched, mistakes are made and this inevitably results in a worse service for the travelling public.

6. The impact of bus lanes and other aspects of road layout.

Bus lanes first appeared in London in about the mid 1970s in significant numbers, since then they have been accepted by the majority of Londoners as a way to improve transport. Nevertheless there is significant opposition to some bus lanes, even on bus lanes that helped to reduce problems for other traffic e.g. the M4 bus lane which reduced congestion for general traffic as well as buses and taxis when it was introduced - the Secretary of State is on record as wanting to remove this particular bus lane.

As stated under point 3 above, measures to encourage sustainable travel and help pedestrians, buses, cycles etc are definitely the type of schemes that Government and Local Government should now be investing in; similarly any measures that give advantage to people transferring to sustainable travel modes, builds on a virtuous circle rather than the vicious circle of a road building led strategy. Generally by encouraging people to leave their cars and use such other modes also helps those left in the remaining cars with reduced traffic flows and hence reduced congestion.

Thompson, Mogridge and other eminent transport professionals have put forward that the only way to improve road traffic in big cities is to actually improve the alternatives.

Outside London and the inner areas of big cities there are seldom sufficient bus flows to justify priority schemes solely for buses and other initiatives like ‘bus and high occupancy vehicles’ or ‘no car’ lanes may be appropriate; methods need to be developed to ensure these can be introduced and enforced otherwise the perception is that it is an anti-car measure sterilising substantial road space to no advantage of anybody.

Very few bus lanes actually impose extra delays on vehicles and some, even very well known lanes e.g. the M4 bus lane, and Park Lane bus lanes, have helped other traffic as well.

Concluding comments

While we have given some specific examples of areas and their congestion for illustrative purposes, we are a national organisation and have not included the specific congestion problems in different locations in England.

We hope that this evidence will be useful to the committee and we will be very pleased to appear in front of the committee to give oral evidence as, when and if required.

January 2011

Written evidence from the Chartered Institution of Highways and Transport (CIHT) (ETM 22)

The Chartered Institution of Highways and Transport's (CIHT) response to the House of Commons Transport Select Committee call for evidence entitled:

Effective Road and Traffic Management

The CIHT is pleased to have the opportunity to submit evidence to the House of Commons Transport Select Committee. CIHT would like to commend the evidence submitted by the Association of Directors of Environment, Economy, Planning and Transport and ITS-UK to the Committee and where appropriate we have re-iterated parts of their response in ours.

1. *The prevalence and impact of traffic congestion and likely future trends.*

The existing highway network has a finite capacity and so the projected growth of population and vehicle ownership in future years must inevitably lead to concerns about traffic congestion given the limited opportunity to build new roads. With this background any move to reduce congestion would have to be grounded in a strategy that linked better use of the existing road space, the use of technology to manage traffic and inform travellers, improved driver behaviour and continued encouragement of modal shift and changes in working practices.

With the finite road capacity that the UK has therefore, we have to consider solutions which can make the best use of our transport systems. 'Delivering a Sustainable Transport System', 'Guidance on Local Transport Plans' and the equivalent strategy documents for each of the devolved governments, all stress the importance of thinking smarter travel first in terms of our travel solutions.

For example, the 5 goals for transport in 'Delivering a Sustainable Transport System' make it absolutely clear that smarter travel solutions must be an integral part of the solution to our 21st Century transport challenges. CIHT along with ACT Travelwise and the Royal Town Planning Institute in 2009 produced 'Making Smarter Choices', a guide for practitioners on implementing smarter choices to assist them in implementing travel demand management.

The CIHT Transport Manifesto '2010 and Beyond' sets out the following priorities that we believe should be the main order in which transport spending is prioritised:

1. Maintaining and safely operating the network;
2. Making better use of that network; and
3. Making targeted infrastructure improvements.

With a deteriorating highway network and the need to ensure the highest safety standards in road, rail and air, it is essential that the first priority has to be in the maintenance of the existing infrastructure. The real cost of delays due to poor quality infrastructure and the cost of accidents are high. A further deterioration of the network can only exacerbate the situation as well as putting more pressure on the police and rescue services at a time when they will be subject to close financial scrutiny.

Increased capacity through making better use of the existing network through upgrades such as the managed motorway programme, improvements to the rail network and signalling, and small improvements to our airports can all deliver greater capacity at relatively low cost. Smooth flow rates rather than direct capacity increases will bring benefits in terms of journey reliability and accident reduction.

Improved information systems and through-ticketing can also deliver a more efficient use of the existing infrastructure, allowing users to make better-informed choices and, while not necessarily affecting large numbers in terms of percentage use, will bring about a degree of modal shift.

The priority for capital investment should be where demand is clearly exceeding capacity and where there is no reasonable alternative option. Greater consideration should also be given to investment planning which allows the private sector access to better value labour markets and land prices to make the UK more competitive on a national basis.

2. *The extent to which the Government and Local Authorities should intervene to alleviate congestion and the best means of doing so.*

The recognised ways of addressing congestion are reducing demand, increasing infrastructure capacity or a combination of both. Techniques In the first category include reducing the flow of vehicles on to a congested link using traffic signals (“ramp metering”) and imposing charges for using the link at peak periods (road user charging). In the second category we have simple road widening, signal-controlled use of the hard shoulders to create temporary widening, and ‘traffic calming’ – setting a reduced and identical maximum speed for all the lanes in a carriageway when traffic density passes a set threshold. More detail of these approaches is given below.

Road User Charging is an extremely emotive issue. The apparent inability of scheme proposers to focus clearly upon the reasons why change is needed and the benefits of making changes to drivers and taxpayers has been matched by the dogged refusal of individual drivers to accept payment of a 'penny now for a poundsworth' of benefit later on, causing previous proposals to fail. The most notable success has been the London Congestion Zone whilst the most notable failure has been the Manchester TIF bid. It could be said that both cities have a similar traffic problem; however it was only through the personal and highly visible leadership of the then Mayor of London, Ken Livingstone, that the scheme was introduced.

For complex schemes to succeed local leadership and tight governance are needed. One major problem that local authorities encounter is the conflict between the long incubation and planning timescales for transport schemes and the much shorter political procedures that oversee them. As transport schemes take many years to design, receive formal approval prior to building and then operate, the eventual outcome of the scheme can be influenced, amended and/or undermined through local political requirements. The government needs to consider the case for an intervention scheme whereby it can empower itself and Local Authorities to guarantee traffic to flow naturally and without hindrance under normal circumstances but retain a capability of intervening as and when circumstances dictate.

4. *Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times.*

Intelligent Transportation Systems (ITS) have proven to be extremely effective in a variety of situations across the whole UK road network. However the best examples can be found in the ‘Managed Motorway’ schemes such as the M42 scheme that has facilitated traffic flow across the region by both smoothing traffic flow and enhancing capacity as and when required. This can be as a response to incidents, collisions or sheer excess traffic flow when intervention is critical to enable the maximum number of journeys to be completed in the best possible time.

An earlier example of active traffic management was the variable speed project on the South Western section of the M25 which during heavy traffic loaded times of the day varied the speed limit. Whilst not a perfect solution because there was insufficient camera enforcement, it did demonstrate that traffic flow could be smoothed and the stop start congestion that occurs through minor incidents could be manage controlled. The results of this trial are available in the TRL report PPR033 which is available from
http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_traffic_and_the_environment/report_speed-control_and_incident-detection_on_the_m25_controlled_motorway_summary_of_results_1995-2002.htm

Across the UK there are many other examples where ITS have been deployed to help manage traffic flow during peak periods and situations where congestion occurs. Each system has been introduced to counter a specific problem and as a bespoke system operates to local requirements.

'Ramp metering' is another effective technology that is employed at critical times through the installation of traffic lights on the access slip roads to motorways and trunk roads to regulate infiltration of vehicles joining the main road without causing either flow. By avoiding vehicles coming to a halt this prevents one of the main causes of congestion – 'stop-start' driving. As this system operates only during peak periods when sensors detect that there is a growing traffic merger problem at that location there is no cause to intervene at other times. However 'ramp metering' can sometimes operate in conflict with surrounding roads that are also congested. Currently this technology is confined to the Highways Agency network and as yet has to be fully integrated with Local Highway Authority systems although a greater extension of UTMC principles to urban, inter-urban and the strategic network could be expected to enable high benefits if a "one network" approach is adopted.

Variable Message Signs (VMS) are being increasingly deployed across the road network and enable travellers to make 'informed decisions' on their journey options as and when incidents occur. This enables the congestion to be kept to a minimum as motorists select alternative routes thereby allowing the speediest resumption of normal traffic patterns.

Increasing use of the Internet through website messages is proving to be an additional boon as 'real-time' information is readily available to travellers to assist journey planning prior to or during journeys. Information-gathering systems linked to intelligent roadside infrastructure can be interpreted by the Highways Agency's National and Regional Traffic Control Centres to communicate specific messages to the travelling public. The recent extreme winter weather conditions have proven to be an excellent example with a significant increase in the number of travellers accessing the Highways Agency website seeking information and advice on the necessity and applicability of their journeys.

ITS systems can be described as having a 'Cinderella' role in that they are an extremely effective behind the scenes and so often fail to receive their due recognition. In these straitened financial times relatively inexpensive ITS systems can return their investment many times over as they operate efficiently 24/7 in the background and enable direct intervention at the most crucial times. If there is to be a genuine effort to resolve and effectively manage congestion then the network must be treated in a coordinated manner by both the Highways Agency and Local Highway Authorities. There is still a tendency for many road authorities to look at traffic management problems from a zero base whereas the considerable past investment in UTMC and similar technology means that adding new capacity to what already exists to address, say, 85% of a problem is going to be far more cost-effective, and faster to commission, than a bespoke new system.

However Intelligent Traffic Management Schemes are only a sticky plaster and is not a long term solution to the problem. Road User Charging is seen by many academics and the profession as a long term solution to rationalisation of journeys, improved journey planning and modal shift.

5. *The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.*

It has been recognised that all works on the highway will cause disruption and delay to the day to day activities of all users. Some years ago this was estimated at 10% of the overall congestion that traffic, as defined in the Traffic Management Act 2004 (TMA), suffers. CIHT believe this figure was originally produced by the then TRRL under commission to the DfT.

The New Roads and Street Works Act 1991 (NRSWA) introduced a new requirement for Utility Companies to comply with legislation designed to ‘control’ activities by notification and this has subsequently been expanded through the TMA.

Most Utility Companies do comply with the initial requirement for prior notification but consequent management of works and the supply of information regarding progress has been a cause for concern.

The TMA introduced a recommendation that all highway works should adopt the same techniques and practice this method of notification without the legislative powers to enforce. There are many highway authorities that have done this but some only to a limited degree.
The TMA also introduced a new Permit Scheme which positively allows for management of all works. Any work promoter must apply for a Permit to Work whereas under Notification rules, it is only necessary to inform rather than request permission.

Over the years the art of managing these types of works has improved and there has been a significant reduction in the overall congestion.

It has been stated that by applying the Permit Schemes a greater degree of congestion reduction has been achieved (Kent County Council verbal statement) and despite an increase in costs to the community, all the Permit Fees costs may be ‘passed on’, there should be a corresponding reduction in congestion costs.

CIHT believe there is scope for a research project to determine the overall costs/benefits from the introduction of Permit Schemes against a limited reduction by the strict application of Notification and all factors recommended to comply with the TMA.

January 2011

Written evidence from Network Rail (ETM 23)

Summary

- Network Rail is concerned about road works permit charging, which will add cost to our operations without improving our incentives to minimise disruption;
- Given that our roadworks are done to improve transport infrastructure, we believe the company should be exempted from such charges;
- Network Rail works very effectively with some local authorities to manage the interface between the railway and the highway; and
- We will continue to work with central and local government to reduce congestion through modal shift, including cycling.

About Network Rail

Network Rail is a not-for-dividend company, limited by guarantee, which owns, operates and maintains rail infrastructure in Great Britain.

Road works

Network Rail is concerned about the growth in local permit charging schemes for road works. These raise costs for us of compliance and in planning in addition to paying the actual cost of essential works.

Network Rail is rather unusual in its use of roadworks. This is because our works are often on sections of road we own (e.g. at stations) or to improve transport infrastructure directly, for example replacing, raising or enhancing bridges. Our works also tend to be short, since they are across rather than along roads, and often done in the early hours of one day rather than taking days or weeks. In addition, we already face significant financial incentives to conclude roadworks as quickly as possible. This is partly as a result of the need to keep construction costs within agreed budgets, but also as a result of the compensation we are required to pay to our customers (train and freight operating companies) when our work disrupts their services. Put simply, the quicker we complete our work the lower the cost.

Our experience of local fee schemes in England is that they increase costs without any benefit such as streamlining the process, and are largely used to raise revenue. By contrast, the system in Scotland where there is the Roadworks Commission, has worked well for us. The Scottish system has much better data which is fully transparent and available to all on the internet. This has been helpful for us to improve our performance.

On the grounds that the roads we close tend to be our own; that the works we do are to maintain and improve transport infrastructure itself; and that we already face significant cost incentives to minimise disruption, we believe we should not be charged for permits to do roadworks. As an industry and a company we are working hard to deliver value for money for the passenger and the taxpayer. We believe increased costs of road works with no additional incentive on us to minimise disruption would be a retrograde step. Transport for London received an exemption from London Councils' version of the permit scheme on similar grounds.

Road user behaviour and culture and its impact on safety and traffic

One of the most important impacts of the railway on traffic management is level crossings. While they matter in terms of disruption and delay, the impact of road user culture and behaviour is most keenly felt in terms of accidents and near-misses.

Level crossings present the largest single risk of catastrophic train accident in Great Britain. Errors or misuse by drivers or pedestrians is responsible for 95% of all incidents at level crossings. The number of fatalities in 2008 was 13, which dropped slightly in 2009 to 10, with 24 and 12 injuries respectively.

Culture and behaviour is critical for improving safety on level crossings since many of these fatalities and serious accidents involve people misusing crossings – for example, swerving around half-barriers.

Local Authorities and Network Rail

Network Rail has strong relationships with some local authorities, including West Sussex and Hampshire – the latter even has a rail officer. However, others could liaise more effectively with us. An appreciation of how local authority work on roads affects the railway is also important, as demonstrated by disruption caused in Wokingham at the Waterloo Automated Half Barrier crossing. Here, roadworks required a diversion over a level crossing producing disruption which led to Network Rail having to deploy an attendant to manage the crossing.

This is an issue that also needs to be taken more seriously by planning departments, which rarely consider the impact of additional housing near level crossings when other parts of the council are aware of high levels of misuse. Some local authorities also seem to lack enough knowledge of Level Crossing Orders – for instance repainting road markings without consultation.

Close relationships between Network Rail and local authorities can be very helpful for enhancing road safety. For example, Network Rail has modified fencing at the request of Highland Council to improve visibility for road users. We have also undertaken joint inspections with Cornwall Council, enabling each side to understand the other's perspective, issues and concerns.

Network Rail's work on the rail side of the road/rail interface already delivers a safe railway, but with better co-ordination we can help to deliver safer roads too. This would require highways authorities to work closely with us across the network, using tools such as speed limits or signs that we are not able to deploy.

Congestion

The railway's principal environmental benefit is in modal shift from car or lorry to train, reducing road congestion significantly as well as cutting carbon emissions. Two principal means exist to encourage this: price, in particular through congestion charging to make the railway more competitive on a cost basis; and improved facilities for cycling and pedestrians at stations.

Network Rail has previously suggested that congestion charging should enable local authorities to borrow against future income to fund local transport improvements, particularly rail.

The combination of the most efficient inter-urban mode of mass transport (rail) and the most efficient intra-urban personal mode (cycling) tackles congestion, pollution and delivers health benefits. Installing bike parking or hire facilities is therefore important for Network Rail. Waterloo station has recently had the largest hire bike docking station installed in London.

Waterloo will also be the Site of the initial Network Rail ‘Hub’ facility which will be operated alongside and in cooperation with the TfL cycle Hire scheme. This will have a range of cycling facilities and will emphasise this symbiotic relationship between Rail and cycles.

Recommendations

- To exempt Network Rail from permit charges for roadworks
- To clarify responsibility at level crossings
- To encourage a much wider use of road control measures at level crossings to improve safety
- To encourage local authorities to take better account of the impact of their actions on the railway; and to better enforce LCOs

January 2011

Written evidence from Kapsch TrafficCom (ETM 24)

EXECUTIVE SUMMARY

1. Congestion on the UK's road network is likely to increase as the economy returns to growth. In some regions, capacity is already over-burdened and the issue of congestion may inhibit growth in the future if left unaddressed.

2. Intelligent transport systems can help to manage and alleviate congestion on and across the road network. Such systems can be tailored to the priorities and specific aims of the locality and can take account a variety of considerations including: fairness, relevance, deliverability, scheme mobility goals, use of funds and environmental drivers.

3. There are a number of intelligent road management systems that can be used to alleviate congestion or create extra capacity, for example the managed motorways scheme. In some cities, such as Stockholm and London, localised road user charging schemes have been used to reduce congestion. However, it is unlikely that such systems alone will be able to significantly reduce congestion without a more systematic approach.

INTRODUCTION

4. Kapsch TrafficCom welcomes the opportunity to respond to the Committee's inquiry into effective road and traffic management. This is a timely inquiry; according to the RAC Foundation's report, *Governing and Paying for England's Roads*, in the decade leading up to 2008, total traffic in the UK increased by 11% but was accompanied by only 1.5% growth in the total capacity. There is a real prospect of a significant further increase in road traffic as the UK returns to economic growth.

5. The Kapsch Group, originating in Austria, is a supplier of advanced electronic toll collection and intelligent transportation systems. The Group has considerable experience in the development of technical and operational solutions for intelligent transport, tolling and congestion charging projects, as well as in the implementation, management and enforcement of specific schemes at both a national and local level. The Group operates and provides technology for projects across the world, including the Austrian National Lorry Tolling System and the Czech Republic's National Truck Tolling System. Kapsch's technology is currently used in over 200 projects in over 30 countries including the Dartford Crossing and M6 Toll.

THE PREVALENCE AND IMPACT OF TRAFFIC CONGESTION AND LIKELY FUTURE TRENDS

6. The importance of transport in assuring long-term economic and social prosperity is widely recognised. Road users continue to make up the greatest proportion of transport in the UK, with congestion on the UK's roads predicted to rise significantly in coming years. Left unaddressed, this could have significant consequences for the growth of the UK's economy.

7. The Eddington Report outlined some of the problems that the UK road network faces in terms of congestion. In the report, Eddington points to road charging as a potential solution to rising congestion. Although Government has ruled out a national road charging scheme in this Parliament, the coalition government has indicated that it would welcome proposals from the private sector for generating additional capacity and maximising the efficiency of existing assets, for example through tolling on new infrastructure.

8. Eddington estimated that, if left unaddressed, congestion could cost the UK up to £22bn a year in wasted time up to 2025. In this regard, Eddington recommends "*[i]ntroducing well-targeted pricing on the UK transport system, and in particular road pricing, [which] offers enormous potential for improving network performance by spreading demand, lowering congestion and overcrowding, improving reliability and delivering GDP benefits*", benefits that Eddington claims could total as much as £28bn a year by 2015.

9. Road transport currently accounts for 22% of the UK's total CO2 emissions and 95% of the UK's domestic transport CO2 emissions. These will need to be reduced significantly if the country is to meet its ambitious targets for reducing CO2 by 80% by 2050.

10. The problem of congestion is caused by either too many vehicles or not enough capacity, depending on which stance is taken when appraising the problem. This leads to the view that there are three options for alleviating the problem of road congestion – (a) adding more physical capacity to the roads through new construction (b) use the existing capacity more effectively or (c) encouraging road users to adopt alternative modes of transport.

THE EXTENT TO WHICH THE GOVERNMENT AND LOCAL AUTHORITIES SHOULD INTERVENE TO ALLEVIATE CONGESTION AND THE BEST MEANS OF DOING SO

11. One of the key issues around the implementation of road management schemes is the influence of the electoral cycle on local authorities' commitment to and ability to move forward with schemes, such as road charging. Recent examples abound, including in Bristol and Cambridge on the road charging front. However, in line with the principle of localism, local authorities are still best placed to know what schemes are necessary and appropriate in a particular region.

THE EXTENT TO WHICH ROAD USER CULTURE AND BEHAVIOUR UNDERMINES EFFECTIVE TRAFFIC MANAGEMENT

12. There is a need to influence driver behaviour if the impact of congestion is to be alleviated. Both national and local governments have a critical role in reducing the impact of negative externalities, with technology playing a supporting role. However, it is also important to note that drivers may not have flexibility on some journeys so should not be unfairly penalised for having to drive a certain route in some circumstances.

INTELLIGENT TRAFFIC MANAGEMENT SCHEMES

13. The Kapsch TrafficCom Group is a system supplier with experience of a variety of different systems across Europe and the World and has an overview of the different approaches to motorway and road network management currently in operation.

14. Strategies designed to keep traffic flowing typically involve reducing traffic speeds, limiting or restricting access to specific areas; real time monitoring and traffic information systems enabling real time reaction to potential problems for example by managing the interaction of traffic signals and providing information to Roadside Variable Message Signs. In some instances such as in London or Stockholm, this limiting of access takes the form of charging vehicles to enter a specific area. In other areas, such as Italy, permits for access to an area are provided for free to those with permission to enter and violators penalised. The managed motorway scheme in the UK is a good example of how traffic can be managed actively in a way that is justified by the economic benefits. It has been generally well-received and is a good alternative to building extra capacity.

15. Examples of charged traffic management schemes include:

a. **Zone** – for example the London Congestion Charging scheme, a certain area is defined and drivers are charged for accessing this area. Charging can be altered to reflect peak use, day-pass tickets or progressive fees. This form of charging reduces traffic within a pre-defined area and also discourages short journeys from outside to inside the area.

b. **Cordon** – A cordon effectively encircles a defined area with vehicles paying to cross the cordon. Again this is a flexible form of charging and can be implemented so that vehicles pay each time they cross the cordon or only if they travel in a particular direction. A cordon discourages shorter and unnecessary trips.

c. **Corridor** – Drivers are charged or given a discount when using a specific route. This form of charging can be used in conjunction with other forms of charging.

d. **Infrastructure** – for example the Dartford Crossing. Drivers pay to use a specific piece of infrastructure, for example a bridge or tunnel, with the charging scheme designed to recoup the cost of building and maintaining that piece of infrastructure.

e. **Distance-based** – Vehicles are charged according to the distance travelled within a defined area. This is particularly well suited to larger areas, for example regional or nationwide schemes.

f. **Dynamic parking** – a vehicle is charged for the time spent within a defined area, with a charge imposed based on whether it enters and / or exits a particular zone. This system can also monitor the number of vehicles within the zone at any one time and therefore indicate the number of available parking spaces.

g. **Restricted access** – it is possible to restrict access to a limited number of vehicles in certain areas (for example pedestrian zones, historic city centres) through an Automatic Number Plate Recognition (ANPR) system and / or Tag and Beacon. Entry to areas could then be enabled by automatically controlled gates or rising bollards, or by recording the number plates of vehicles entering an area and issuing penalties to unauthorised traffic.

16. Free-flow tolling involves the replacement of toll booths with technology such as cameras or beacons that allow traffic to move through freely, such as on the M50 in Ireland, a project with which Kapsch is involved. Such schemes can also significantly reduce congestion. The Department for Transport is currently moving forward with proposals to introduce free-flow tolling on the Dartford Crossing and this could increase capacity on the crossing considerably. However, there is an issue around open tolling with regard to foreign vehicles and the proximity to the UK's ports; it is likely, therefore, that HGVs will still need to pass via toll plazas thus limiting the impact that this measure will have on congestion.

CASE STUDY – Bergamo, Italy: Telematics System for monitoring and controlling Limited Traffic Zones (LTZ) Access Control System

17. Kapsch has undertaken a series of implementations of ANPR-controlled City Access schemes across 28 cities in Italy, a total number of 268 camera installation sites including in Rome and Turin. The following describes one of the schemes in Bergamo in more detail.

18. The aim of the scheme is to reduce traffic in order to protect the historic buildings and retain the city character as well as enhance the quality of urban life and traffic safety.

19. The scheme provides:

- Residential access;
- Controlled access for HGVs;
- Minimal impact on 'streetscape'.

20. Other requirements included:

- Accommodating vehicles from different countries;
- ANPR cameras which provided encryption, high performance and are aesthetically pleasing;
- Systems which offered ease of use and full authentication and data privacy.

21. There are three types of zones within the city:

    a. PEDESTRIAN AREA (AP): A zone in which vehicles are forbidden, except emergency vehicles, motor scooters and vehicles for disabled people and waivers for vehicles with zero emissions.

    b. LIMITED TRAFFIC ZONE (ZTL): Areas to which vehicular access is limited to specific times or particular categories of users and vehicles.

    c. LIMITED STOPPING ZONE: Areas where vehicles are allowed to stop for a short period of time (e.g. 15minutes) for uploading / unloading goods.

22. 13 ANPR sites have been are installed at the entry and exit points into the zones and all vehicles are checked to see whether they are permitted to be in the area.

23. Permanent residents of the area register their vehicles with the local authorities, some categories of users such as the Police and Emergency Services are exempt from the scheme rules and temporary visitors to the area can apply for one-off permissions to enter the area. These registrations are logged in the central system and constitute the scheme's "white list".

24. When a vehicle is identified as being in the area without permission, a prosecution is initiated using the ANPR data and image as the basis of the evidential record which will include the vehicle's registration plate and images of the vehicle showing it committing the offence. Where a vehicle is legitimately within the zone, all images and records are deleted from the system.

25. In the Limited Traffic Zone examples in Italy, the observed ANPR value is compared to a clear list of vehicles with permits for the zone, if the vehicle does not appear on this list then a violation or penalty notice is raised. It is also possible to maintain a "hot" list of vehicles that are repeat offenders so that an alarm can be raised in real time and traffic officials sent to intercept the vehicle whilst it is still in the area.

26. Within the limited stopping zone, the time spent within the zone can be exactly determined based upon the time stamps which are taken upon entering and exiting the zone.

THE IMPACT OF BUS LANES AND OTHER ASPECTS OF ROAD LAYOUT

27. Priority bus lanes when used effectively can help to encourage modal shift, acting as an incentive for individuals to use public transport over private cars. However, their effectiveness is limited where bus lanes are not well integrated with the rest of the road network. This is a problem in Cambridge, for example, where the guided bus lanes and standard road network converge at a point that suffers particularly from congestion, thus negating any time gained from having used a priority bus lane.

CONCLUSION

28. Transport remains a priority to the future growth of the UK's economy and with impending cuts in public expenditure the Government will need to look increasingly to the private sector to provide funding for investment. The importance of transport for economic growth and the absence of public funding for new capacity increase the need to maximise the efficiency of the existing transport network.

29. Intelligent traffic management, such as managed motorways, the prioritisation of public transport through road junctions and real time traffic information system can be used to increase road capacity and manage traffic flow in congestion hotspots. However using such measures requires drivers to change their behaviour voluntarily and it may be necessary in extremely congested locations to implement congestion charging or work place parking levy schemes to provide a financial deterrent to car use. In the longer term, government will have to consider more systematic road charging if congestion is to be tackled effectively.

January 2011

Written evidence from the Department for Transport (ETM 25)

1. **The Government welcomes the opportunity to outline in this memorandum our approach to ensuring effective road and traffic management.**

2. **We set out below the evidence base on the scale and impact of congestion and our strategy for dealing with it, which brings together measures aimed at ensuring drivers have the information they need before and during their journeys, supporting responsible driving, managing disruption more effectively, and increasing the effective capacity of road networks.**

3. **In line with the Government's commitment to localism we promote local accountability for local road networks by giving local authorities the tools they need to tackle problems on their network, rather than dictating specific solutions to them.**

Why does congestion matter?

4. The Coalition Government's vision is for a transport system that is an engine for economic growth but is also greener and safer and improves communities' quality of life. Our approach to developing and managing our road networks is an integral part of our work to deliver that vision.

5. The 2006 Eddington Study[1] provided a detailed account of the role that a good transport network plays in bolstering economic growth; securing connectivity in linking people to jobs; delivering products to markets; underpinning supply chains and logistics; and supporting domestic and international trade. **A well functioning transport network can raise productivity by reducing journey times.**

6. Congestion – caused by traffic levels too close to the maximum capacity of a network, or by disruptive events – is a barrier to a well functioning transport network and so functions as a drag-anchor on economic growth. It is also environmentally damaging – because most emissions are higher from slower moving vehicles – and socially damaging – because roads operating above capacity tend to have worse accident rates.

7. At a human, individual level, congestion can be intensely stressful and frustrating. As we set out in more detail below, individual road users place great importance on the reliability of their journeys and have high expectations about the ability of network operators to deal promptly and effectively with unexpected disruption.

8. **Congestion, and the unreliability of journey times that congestion generates, are important measures of the success with which road networks are developed and managed. Mitigating the effects of congestion is a priority outcome for this Government.**

How much congestion is there?

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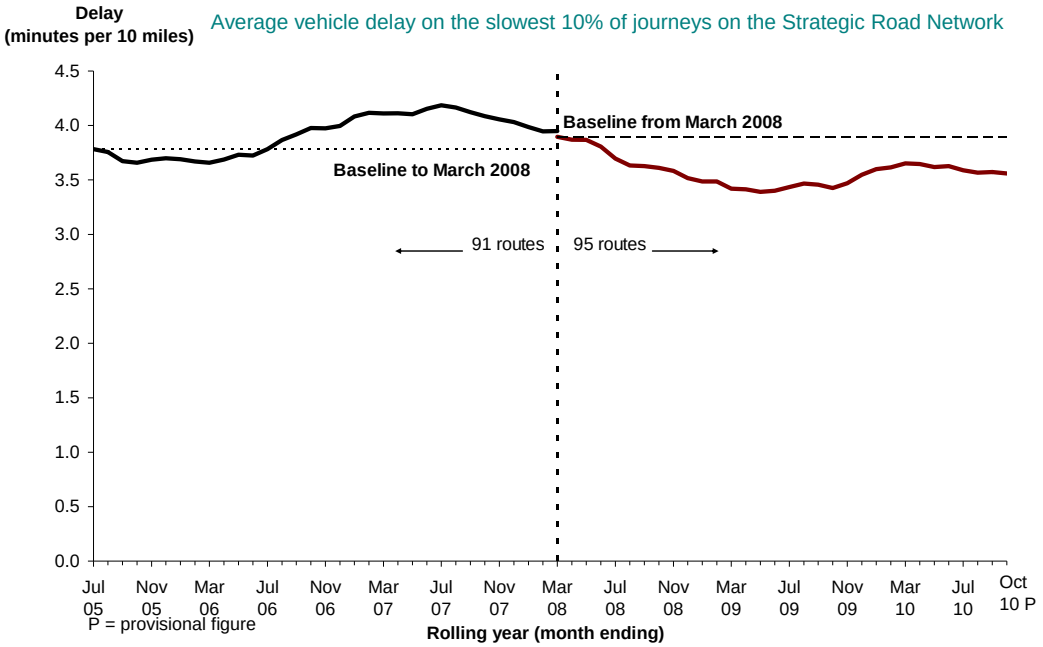
[1] **The Eddington Transport Study: Transport's Role in Sustaining the UK's Productivity and Competitiveness, 2006**

9. The Department's latest statistics show that **congestion has fallen on both local and strategic roads over recent years[2].** While some of this fall has been down to the introduction of various interventions on these roads, the recent recession will also undoubtedly have had an effect. with the latest estimates showing overall traffic to have fallen by 1.8 per cent since 2007.

10. On the strategic road network (SRN), encompassing all motorways and trunk 'A' roads managed by the Highways Agency, the average delay experienced on the slowest 10 per cent of journeys in the year ending October 2010 was 3.56 minutes per 10 miles. While up slightly on the year before, this represents an 8.7 per cent reduction since the year ending March 2008 and is the equivalent of the average speed on these slowest journeys rising from 44.3 mph to 45.3 mph. Average delays experienced on all SRN journeys have also fallen by 4 per cent over the same period:



11. On locally managed 'A' roads in England we measure speed rather than delay due to different data collection measures. The average vehicle speed on these roads during the weekday morning peak increased by 1.5 per cent to 25 mph between the years ending September 2008 and September 2010. In addition, average morning peak person journey times – which take account of vehicle occupancies as well as numbers – on key routes in the largest urban areas became 4.5 per cent faster over the same period.

12. While recent reductions in traffic have had the short term impact of reducing congestion and increasing peak time speeds, in the longer term there is a risk that we will see a significant growth in congestion as the economy recovers and pressure on road networks increases. **The Eddington Study estimated that the average time 'lost' per kilometre is forecast to increase by 30% during the period 2003 to 2025**. Eddington estimated that direct costs of congestion to business could rise by £10-12 billion from 2003 to 2025 (in

[2] http://www.dft.gov.uk/pgr/statistics/datatablespublications/roads/congestion/

2002 prices). Adding in the value of the lost time experienced by other travellers raises this figure to £23-24 billion per annum.

Public attitudes to congestion

13. In developing strategies for dealing with congestion, we think it is important to understand how people experience it, and the circumstances in which it causes them most concern.

14. The Department's latest attitudinal statistics[3] show a marked difference between people's perceptions of congestion and their actual experiences of how it affects their journeys.

15. When questioned in a recent survey, over 80 per cent of people reported that congestion was a serious problem in the country and over 90 per cent said that the Government should be doing something about it. However, **when asked about their personal experiences, only 25 per cent of people said that congestion regularly affected them while a larger number, 30 per cent, said that they were rarely affected by congestion.**

16. One of the key results from the survey was that people perceive **the main problem of congestion to be not the average time increase caused but journey time unreliability**. When asked why congestion was a problem three in ten said it was because of the uncertainty it created over their journey times while only one in ten said the waste of their time was a problem.

Our approach to reducing congestion

17. **Our approach to tackling congestion is a practical response to the needs of motorists who travel on our networks every day, starting from the perspective of the motorist rather than that of the infrastructure provider, whether that be the Highways Agency or a local Highway Authority**. We seek to provide road users with access to the information they need when they decide to travel, when they plan their journeys, and to respond to conditions as they are travelling. We seek to ensure that our current road networks offer a good service to those who use them, by doing a fully professional job of managing and reducing the impact of disruptive events on the strategic road network and giving Local Authorities the tools they need to do the same on their road networks, and by using capacity fairly and efficiently. And, looking to the future, we are making best use of the funding we have available to mitigate the most serious congestion, safety or quality of life problems, by carefully targeted investments in management systems or capacity.

18. Only a small minority of roads are directly managed by central government – 98% of all roads are managed by local highway authorities. The Government has published a **Local Transport White Paper** that sets out the Government's vision for a sustainable local transport system that supports the economy and reduces carbon emissions. A key part of this will be reducing congestion. It explains how the Government is placing localism at the heart of the transport agenda, and taking measures to empower local authorities when it comes to tackling these issues in their areas. The White Paper also underlines Central Government's direct support to local authorities to achieve

[3] http://www.dft.gov.uk/pgr/statistics/datatablespublications/trsnstatsatt/roadcongestion

this.

Helping road users make informed choices

19. The Committee's inquiry rightly recognises that the behaviour of individual road users has the potential to affect the performance of road networks in both positive and negative ways. Part of our strategy for dealing with congestion is to ensure that individual drivers have the information and tools they need to make well informed decisions about their own journeys. We also have a range of plans in place to support responsible, considerate driving.

20. Through our work on alternatives to travel and sustainable travel we aim to make people aware that **they have a genuine choice about whether to travel at all**. A reduction in travel demand would bring tangible benefits – reduced congestion, reduced carbon emissions, and improved quality of life. In order to facilitate this, the Government is taking steps to increase the speed and take-up of broadband across the country for both business and leisure purposes and holding discussions with bodies such as the CBI and TUC as to how a reduction in travel demand could fit with the needs of business. Businesses are being encouraged to consider measures such as permitting home working and staggering people's working days as options which could increase productivity and reduce congestion.

21. As well as addressing the need to travel, we are also providing people with better choices as to how they travel. The Government supports congestion and carbon reducing sustainable transport modes both through investment in our public transport network and by helping Local Authorities embed sustainable travel measures in local transport planning. For example, a combination of improvements to infrastructure and services and better information provided to members of the public resulted in a 2-8% reduction in traffic in the recent sustainable travel towns project.

22. Where journeys do need to be undertaken by car, it is important that drivers have high quality information to support choices of route and timing. The Department, in partnership with transport stakeholders and technology providers, provides **journey planning and travel information to the public** via www.transportdirect.info. This portal provides road users with dynamic route planning, based on predicted traffic speeds at a given time of day, and including real time information about road incidents. The portal can plan the quickest route, which may not be the shortest or most obvious. This reduces both journey times for the user, and also congestion on the avoided routes.

23. Drivers also need access to information once they are on the roads. On the strategic road network, on-road traffic officers are backed up by regional and national control centres, which also **keep drivers informed through real-time traffic information**, by setting signs and by giving other service providers accurate travel advice, enabling motorists to make more informed decisions about how to avoid (and avoid adding to) congestion.

24. A new **National Traffic Information Service** (NTIS) is being introduced to replace the current PFI contract for the national control centre which expires later in 2011. The new service will provide the capability to capture and interpret traffic data and to deliver that to users of the strategic road network through a range of information channels, both directly, and indirectly through other organisations such as the travel news media.

Supporting responsible, considerate driving

25. The choices drivers make while they are on the road have a major impact on both the performance of the network and the experience of other road users. Our goal is to support responsible, considerate driving, thereby avoiding accidents that, in addition to tragic loss of life, can cause large amounts of disruption and congestion.

26. Great Britain has the safest roads in the world, and the Government is committed to seeing further reductions in the numbers of people killed or seriously inured on our roads. The Government will be setting out a **new strategic framework for road safety by April 2011** setting out its vision and approach to road safety.

27. We are already improving road safety by strengthening **the way people learn to drive and are tested**, moving the focus to one of continued and lifelong learning. We have started a trial of a new learning to drive syllabus which focuses not just on vehicle control but also on the skills, attitude and understanding needed to be a safe driver. Independent driving has also been introduced to the practical driving test. We will not be publishing theory test questions in future, requiring candidates to have a deeper understanding of the Highway Code, rather than merely learning answers to published questions.

28. Many local authorities have implemented concerted programmes of work to improve road safety and in doing so have contributed towards Britain's enviable road safety record. Some of these are engineering changes, e.g. alterations to local roads, including signing, lining and surfacing changes, as well as revised layouts, and traffic calming. Local authorities have the power to introduce 20 mph speed limit zones. The evidence suggests that in residential streets, and in town centres where there is likely to be a conflict between vehicles and pedestrians, carefully implemented 20 mph zones can contribute to an improvement in road safety .

Managing Disruption

29. Effective road and traffic management is also about resilience. The Government is keen to ensure that motorists receive a good service on the roads, by making sure incidents are dealt with professionally. This includes clearing up accidents as quickly as possible when they occur, minimising the disruption caused by street works and selfish parking and managing the impact of the weather.

30. The Highways Agency's Traffic Officer Service plays a vital role in achieving the aim of a **swifter recovery of our motorways after accidents**; it now attends a daily average of 375 incidents affecting 'live' lanes. Following dispatch, traffic officers arrive at over 80% of these incidents within 20 minutes, on the busiest routes during the day-time. Because we clear incidents more quickly, incident-related congestion is minimised and the chance of further incidents is reduced, thereby delivering substantial reliability and safety benefits.

31. A key action in the Department's business plan is "to work with the Home Office to review police investigation/closure procedures for motorway

incidents." The review is focusing on indentifying further improvements that could be made in managing serious incidents on the motorway network. The Department is working closely with the Association of Chief Police Officers, Highways Agency and Home Office in delivering the review which will be completed in January 2011. We are committed to ensuring that any improvements identified from the review are taken forward by December 2012.

32. Works in the highway (**street works**) are vital to maintain the supply of essential utility services on which households and businesses all depend, but impose costs on the economy and society estimated to amount to £4.2bn a year. Aside from the motorway and trunk road network, it is for local highway authorities to manage and coordinate works on their roads to support their wider **network management duty,** which was put into place under the Traffic Management Act (TMA) 2004. An initial evaluation carried out in 2010 concluded that the network management duty was proving effective, though there was still room for improvement[4].

33. The TMA also included powers for local authorities to run **street works permit schemes**, which substantially strengthen authorities' ability to control and coordinate works. Early progress of schemes in London and Kent has been encouraging, and local authorities will be responsible for evaluating their performance. As part of its commitment to the localism agenda and reducing bureaucracy, the Government will be bringing forward proposals by April 2012 to allow schemes in England to go ahead without the Secretary of State's approval.

34. Building on existing permit schemes, we are also currently developing proposals to increase the financial penalties for overrunning street works (legislation brought forward by October 2011), and to pilot a "lane rental" approach for the most traffic sensitive roads (legislation brought forward by December 2011). Importantly, looking beyond regulatory levers, we believe that there is considerable scope for the utilities sector to deliver strong good practice initiatives, and we are supportive of the sector's work to develop a transparent performance scorecard.

35. The responsibility for **tackling selfish and disruptive parking** also lies with local authorities, the vast majority of which have now adopted civil parking enforcement powers. We now want to help local authorities understand their performance, so we have recently provided a new self-assessment tool that enables them to compare their policies and services to those of the most effective authorities. We are also considering proposals from English local authorities outside London for powers that would enable them to apply a wider range of penalty charges, and to help keep traffic flowing by enforcing a wider range of traffic contraventions.

36. In addition to these man-made causes of congestion on our roads, the environment can cause widespread disruption. Providing a **winter service** which ensures that the highway network continues to operate effectively throughout the season is a basic component of maintaining a road. Both the past two winters and the wintry weather that we have seen already in November and December 2010 point squarely to the need to plan. Both the

[4] Evaluation of Traffic Management Act 2004 Part 2 - Network Management Policy and Part 4 - Street Works. Halcrow. 2010

Select Committee and the Government (as well as others) have examined the lessons to be drawn from the way in which transport networks coped with severe winters, but the Department believes that some local authorities have yet to put those lessons into practice in a fully effective way.

37. Following the last two winters' severe weather the Government set up an independent review examining the resilience of England's transport system, chaired by David Quarmby CBE. The review considered the resilience of our transport system to periods of severe winter weather and reported in two stages with the final report being published in October 2010. The Department has accepted all the recommendations, and where these apply directly to the Government they have either been completed or are currently being implemented. The Government continues to encourage local authorities and other transport operators to take forward the recommendations that relate to them. Actions that the Government has taken include making arrangements for the import of 250,000 tonnes of salt, developing a monitoring portal which will help local authorities monitor how much salt stock they have and help to ensure that levels are managed efficiently, publishing a common sense guide to help shop keepers and residents who want to clear their paths without having to worry about falling foul of health and safety law.

38. In December 2010, David Quarmby was asked to undertake a further urgent audit of the performance of the highway authorities, as well as the railway and aviation sectors over the period of severe weather encountered in late November/early December 2010. This audit was published on 21st December.

39. Winters such as this year's and last have been rare in modern Britain and weather this extreme will inevitably have some impact on services. However, the measure of resilience is the speed with which we recover from these events and we need to consider whether we are now seeing a step change in our weather that might therefore justify further investment in equipment and technologies to reduce the impact of severe weather. We have asked the Government's Chief Scientific Adviser to provide advice on this subject.

Designing in better use of capacity

40. The paragraphs above set out a comprehensive package of measures to support motorists in planning their journeys and to ensure that local and national networks are as resilient as possible to events that can disrupt performance. But given the continuing predicted longer term growth in traffic, we will also need to ensure that we think flexibly and imaginatively about how additional road capacity can be delivered to road users in those places where it is most critically needed. In developing future plans, and in the light of funding constraints, it will be more important than ever to ensure that we are harnessing innovation in making the best use of our existing asset base, and ensuring that we adopt novel approaches to managing road capacity to meet the needs of the users.

41. As part of our future spending programme, we will be taking forward a number of **managed motorway schemes** across the country. The M42 pilot of hard shoulder running showed that the measure can improve reliability and reduce the number of accidents, delivering a substantial proportion of the benefits of conventional road-widening solutions, while securing cost savings of at least 40%.

42. Given that road capacity is often constrained by a small number of key bottlenecks, targeted interventions at these locations can make a critical difference. On the strategic road network, for example, future capacity will be needed at the Dartford Crossing and DfT is committed to embark upon a review of the options for future capacity increases at Dartford. Subject to consultation, we intend to increase charges for the Crossing in 2011 to fund any changes. At the same time, to better manage the traffic and to ease congestion, we will introduce free flow charging from 2012, and more immediately, we will lift the charges at times of severe congestion to aid flow through the charging plaza.

43. At a local level too, highway authorities' decisions about road layout, the allocation of road space and other traffic management measures at key pinch-points (such as major junctions, river crossings, etc) are vitally important. Well-designed interventions at these critical locations can directly improve conditions for all road users, but they can also have other indirect benefits: where quicker and more reliable bus journeys encourage people to switch to public transport, overall traffic levels can be further reduced. Dedicated lanes and traffic signal priority for buses or trams can reinforce these positive impacts where local circumstances permit, but care needs to be taken to avoid unjustified adverse impacts on general traffic. The injustice of the M4 bus lane (see below) is a case in point.

44. The Department for Transport works to **build up the expertise of traffic professionals** by issuing evidence-based advice on road infrastructure and design. DfT's advice seeks to help local authorities design streets in a way that achieves their desired outcomes. Our advice covers designing streets to encourage sustainable transport choices as well as how to accommodate various pressures on local road networks in a way that minimises delay and conflict between different road users.

45. In cities, we have seen benefits from **consistent use of established technologies**, in particular, the Urban Traffic Management and Control (UTMC) programme. UTMC systems use a common database to share relevant information between individual Intelligent Transport Systems, such as traffic signal control systems and bus priority, often all managed from the same control centre. These services can be provided individually, but greater benefits can be gained by integrating them into a UTMC system.

46. Finally, we are taking steps to put right management measures which are simply not making sense for motorists - our **suspension of the M4 bus lane** and opening it to all traffic in December 2010 ends the injustice suffered by thousands of drivers who used to sit in traffic next to an empty lane. We are monitoring the impact of the suspension over a period of 18 months, but our intention is to scrap the lane permanently once the London 2012 Olympic Games are over.

Investment in our roads

47. Despite the difficult fiscal climate, there is a place for **targeted investment in our strategic roads** within our strategy to improve congestion, safety and environmental benefits to users of our road networks on our roads, and to ensure continuing high standards of road maintenance.

48. In October, we announced 14 new schemes to start construction by 2015, and funding to complete a further eight. Funded projects included major improvements to the M60, M62 and M1 around Manchester, Leeds and Sheffield, dualling the last stretch of single carriageway on the A11 to Norwich and completing upgrades to the M25 around London. Further schemes will go ahead after 2015.

49. Two of the 14 schemes are only affordable because of procurement efficiencies realised on the other 12. If we were not driving down costs, we would not be able to realise more than a billion pounds of public benefit. Eleven of the schemes are managed motorways, which were discussed in more detail above.

50. In addition to spending on our larger roads, we are intending to commit **£1.5bn to local authority major transport schemes** in the Spending Review period. Some of these will contribute directly to better traffic management, such as Urban Traffic Control technology schemes in West Midlands and Greater Manchester. Many others seek to reduce congestion both now and in the future and make journeys more reliable, including high quality public transport schemes that aim to make using public transport a real option for people.

51. The Government is also providing funding to help **local authorities maintain their roads**. The Department is providing £3.042 billion in capital allocations for highways maintenance to local highway authorities in England (outside London) over the Spending Review period. In addition, revenue funding from the Department of Communities and Local Government can be applied to highways maintenance. It is for each local authority to decide where maintenance is needed on their networks, and what treatments are appropriate.

52. Further funding will be available through **a new £560m Local Sustainable Transport Fund**. This has been established to support local authorities in developing sustainable transport packages which help build strengthened local economies and reduce carbon emissions. Guidance for local authorities on the Local Sustainable Transport Fund and how to apply to it has been published on the DfT website alongside the White Paper.

Conclusion

53. In this evidence, we have outlined how our approach to tackling congestion starts with informing effective choices for the individual citizen, supports effective network management, resilience, and intelligent use of capacity, and provides for targeted efficient investment of public funds. This approach – targeted, localist, and citizen-focused – ensures that the decision makers at each stage in the process have the tools and the information they need to play their part in managing or mitigating the impacts of congestion on the economy, environment and society,

54. For our part, we seek a new understanding with the motoring community, where we undertake to play our part in removing and reducing sources of frustration (from the unfair M4 bus lane to poorly managed street works) while expecting in return safe and responsible road user behaviour.

55. The Government welcomes this opportunity to submit evidence to the Committee's inquiry, and looks forward to meeting with the Committee in the Spring.

January 2011

Written evidence from Michael Coles (ETM 26)

Introducing myself

My name is Mike Coles I am 67 years old I have been retired for 17 years as a result of a head injury and in recent years I spend a lot of my time helping others to deal with the day to day problems in society such as the one I am presenting today.

I am a supporter of Living Streets and admire them for the sturdy campaigning in the past on this subject.

My presentation is about my own personal experiences but I can assure the committee that a fair number of the population that are mums with young children and the disabled share my views.

My summary of the main points are: -

1. The Law in respect of pavement parking and in particular driving on a pavement.
2. The effects this practice has on others and myself.
3. The cost to local authorities and the taxpayer.
4. The cost to society and the erosion of social values.
5. Support for pedestrians from the police and local authorities that are not up to a good standard and can vary from area to area.
6. The car insurance in respect of being illegally parked
7. Suggestions for moving some parked cars off the streets.
8. Recommendations I would like the committee to put into its report

1. **The law in respect of pavement parking**.
As of the 5th.July 2010 out of 326 local authorities 57 did not have Civil Parking Enforcement Powers outside London. The areas where I live are part of the 57.
My local authority rely on the police to enforce disciplines on parking and I draw your attention to the Enclosed supplement reference Supp/1/A
As you will see the local authorities reluctance to make TRO's[Traffic Regulation Orders] for all the reasons given is not a satisfactory solution. The reluctance of our local council representatives to pass things up to a higher level is just an easy way of not dealing with the problem. See supplement reference Supp/1/B and response Supp/1/C.
The reluctance of the police forces to take action is always excused by "We haven't got the resources" Please see supplement reference Supp/1/D from the chief superintendent of Cambridgeshire Constabulary.
It must not be forgotten that in areas where the local authorities have taken over responsibility for parking, cars parked on the pavement can be ticketed as contravening the parking regulations rather than for causing an obstruction. But of course this can't happen in Cambridgeshire.
There are laws in place to deal with pavement parking and driving on pavements and more effort is required by authorities to uphold the law.

2. **The effect this has on others and me**.
Because we can walk freely on pavements in London and some other Counties we feel discriminated against in counties that allow pavement parking.
It is confusing to understand the logic of Counties having different arrangements.

Counties that allow parking on pavements are in contravention of the Disabled Discrimination Act, as I can find no evidence where Authorities have a minimum clear passage chart for footpaths.
I am partially disabled and find it impossible to negotiate around parked cars and try to keep safe from the moving traffic so I tend not to go to those areas.
My children have young families and they find it impossible to negotiate their pushchairs around parked cars.

3. **The cost to Local Authorities and the Taxpayers**.
In the area of Cambridgeshire County Council it has cost nearly 3million pounds in compensation alone during the last five years. See supplemement Supp/3/A.
They spent a further 3.2 million pounds repairing footpaths. Now not all of that cost is caused by parking as some money would have been spent on refurbish and normal repairs.
It also has to be remembered that from reporting stage to actual repairs being carried out to footpaths sometimes takes over 1 year when footpaths have to be rebuilt due to excessive pounding by motor viechles which increases the risk of compensation claims
There are much more urgent needs to spend money on so even more reason to ban pavement parking nationally.

4**. The cost to Society and the erosion of Social values.**
By turning a blind eye to motorists driving and parking on pavements has given the motorist an arrogant dominance over the pedestrian which sparks off a dispute when the motorist is challenged. By taking up the whole pavement the motorist feels that he is uppermost in society and has more importance than anyone else.
It has developed into a hate relationship between the motorist and the pedestrian and does not help the road safety cause at all.
In areas where parking is allowed on pavements it is impossible now to enjoy a stroll down the street, to push prams and generally enjoy the place.
It is also very dangerous as motorist often open doors without looking first as it never occurs to them that pedestrians may be around.
Pedestrians also walk in fear of damaging the parked cars. Accidents can and do happen with prams and pushchairs and you can bet that if the owner of the car saw someone damage it they would report the incident. The pedestrian should not be put in that position.

5**. Support for pedestrians from the Police and Local Authorities**.
When you ask a Local Authority or Constabulary “What constitutes an obstruction” you do not get a clear answer.
The supplement reference **Supp/5/A** is apparently not an obstruction?
There have been several occasions previous to this reported none of which have, according to Cambridgeshire Constabulary, been obstructions
Now this is an absolute hideous situation and it highlights the need for some form of standard code of practice if we are stuck with pavement parking in this country.
I have photos of similar pieces of parking around Cambridgeshire none of which are causing obstruction according to the Authorities.
So in essence we pedestrians don’t stand a chance against the motorist the Authorities or Governments. Perhaps The Government is afraid to upset one of its major sources of revenue or perhaps it is just not bold enough to tackle the problem head on.

6. **The Insurance requirement**
I have made enquiries with 3 major car insurance companies legal departments and posed the same hypothetical question to all.

“Supposing a car you were insuring was involved in an accident or a pedestrian fell or tripped on the car whilst it was illegally parked or driving illegally on a footpath would your cover be valid”.
Without hesitation all 3 companies said the insurance would be invalid.
I am also waiting for a response from the Constabulary to see how they would deal with this.
So as I see it if as a result of a car parked on the pavement I have an accident with it by falling against the car or being hit by a door being opened and I sustain an injury I cannot claim against the owner of the car because I would tell the insurance company where it was parked and they wouldn’t pay?.
The local Authority says they wouldn’t pay because it wasn’t there property that caused my injury?.
It would be prohibitive for anyone to sue the owner privately.

7. **Suggestions for moving some parked cars off the streets**.
In rural areas there is enormous scope to encourage people to use more of their front gardens to park their additional cars. More and more families have a car each and yet make no provision to park there cars safely so as not to be an annoyance to others. Most have garages, which are used for other things.
It is so annoying to drive down the street weaving in and out of parked cars and to see that someone can’t be bothered to park in there driveway or park with the flow particularly at night.
In rural areas parking on the road is becoming more dangerous as lorries and farm implements get bigger each year.
If the Government was to do more to educate the motorist on these matters we might stand a chance, if it is not prepared to then I see a future where we grind to a halt or worse than that we have a free for all.

8**. Recommendations I would like the committee to put into its report**.

a. I would like to see the government impose a total ban on parking on pavements.
b. I would like to see the government set up a national advertising campaign aimed at motorists on how to protect and respect pedestrians whilst they are driving.
c. I would like to see the government encourage more people to convert their
d. front gardens to park their cars instead of parking them on the streets. There are a lot of properties that have the garden facility, so that parking on the road is a very last resort. If we have to put up with pavement parking I would like to see the government initiate the setting up of a national standard for establishing the measuring of an obstruction. 1metre width of pavement being the minimum and measured from the part of the pavement that is the responsibility of the local authority to the obstruction. This way the public, police and local authorities are all working to the same standard. This sends out a clear message to the motorist, “ If it is not possible to keep a clear specified distance when parking then don’t park as you will be reported”

I would also like to suggest that this committee takes into account the following report made by The Select Committee On Transport Seventh Report.
Section 12 Parking Accessibility and paras. 256 to 265, which covers also the subject of pavement parking.

Enclosures with this report:[1]- Supp/1/A—Supp/1/A2

[1] Enclosures not printed

Supp/1/B
Supp/1/C
Supp/1/D
Supp/3/A
Supp/5/A

January 2011

Written evidence from the Green Light Group (GLG) (ETM 27)

Briefing Note

- *This paper has been prepared by the Green Light Group (GLG) - the multi-institutional interest group on road pricing. The GLG supports the principle of road pricing generally and seeks to progress its introduction by advising government organisations on practical means of implementation. The GLG was founded by the Institution of Civil Engineers (ICE) and includes the Chartered Institute of Highways and Transportation (CIHT), the Chartered Institute of Logistics and Transport (CILT) and the Transport Planning Society (TPS) and is now joined by the Royal Town Planning Institute (RTPI The GLG is also supported by a number of individuals with expert knowledge of road and parking pricing and has taken informal advice from local government associations.*

- *The focus of this paper is on the pricing of parking in the congested areas of our towns and cities. It introduces a new and equitable approach to pricing by combining well-established parking management practice with the new techniques enabled by more recent legislation.*

- *The new approach builds substantially on the type of scheme being introduced in Nottingham to charge a levy on workplace parking taking account of the circumstances arising both there and in London.*

- *This new approach should enable local authorities to act independently in the spirit of "localism" to implement fair and effective means of achieving their local transport objectives.*

- *The approach has the potential of deriving new revenue for local transport and environmental improvements and reducing congestion and CO2 emissions.*

- *The approach is capable of being introduced incrementally in any area under existing legislative powers. Relatively minor changes in legislation would be required in due course to enable fully comprehensive parking pricing regimes to be implemented.*

- *Government should support those local authorities choosing to pursue this new approach by simply freeing them to do so and by progressing those changes in legislation needed to achieve the fully comprehensive pricing regimes.*

Preamble

This brief paper considers the possible applications and potential impacts of introducing parking levies in congested urban areas in more equitable ways than previously considered. It also seeks to clarify the basic objectives now applying for such levies - which include reducing congestion and CO2 emissions. One of the advantages of this approach is that it also raises additional revenues which are required by statute to be used for local transport purposes. Hitherto parking levies have only been considered for application on workplace parking. This

paper introduces a new concept whereby levies would be applied to a wider range of private parking and combined with price increases for both public and residential parking.

A levy on private non-residential parking (PNR) to reduce traffic congestion was first seriously considered by the GLC for London in the 1970's but abandoned when the idea of introducing a supplementary licence fee for all road users entering central London seemed to be more effective and deliverable.

The enabling legislation for introducing congestion charging (CC) and workplace parking levies (WPL) eventually followed in the Transport Act 2000. After in depth technical studies carried out by the ROCOL Working Group, managed by GOL, into the overall performance of CC and WPL and much political debate, the Mayor of London decided to press ahead but only with CC. Opposition to the principle of WPL had built up into a national campaign featuring the national Chambers of Commerce and other commercial interests arguing very effectively that the levy would impact on their members and no-one else. Indeed the WPL legislation had been framed more tightly to exclude for example super-markets following successful lobbying by the major food retailers. In Scotland, the Scottish Parliament denied itself the opportunity to introduce the equivalent legislation.

Since the Transport Act was introduced, only Nottingham has taken up the opportunity to adopt WPL and this has been finally endorsed by Government for implementation in October 2012. The scheme in Nottingham has faced and still faces strong opposition from some commercial interests.

Why are Parking Levies Needed?

There are three reasons why levies are needed now. The first reason is to reduce the economic costs of traffic congestion in our towns and cities by influencing travel choice. The second reason is to help tackle the environmental costs including reducing CO2 emissions. The third reason is to raise revenues specifically to help with investment in local transport infrastructure and services. There continues to be little political appetite, at least in the foreseeable future, for progressing to a comprehensive system of road pricing. Even if a broad consensus to implement such a system were achieved, implementation would be unlikely for some considerable time – except perhaps for charging heavy goods vehicles and for new road capacity. Parking levies could at least "fill the gap" until road pricing is eventually introduced. We believe their time has come. Locally applied levies are essentially a local matter and, as with congestion charging, they should no longer be subject to central government approval.

A New Approach

In the briefest outline, the new approach might be as follows;

- Focus any application of levies on inner town and city areas and their principal radial approach roads where there is clear evidence of traffic congestion and parking pressure and on relevant parking in alternative destinations to those towns and cities. Most of these areas would normally have comprehensive on street parking controls and

enforcement and ongoing proposals to extend them over time. The roads surrounding out of town retail establishments would need to have on street parking controls.

Apply a modest levy or premium charge on virtually **all types** of parking space in a manner which results in a broadly equal price increase for their use. The only exemptions might be for private off street residential parking in domestic garages and driveways and for special categories such as for emergency service vehicle parking. In the former case, additional revenues would be captured eventually by means of any future changes in Council Tax as off street parking increases in value. The levies would therefore apply to;

a. Local Authority Public off street parking (POS)
b. Parking meters (PM)
c. On street residents' parking (RP) in controlled parking zones (CPZs)

All the above categories are well established as charged services and the revenues flow to the relevant local authorities

In addition, levies are needed on;

d. Private Non Residential spaces (PNR)
e. Shoppers' and community facilities' parking (SP) – including the major "free standing" supermarkets where parking can be controlled on the surrounding roads
f. Privately Owned Public off street parking (POPOS)

This would require the application of as yet unused legislation to enable authorities to licence privately owned public car parks (POPOS) and thereby set charges and, if necessary, pay compensation for financial loss. This legislation is contained within the Transport (London) Act of 1969 and the Transport Acts of 1978 and 1984. Amendments would be needed to the Transport Act 2000 to include shoppers' and community facilities' parking.

The levies would be payable annually, seasonally or by the day or hour depending on the type of parking space involved. The local transport authority would administer the levy schemes and receive most of the payments so generated. Supermarket and privately owned public car parks would initially retain the additional revenues from the levies and new legislation would be needed for them to be captured by the local authorities.

Potential Gross Revenues Yielded by a Parking Levy Scheme

The potential gross revenue yield from a typical town's inner area already the subject of a controlled parking zone (CPZ) is estimated to be over £6m pa initially and then to increase as it takes further effect on the total parking supply. This revenue would be generated by levies of between 7 and 10% on current public parking charges (off and on street), and £1 per day on private parking..The costs of administration, enforcement and possible compensation for some private owners of public parking would need to be deducted. The net revenue forecast for

Nottingham's levy on PNR alone is approximately £9m pa. This take account of forecast costs in the order of 5%.

In central London alone, the parking supply figures are over 5 times higher than the illustration given here. The supply within that part of inner London already covered by CPZs is much higher again. The scale of potential new gross and net revenues from a relatively modest range of levies there would be high indeed. There many locations, apart from inner London, where these parking levy schemes should be considered. Indeed, in terms of priorities for addressing growing congestion, CO2 emissions and needed improvements to public transport, it would seem necessary to focus initially on free-standing towns and cities outside London and on the outer London town centres.

Since the objectives of introducing parking levies are to reduce traffic congestion and CO2 emissions and to generate new revenues for local transport improvements, the size of the levies may need to be lower or higher than those in this illustration. The effects of increasing the levy over time in real terms will need to be examined further, taking into account their impacts on travel behaviour as well as the social and economic impacts and net revenues obtained by the local authorities.

Comparisons with Congestion Charging

Comparative studies into Congestion Charging (CC) and Workplace parking Levies (WPL) have generally concluded that the former is a more effective instrument for influencing travel behaviour. However, no studies have yet examined the effects of applying parking levies in a more comprehensive manner such as that described above. It is usually argued that because parking levies do not impact on "through" traffic, then they are both inequitable and ineffective. However it is the case that levies could be applied over wider areas without creating the "hard" boundaries that CC schemes require. Parking levies could be introduced on a price gradient basis reflecting demand and market pricing principles. Clearly, the wider the area of application, the more car journeys will be affected – including a significant proportion of what is normally counted as "through" traffic. Taking inner London as an example, levies applied there could influence the travel choice of many times more vehicles than a more tightly drawn CC scheme allowing the through traffic to drive around a ring road. As with the CC scheme in Central London, overall traffic and congestion levels within the area subjected to levies could be further influenced by adjustments to network capacity.

Next Steps

Given the reduced spending on infrastructure planned as part of the austerity measures, local authorities in the UK facing increasingly serious congestion are encouraged to consider this new approach to parking pricing. Pilot studies need to be carried out to test the impacts and costs of introducing these more comprehensive levies along the lines of the illustration set out above.

Ideally, these pilots need to be undertaken in a number of free standing towns and cities in the regions as well as parts of London. The London studies should include one for the inner London area and one or more strategic outer London town centres. These pilots should demonstrate the

broad effects of introducing these levies on travel patterns, the local economies, the social impacts and the net revenue yield. The studies should also address the potential barriers to implementation and the legislative requirements for delivering a more comprehensive parking levy system. In summary the focus of future work either within these pilot studies or as path-finding policy analysis should be;

- To carry out an audit of the relevant legislation in order to examine how existing powers may best be used to support the wider application of parking levies.
- To identify gaps or improvements in the relevant legislation that would need to be addressed to support the wider application. These may include enabling local authorities to proceed without recourse to central government, the means of levying private shoppers' parking, the means of passing on levies to the car user rather than the car park owner, the exemptions from payment of levies and the wider ability of local authorities to raise and spend money on local transport improvements.
- To carry out scoping studies and impact assessments

The Green Light Group is pleased to release this paper and now seeks to engage in discussion with both central government and local authorities and wider stakeholders in order to move the initiative forward.

February 2011

Written evidence from National Grid plc (ETM 28)

Executive Summary

1. National Grid believes existing road and traffic management legislation is sufficient to manage street works if implemented and applied by Street Authorities consistently, and equally to all works promoters.

2. We are certain that collaborative working between all stakeholders involved in road and street works[1] would provide the opportunity to improve performance and reduce costs under the current regime, thereby providing benefits to energy consumers and UK plc. We are proactively engaging with all parties to drive this forward.

3. The current application of legislation is ineffective and is leading to additional, unnecessary but also unavoidable costs which will be passed onto energy consumers. We recognise this is an important issue, especially given the current economic climate. So it is very important that National Grid and its street works stakeholders work together towards a common goal; reducing street works costs and minimising disruption to the public.

Introduction

4. Energy is essential for our domestic and working lives. National Grid carries out street works for the purpose of providing energy safely and reliably to end consumers. Due to the nature of National Grid's statutory obligations street works are essential for public safety and security of energy supply. Street works legislation has a major impact on our operations. In 2010-11 National Grid will have submitted approximately 372,000 notices and permits.[2]

5. Parity between works promoters, including Street Authorities, is essential to ensure that all parties are incentivised to carry out work in an efficient and timely manner.

6. We are working closely with stakeholders to improve the coordination of works so as to minimise the impact of our street works.

7. Permit schemes and their associated conditions have added significant complexity to the street works regime and removed our statutory rights to undertake works. The inconsistent application and format of such schemes between Street Authorities has limited our ability to optimise processes and has had a negative impact on our productivity, hence prolonging total works duration in some cases. This leads to unavoidable increased costs which will ultimately pass through to energy consumers and UK plc.

8. It is crucial that network companies carrying out street works are appropriately incentivised to minimise costs and disruption. National Grid advocates the introduction of a national permit scheme with consistent requirements and conditions which can be deployed in locations where a permit scheme is deemed appropriate against a set of transparent criteria. This would allow rationalisation and optimisation of processes by those undertaking works and provide a real incentive to improve the efficiency of street works and deliver net benefits to all parties.

9. National Grid does not believe that lane rental will necessarily deliver any benefits. Proposals should be carefully analysed and only those which demonstrate clear net benefits should be considered for implementation, as the costs must be ultimately passed on to energy consumers.

10. Proposals for the devolution of approval of permit schemes would risk increasing inconsistency between Street Authority requirements, thereby significantly increasing both administrative costs, the regulatory burden for utilities and further impacting on productivity and congestion.

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[1] Road works refers to works by Street Authorities to maintain the road network, street works refer to works by parties such as statutory undertakers (including utilities) who have apparatus in the street.
[2] Data based on figures for 9 months April – December 2010 pro rated to April 2011.

11. **It is in National Grid's interest, as much as it is in the interests of consumers and the public that we are able to complete street works in the minimum possible time and causing minimum disruption to the local community. So we are committed to working with all stakeholders on these issues to jointly identify and deliver the improvements required to enable effective street work management.**

National Grid and street works

12. National Grid owns and operates the gas transmission system throughout Great Britain and distributes gas throughout the heart of England to approximately eleven million homes, schools and offices. Its primary duties in the UK are to develop and maintain efficient networks and also facilitate competition in the generation and supply of electricity and the supply of gas.

13. National Grid undertakes street works for four main reasons;
    - safety;
    - security of supply;
    - connecting new or enhancing existing customers' supplies; and
    - diverting apparatus for major transport or urban regeneration projects.

    In practice, for most premises which we are under a duty to connect to the gas network (as dictated by the Gas Act 1986 as amended), there is no practical alternative but to install pipework in streets. Safety is our top priority and our responsibilities in this area are driven by the Gas safety (Installation and use) Regulations 1998, Health and Safety at Work Act 1974, Pipeline Safety Regulations 1996, Gas Safety Management Regulations 1996 plus associated approved Safety Cases. We are required to publish and comply with plans to ensure security of supply under our Gas Transporter Licence granted under section 7 Gas Act 1986 (as amended) and requirements to divert pipes and apparatus are driven by the New Roads and Street Works Act (NRSWA) 1991, Traffic Management Act (TMA) 2004, the Highways Act 1980 and the Town & Country Planning Act 1947 (as amended 1990).

14. Due to the nature of National Grid's obligations street works are unavoidable. Most of National Grid's street works relate to work on the low pressure gas distribution network within four of the eight regional gas distribution networks.

15. National Grid seeks to minimise disruption caused by street works by ensuring compliance with the existing legislation within NRSWA 1991 and the TMA 2004. In 2010-11 National Grid will have submitted approximately 372,000 notices and permits.[3] The stages of compliance and noticing requirements for different types of works are illustrated in Appendix 1, for example for planned major works the noticing process starts at least 90 days prior to undertaking works, with six notices required in total.

16. National Grid seeks to deliver world class street works, with safety as the number one priority. We share best practice with companies across the industry, through regional Highway Authorities and Utilities Committee (HAUC) conferences and National Joint Utilities Groups (NJUGs) Street Works Forums. We are fully supportive of NJUG's submission to this inquiry.

17. National Grid has been very active in the development of a range of programmes to reduce the impact of our works on both road users and the general public. We helped develop and are a signatory to the National Code of Conduct which we launched with NJUG, Transport for London and the London Mayor in June 2010 following the success of the Mayor's London Code of Conduct. The Code's features include:

    - Assisting local authorities in the development of permit schemes to ensure they are workable and effective at tackling disruption;
    - Sharing long term plans for major street works projects between local authorities and utilities to allow greater opportunities for coordinating works;

[3] Data based on figures for 9 months April – December 2010 pro rated to April 2011.

- Promoting the use of minimum-dig technology to reduce the duration of works;
- Encouraging the use of plating over road excavations where safe and practical to do so;
- Striving to work outside of peak hours wherever possible to reduce excessive traffic delays;
- Providing work site information boards at all sites with contact details and updates on progress;

18. It is important to make clear that just as it is in the interest of energy consumers and the public that National Grid completes its street works as quickly as possible and with minimum disruption it is also in National Grid's interest. We are committed to working with the Department for Transport, Street Authorities and other stakeholders to ensure that congestion and disruption to the general public is minimised without imposing unnecessary costs on energy consumers. We feel certain that with a common goal in mind, it is possible to develop an effective regime to deliver the best outcome for all stakeholders.

Price control

19. National Grid is funded by a price control mechanism which is agreed with and set by Ofgem, the energy regulator. Historically the Price Control was based on a retail price index model with an element of efficiency savings. This approach has served the customer well; however the UK energy sector is now facing a number of new challenges in providing safe, reliable and secure energy which will also be sustainable in a decarbonised future. In response to these challenges, Ofgem has recently introduced a new regulatory framework known as RIIO[4].

20. Under the RIIO model, network companies are required to develop well-justified business plans setting out their outputs and how they propose to deliver these. Stakeholder engagement is a key element of this and National Grid is currently consulting with a wide range of stakeholders to ensure we fully understand their priorities. These will, in turn, help us to develop our business plans to ensure that, alongside delivering energy safely, reliably and efficiently, we are funded appropriately by Ofgem to deliver the street works service that our customers and stakeholders want. Recent feedback from our first stage of stakeholder engagement indicates that there is recognition and concern that increased costs incurred as a result of street works legislation will be passed through to energy consumers. Our stakeholders also believe that networks should be incentivised to minimise cost impacts of street works where it is within their control. .

21. We welcome the opportunity to share this feedback and our resulting proposals with government and other utilities in order to help shape improvements and deliver a mechanism that could be rolled out across works promoters.

Opportunities to improve performance of the current regime

22. From our experience of the current regime we have identified potential improvements in the areas of measurement, parity and best practice, work co-ordination, and permit scheme consistency, conditions and transparency which we believe could deliver a more effective regime and incentivise improvements.

Measurement, parity and sharing best practice

23. National Grid would welcome a defined method for measuring congestion and its root causes. This would facilitate an assessment of the impact and effectiveness of the current regime, enable targets to be set and progress to be mapped.

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[4] RIIO: Revenue = Incentives + Innovation + Outputs. The RIIO model offers network companies incentives for securing investment and driving innovation. The model aims to ensure the delivery of sustainable energy networks for current and future customers at the lowest cost.

24. Independent studies have indicated that only 10% of congestion is attributable to road and street works.[5] Utilities undertake approximately 50% of the works in the street with the other 50% accounted for by Street Authorities' work. Therefore just 5% of congestion is attributable to utility works.

25. National Grid believe that to tackle disruption effectively legislation needs to show parity between all works promoters, including Street Authorities, so that all parties are incentivised to carry out work in an efficient and timely manner.

26. It should be noted that different stakeholders will measure regime success by different parameters. Statutory undertakers will be driven by customer service, cost and productivity, aiming to complete works safely in the shortest time possible, causing minimum disruption and protecting business reputation.

27. Key Performance Measures (KPMs) applied across all works promoters could be used to demonstrate performance, identify best practice and incentivise improvements. Currently there are no KPMs available from the Street Authorities to measure the performance of those undertaking works under either the NRSWA or TMA regimes. National Grid therefore welcomed the requirement to produce precise KPMs within the London Permit Scheme Section 22.8.5, 6 & 7, unfortunately however this has not yet been completed and the KPMs to measure the Authority's own works are optional. In order to ensure effectiveness KPMs need to be developed and applied equally to all works promoters including Street Authorities.

28. Benefits could also be gained from the inclusion of all works promoters in areas where Permit Schemes are introduced. This would enable benchmarking; the identification and sharing of best practice and the introduction of incentives schemes (for example by rewarding upper quartile performance). Currently a substantial part of Street Authorities' works are excluded from permit schemes. For example Section 22.8.1 of the London Permit Scheme excludes 'highway works, defined in Section 86 (2) of NRSWA as works for road purposes' (i.e. works for the maintenance of the highway, improvement works, any works associated with traffic signs and the construction of crossing for vehicles in footways) from having to comply with the scheme. In contrast all works undertaken by utilities such as National Grid, are subject to the permit scheme requirements. We believe this arrangement to be inequitable and not therefore in the best interests of customers.

29. National Grid welcome the creation of the four Task Forces set up under the TMA legislation under London Permit Scheme section 22.7. These should provide a good opportunity for identifying and sharing best practice. To this end, we would welcome early communication of the Task Forces' objectives and ongoing transparency regarding attendance and progress.

Co-ordination of works

30. National Grid works closely with stakeholders to improve the coordination of street works so as to minimise the impact to the lowest reasonable level.[6]

31. National Grid supports the drive to co-ordinate street works under both Sections 59 and 60 of NRSWA in order to reduce disruption and congestion. Section 59 stipulates that it is the duty of the Street Authorities to use their best endeavours to co-ordinate works. Improvements in co-ordination both within and between Street Authorities and all works promoters could be delivered through process development, more frequent co-ordination meetings and incentivisation of collaborative working. At present there is only limited proactive approaches by Street Authorities and work promoters to co-ordinate the works and therefore a failure of duty to effectively bring together undertakers proposing works. Where co-ordination results in trench sharing the scheme regulations place a large onus on the initial promoter to instigate all the relevant permitry and take ownership of the final reinstatement and appropriate guarantee period, so even with reduced fees

[5] 'Utilities' Street Works and the Cost of Traffic Congestion' Professor Phil Goodwin, 2005

[6] For example in 2010 we worked in partnership with Severn Trent to carry out essential asset renewal work in Bewdley, Worcestershire. By working together and using one contractor we significantly reduced the length of time required to complete works.

the incentive to co-ordinate works may not be sufficient to offset the substantial risks borne by the initial promoter. Hence the understandable lack of collaborative working between utilities within the same streets.

32. In addition co-ordination of works could be further improved by the mandatory contribution of all works promoters, including Street Authorities to a transparent and easily accessible central works register. National Grid consistently uses the London Central Works Register however this is not mandatory and the number of both participating Permitting Authorities and utilities makes it only partially effective.

33. Efficiencies could also be achieved by improved communication processes between Local Authority departments. The circulation of notices within Local Authorities would negate the need for works promoters to actively coordinate interdepartmental engagement within the Authority where works involve more than one department (e.g. excavation near trees and parks).

Permit scheme consistency, conditions and transparency

34. National Grid advocates the introduction of a national permit scheme with consistent requirements and conditions which can be deployed in locations where a permit scheme is deemed appropriate against a set of transparent criteria. In their current format permit schemes and their associated conditions have added complexity to the regime and in certain respects conflict with the statutory rights to undertake works conferred to gas distribution network owners under the Gas Act. The fact that different Street Authorities may develop varying schemes, or may interpret the same scheme in different ways and with different levels of rigour leaves utilities unable to define one "best-practice" approach to managing permitry, thus creating inefficiencies across the entire work planning and delivery process. This unavoidable inefficiency and resultant reduced productivity generates increased costs which ultimately pass through to the energy consumer and UK plc.

- Site productivity: The negative impact on site productivity has been evident from the analysis of the impact of the London Permit Scheme on our essential mains replacement programme activity (Appendix 2). Due to conditions imposed works are taking longer to complete and congestion may be worsening as a result (Appendix 3).
- Administrative support functions: Differences between and within permit schemes also necessitates a multitude of different administrative processes to be undertaken by those applying for permits in more than one geographic area. For example the three current schemes in operation or preparation covering areas where National Grid undertakes work (London, Northampton, Manchester) are being implemented in very different ways in terms of both interpretation and application (Appendix 4).

35. A single consistent permit scheme would allow rationalisation and optimisation of processes by those undertaking works and provide a real incentive to improve the efficiency of street works and deliver net benefits to all parties. As with current proposals we would support Street Authorities deciding whether or not to deploy the scheme or retain the noticing system under NRSWA.

36. Cost benefit analysis should be applied to all proposed schemes to ensure there is a net benefit across all elements. The blanket application of permit requirements in some schemes such as the London Permit Scheme to all classes of road, whether they be major routes where congestion is an important issue or side roads, where there is little if any impact, imposes costs that are disproportionate to the benefits to be gained.

37. Benefits of reduced administrative burden could also be accrued by aligning central systems with the legislation.

- The advent of Permits has led to a discrepancy between the Code of Practice for permits (in which works should be co-ordinated) and the ETON Technical Specification (under which applications are made). These two pieces of regulation do not allow fluency in the implementation and interpretation of the legislation (both fall under TMA 2004). Due to discrepancies between the interpretation of requirements by the permit applicants and the

Permit Authorities the system does not comply with what is stipulated in the Legislation. Thus a greater administrative burden is placed on the permit applicants to make the system and processes work via the application of 'work arounds' (Appendix 2).

- Systems are also currently incompatible with the requirement for Permit Authorities to attach conditions. In National Grid's practical experience the onus falls on the applicants to meet this requirement (Appendix 2). Permitting meetings between works promoters, developers, Department for Transport and the Authorities have failed to make any impacts on getting the systems changed due to the costs associated with amendments.

38. It would also be beneficial to improve transparency over grounds for refusal of permits or application of conditions, and clear and consistent rules about what must accompany a valid permit application or a Permit Advance Application.

Additional comments on the proposed future regime

Lane Rental Proposals

39. National Grid do not believe that lane rental will necessarily deliver any benefits. Proposals should be carefully analysed, only those which demonstrate clear net benefits should be considered for implementation.

40. Any proposals taken forward should aim to drive early completion of works. There should be incentives for clearing site earlier then predicted and refunds available for those who succeed in doing so. There needs to be clear criteria outlining when and where schemes can be imposed. To maximise effectiveness and benefits any scheme should be targeted at pinch points on the strategic road network and should only be introduced upon the removal of other requirements (i.e. Permit and noticing requirements) otherwise there is a danger of further regulatory and cost burden. There is also the need to recognise that Lane Rental costs will be unavoidable by utilities such as National Grid undertaking essential work and that these costs will be ultimately passed on to energy consumers who are already facing higher bills from suppliers.

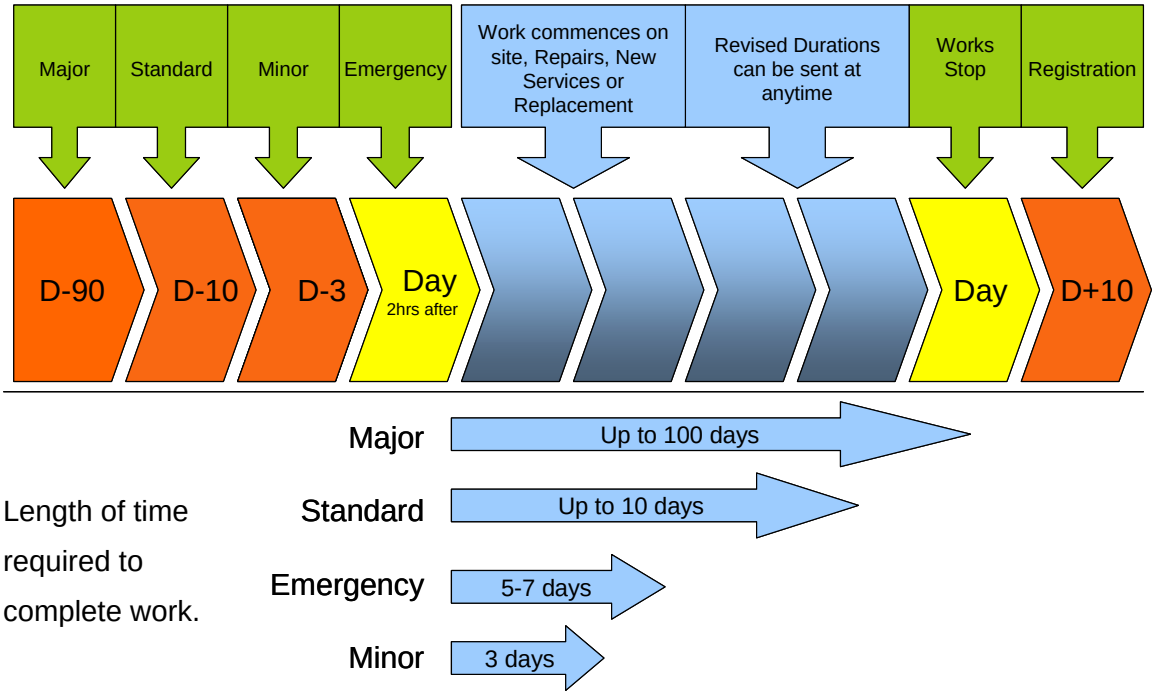
Proposal to localise powers to authorise permit schemes

41. National Grid is concerned by the proposal in Department for Transport's Business Plan to localise powers to authorise permit schemes. Currently permit schemes are issued for consultation by Street Authorities, responses are considered by the Department for Transport and recommendations made to proposed permitting authorities to amend schemes.

42. The removal of this arbitrating policing role has the potential to create an even greater variety of permit schemes and cause huge inconsistencies between Street Authorities, resulting in a multitude of issues for utilities working across different Street Authority's borders. This will serve to further exacerbate the issues identified above. These issues could be overcome by the introduction of a national scheme which Street Authorities could choose whether or not to deploy (see paragraphs 34-35 above).

Appendix 1: Noticing required (NRSWA)

Noticing requirements are dependent upon the type of work to be undertaken.
For major works the process starts at least 90 days prior to undertaking works, with six notices required in total.
For emergency works three notices are required.



Appendix 2: Productivity under Permit Schemes

Administrative Support:

At present for noticing there is just one exchange of information and the works continue;

a) Notice sent by National Grid informing Street Authority of works

With Permits there is considerably more administrative burden with the potential for numerous exchanges of information;

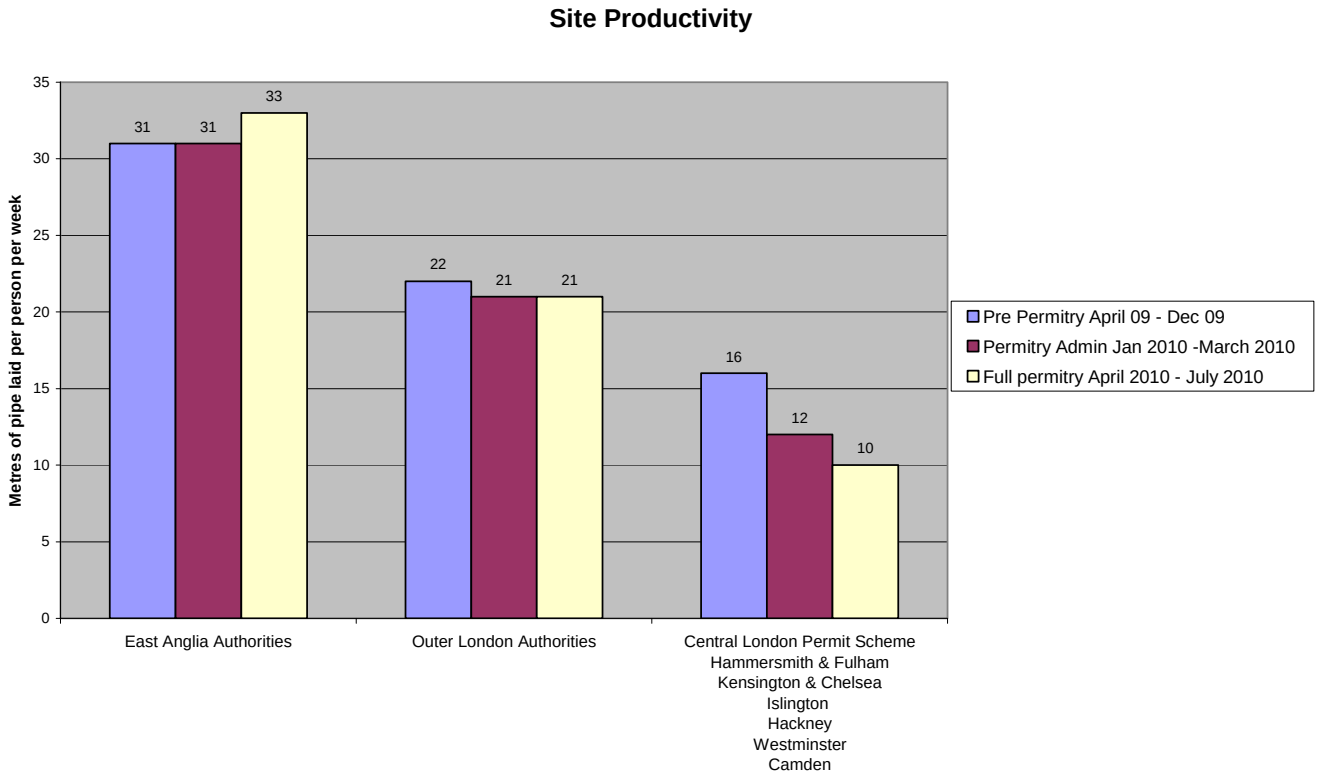
a) Permit request sent by National Grid
b) Permit rejected by Street Authority. Street Authority request conditions to be added.
c) National Grid add conditions and submit permit request.
d) Permit either accepted or once again rejected by Street Authority (If the permit is rejected steps b and c are repeated until agreement is reached)

On site:

The metric “metres of pipe laid per person per week”, allows us to measure productivity within the geography of each Street Authority’s area. The graph below illustrates productivity before, during the preparation and after implementation of the London Permit Scheme across three areas, East Anglia (no

scheme adopted), Outer London authorities (no scheme adopted at this time) and the Central London authorities which adopted the London Permit Scheme in January 2010.

Productivity in East Anglia increases over the timescale analysed as we realise the benefits of a number of efficiency initiatives. Productivity in the Outer London Authorities remains fairly constant whereas there is a reduction of 38% in productivity across the Central London Authorities which have implemented the Scheme. Appendices 3 and 4 further demonstrate why productivity is reduced.



Appendix 3: Inefficient permit conditions

These diagrams illustrate the replacement of 200m of gas main. Connection holes are shown in blue and the pipeline is shown in yellow.

Diagram 1: The pipeline is replaced by a single insertion. There are no permit conditions which limit the length of road which can be worked on. This enables the use of just two connection holes. The 200m of pipe would be installed in a single insertion, allowing the work to be completed in just 21 days.

Diagram 2: This shows the added time needed to comply with restrictive permit conditions which limit the length of highway which can be worked on. Undertaking the work under these conditions requires three additional connection holes. The work takes longer to complete (30 days) and there are additional material and backfill costs.

Diagram 1:

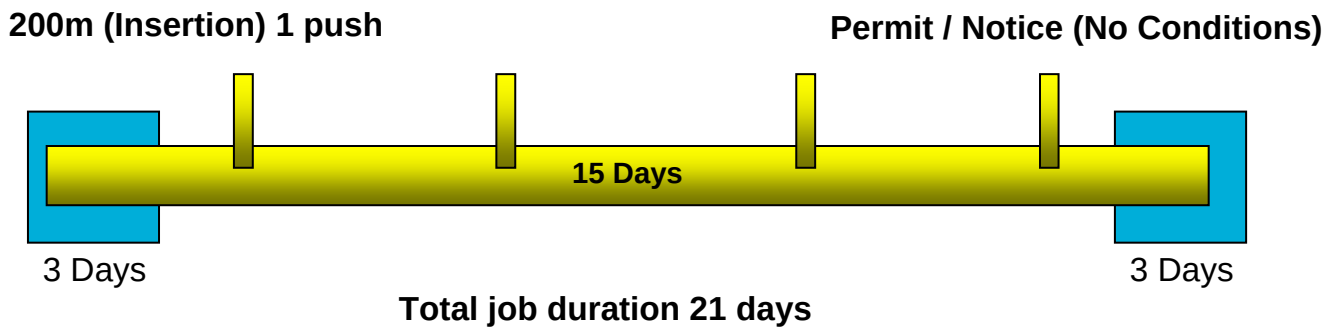
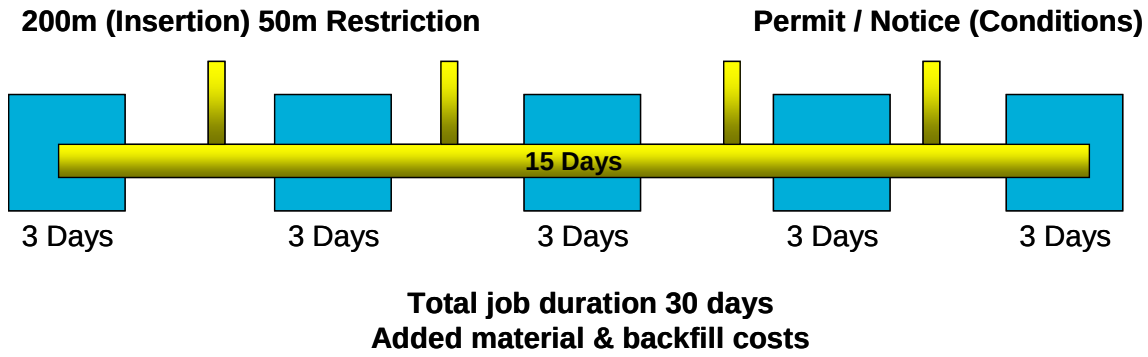
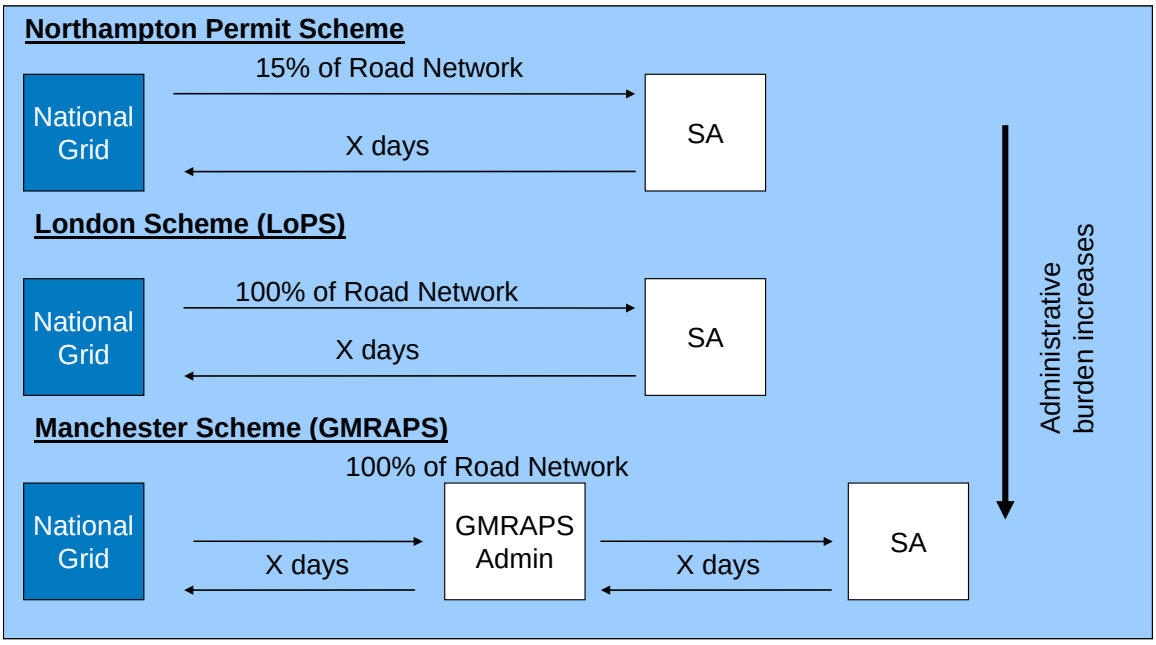


Diagram 2:



Appendix 4: Permit Scheme inconsistencies



Northampton's permit scheme only applies to 15% of the road network. National Grid liaises directly with the Street Authority (SA). This is in contrast with the proposed Manchester permit scheme (GMRAPS) which will apply to 100% of the road network and applications will be processed via an administration team prior to being routed through to the Street Authorities. There is therefore a greater administrative burden associated with undertaking works in the Greater Manchester area than there is in Northampton.

Productivity is impacted by the percentage of the network that schemes apply to. Where a scheme applies to all roads in an area flexibility is minimised. When there is a delay in obtaining a permit there is no scope for the works team to undertake other work in the same geographic area, resulting in significant costs which will ultimately be paid by the end consumer and UK plc.

Schemes which do not apply to 100% of the road network provide scope for reallocating teams when there is a delay in obtaining a permit, enabling the team to work in less congestion sensitive areas within the same geographic area.

February 2011

Supplementary written evidence from National Grid plc (ETM 28a)

What is National Grid's process for checking the quality of street works reinstatement?

National Grid has its own "Management Procedure for Reinstatement Monitoring" - T/PM/SW/4 for checking the quality of reinstatement. This procedure provides guidance on Works In Progress checks that are carried out by both Backfill & Reinstatement Operatives and dictates the frequency at which "completed" works (visual checks and core sampling of completed reinstatements), shall be undertaken to ensure compliance with the "Specification for the Reinstatement of Openings in Highways" (SRoH).

The New Roads and Street Works Act provides that Statutory Undertakers pay for Inspections of their works by the Street Authority.

The Sample Inspection regime is the procedure by which a street authority can regularly establish the overall performance of each undertaker operating in its area, and designed to enable street authorities to monitor undertakers' performance.

There are three stages of inspections, at which information on undertakers' performance can be obtained;

- Category A (Undertaken during progress of works – predominantly Signing, Lighting & Guarding)
- Category B (Undertaken within 6 months of interim or permanent reinstatement)
- Category C (Undertaken within the 3 months preceding the end of the guarantee period).

Highway Authorities may inspect up to 30% of undertakers' work, based on an average of the previous 3 years volumes, for which undertakers pay £50 per inspection. The calculation is based on inspection units generated from undertakers' workload, but it is important to consider that one unit of inspection does not necessarily always equal one excavation.

Should any Statutory Undertaker have a failure rate in excess of 10% in any category in a given quarter, then the Highway Authority may issue an Improvement Notice. Over the last 5 years, National Grid has only ever been served one Improvement Notice relating to Category B and C inspections. This Improvement Notice was served by Cumbria Highway Authority, and it is worth noting that that every utility working out of Cumbria received an Improvement Notice.

What percentage of National Grid's reinstatement works are checked by local authorities? Of these, what proportion are found to have defects that require subsequent street works to repair the original reinstatement?

National Grid produce a weekly defect exception report (IMC260) indicating the number of defects that have been received from Highway Authorities that potentially require remedial work. These are broken down by type of defect (Dangerous or Non Dangerous) and by Highway Authority. Investigation of this report allows root cause analysis to take place, to identify any trending, and specific areas of learning. Our 2010/11 performance is as follows:

- There were 83,027 registerable works activities carried out by National Grid

- From these works there were 93,381 inspection units generated and registered with the Highway Authorities. 30% are eligible for inspection under the current regime.

- Of the total 93, 381 inspection units generated, 3, 643 (following the Highways sampled inspection process) were found to have structural defects with the reinstatement which required subsequent street works to repair the original reinstatement.

June 2011

Written evidence from the National Joint Utilities Group Ltd (NJUG) (ETM 29)

1.0 NJUG – Introduction

1.1 The National Joint Utilities Group Ltd (NJUG) is the only UK trade association solely representing utilities and their contractors on street works issues. NJUG is a constructive organisation with a focus on promoting best practice, self-regulation and a two-way working relationship with Government and other relevant stakeholders. NJUG is also the utility arm of the Highway Authorities and Utilities Committee (HAUC(UK)) working collaboratively with local authorities, the UK Government and the devolved administrations to improve standards of road and street works in England, Northern Ireland, Scotland and Wales.

1.2 NJUG's members include the major gas, water, electricity and communications companies operating in the UK, as well as their contractors[1]. Including members through trade associations, NJUG represents thirty-seven utility companies and thirteen utility contractors.

1.3 This submission is focused on the three points in the call for evidence where we have particular expertise – the prevalence and impact of traffic congestion and likely future trends; the extent to which the Government and local authorities should intervene to alleviate congestion and the best means to do so; and the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.

2.0 Executive Summary

2.1 Utility services are the essential fabric of the UK economy and street works are undertaken for four main reasons - safety, security of supply, to connect new customer or upgrade existing customers' supplies, or to divert utility apparatus to facilitate major transport or urban regeneration projects such as Crossrail, the 2012 Olympics and Paralympics, tram projects, or new housing developments.

2.2 Utilities are investing billions to improve the quality and reliability of these essential networks. The Health and Safety Executive has placed a requirement on gas network owners to replace all cast iron gas mains within 30 metres of buildings; the water industry continues to replace its network of water mains, which often dates back to the Victorian era, to reduce leakage, and the communications industry is investing in the next generation of broadband networks.

2.3 This investment in the essential infrastructure on which we all depend, means that the volume of utility works will not decrease for the foreseeable future. Therefore it is vital that utilities and local authorities, who have a statutory duty to co-ordinate all works in the highway, work together better to plan works and develop further innovative ways to reduce the disruption caused by both utility and highway authorities' own works.

2.4 Utilities are subject to a myriad of legislation/regulation governing their street works. Additionally, local authorities have a statutory Network Management Duty requiring them to ensure the expeditious movement of traffic and a specific duty to co-ordinate their own and utilities' works. The primary legislation regulating utility street works and the implementation of the associated Regulations and Codes of Practice has done much to reduce the unfortunate disruption that sometime arises from essential utility works. However, in order for the regulations to fulfil their full potential they need to be applied more consistently and effectively (as recognised in a previous Transport Committee Report[2]). Equally, if Government is to implement further measures to regulate works in the street, it must be noted that utilities undertake only 50% of the works in the street, and similar incentives that already

[1] NJUG members include the Energy Networks Association (representing electricity and gas), Water UK (representing all water and wastewater companies), National Grid, Openreach, and Virgin Media. Our associate members are Clancy Docwra, Skanska Utilities, Balfour Beatty, Morrison Utility Services, Morgan Est, NACAP, PJ Keary, First Intervention, Carillion, Enterprise, Laing O'Rourke and AMEC

[2] Transport Select Committee Road and Pathway Maintenance Report (2003) – Recommendations 21 to 25 http://www.publications.parliament.uk/pa/cm200203/cmselect/cmtran/407/40708.htm

exist for utilities, and any new regulations, should be applied to highway authority works which account for the other 50%.

2.5 NJUG and the Local Authorities, through the auspices of the national Highways and Utilities Committee (HAUC(UK)), assist DfT and the Devolved Administrations in achieving their priorities. NJUG is also driving forward numerous self-regulatory initiatives to reduce disruption and improve the quality of works, including implementing the National Code of Conduct (Section 4.0).

2.6 DfT recently revised its Business Plan to reflect Government's overarching priorities of deficit reduction, deregulation and localism. Measures include - a substantial increase in S74 overstay charges; introduction of a daily charge for every day utilities occupy the highway (lane rental); and devolvement of approval of permit schemes to local authorities. The DfT has also decided not to honour the previous Government's commitment to a one-year independent review of permit schemes.

2.7 However, Government has committed to reducing regulation and costs on business. Therefore, NJUG believes that Government support for the range of self-regulatory measures, combined with effective and consistent implementation by all local authorities of the myriad of existing regulations/legislation will deliver a further improvement in street works and reduced disruption, without the need for extra measures. Therefore, serious consideration of any additional regulations / increases should include a rigorous assessment of costs and benefits.

2.8 NJUG therefore wishes to continue to work constructively with Central and Local Government to ensure any proposals are robust and workable and do not place any unnecessary additional costs on utilities and their customers.

3.0 <u>The prevalence and impact of traffic congestion and likely future trends</u>

3.1 NJUG and utilities recognise that essential street works can sometimes cause unfortunate disruption and are working hard to reduce it.

3.2 According to an independent study[3] by Professor Goodwin (Professor of Transport Policy, University of the West of England) utility and authority works together account for only 10% of all congestion, on an approximately 50 / 50 basis, meaning that just 5% of congestion is caused by utility works. The scale of disruption for which utilities are often blamed is striking in its contrast to figures provided by Professor Goodwin's report, which shows that the "great majority of works cause delays of less than 20 seconds per vehicle".

3.3 Whilst utilities continue, through a range of self-regulatory measures (see section 4.0), to reduce the unfortunate disruption essential street works sometimes cause, given that just 5% of congestion is attributable to utility works, it is clear that action by utility companies can only have a limited impact on overall levels of congestion – for example a 20% improvement by utility companies would result in only a 1% reduction in congestion.

3.4 Whereas DfT forecast in their latest report (Road Transport Forecasts 2009 – Results from the Department for Transport's National Transport Model[4]) that the volume of traffic will continue to increase at a rate of 0.5% per annum between 2008 to 2015. However, *"the return to economic growth, predicted to begin in early 2010 and to gain strength in 2011 is likely to lead to traffic growing more strongly than the average annual rate forecast for the 2008-2015 period."*

3.5 This means that all the work utilities are undertaking to reduce disruption can only be part of the solution, and there is a risk that any improvements will be dwarfed by the sheer volume in traffic as it

[3] "Utilities' Street Works and the Cost of Traffic Congestion" Professor Phil Goodwin, February 2005. http://www.transport.uwe.ac.uk/research/projects/NJUG-congestion.asp
[4] http://www.dft.gov.uk/pgr/economics/ntm/forecasts2009/pdf/forecasts2009.pdf

steadily grows. Therefore it is important to recognise this when considering further legislative / regulatory measures, with a focus on addressing traffic volumes likely to deliver greater results.

3.6 Utility works are highly regulated and are controlled through a myriad of legislation / regulations. In addition to the wide-ranging provisions of the New Roads and Street Works Act 1991 already available to local authorities to manage street works, the Government has implemented a range of new provisions under the Traffic Management Act 2004 (TMA) – see section 5.0. Additionally, economic regulators for energy and water further incentivise utilities to operate efficiently through five-yearly regulatory settlements. Whilst regulators' statutory duties vary, their central objectives are to protect the consumer, by balancing investment for the future with price levels to customers and ensuring all works are undertaken as efficiently as possible.

3.7 However, currently there are no financial incentives for local authorities to carry out their work in a similarly efficient and timely manner even though they account for around half of all works.

3.8 Scotland has an independent road works commissioner who is able to penalise both utilities and local authorities for failures to coordinate and cooperate, which has proved to be effective at encouraging a more collaborative approach to reducing disruption. Consideration should be given to how the benefits of this approach could be realised in the rest of the UK, given how effective it has been in Scotland.

4.0 The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so

4.1 Utilities are continually under pressure from economic regulators, road users, Government, local authorities, and the public to reduce the time works take, and so works are planned on the basis of ensuring the safety of the public and operatives and securing / enhancing their networks whilst taking as little time as possible. Yet street works account for a small proportion of overall congestion, with mostly arises from volume of traffic and road accidents, and so congestion alleviation policies need to focus heavily on these areas to be truly effective.

4.2 However, we believe that some Government and local authority intervention is necessary to tackle the unfortunate disruption that utility and highway works can sometimes cause. The Traffic Management Act 2004 imposed a statutory duty on local authorities to manage their networks (The Network Management Duty), however currently there is inconsistent application by local authorities of the powers they have to help them fulfil this duty. More effective application would negate the need for further intervention by the Government.

4.3 In the light of cuts in local authority budgets, coupled with devolvement of additional responsibilities and powers as a result of localism, there is a danger of greater inconsistencies in interpreting and applying regulation. This would place considerable burdens on utility companies, many of whom have a national footprint or work across many local authorities, and who would therefore be faced with a range of approaches across their operating area, increasing costs and creating a potential for inadvertent non-compliance. Equally, it is important that the emphasis remains on improving the quality and management of works rather than on revenue-generation. It should not be forgotten that utilities already make a very significant contribution - in excess of £1.3 billion per year - to local authorities through "business (cumulo) rates" charged on their network assets, which are the assets that utilities carry out roadworks to maintain. At present, we understand that this contribution is not specifically allocated for highway maintenance.

4.4 Therefore, the most effective way of reducing disruption from works in the street is through Government and local authorities working in partnership with utilities to better coordinate and manage works to consistent standards. NJUG has been working constructively with local authority and DfT colleagues through HAUC(UK) and with individual authorities across the UK.

4.5 Government / local authorities should also encourage and promote self-regulatory measures instead of further regulation, particularly given Government spending cuts and the deregulation agenda. NJUG

has driven a number of voluntary initiatives delivering real benefits through a step-change in the quality and impact of street works, including improved safety, quality, sustainability, communication and reduced disruption, as well as extensive sharing of best practice.

4.6 However, whilst we are seeing many examples of good practice becoming commonplace, we need to continue to further improve the safety and quality of works and find new ways of reducing disruption. *A summary of these voluntary initiatives is below:*

4.7 ***NJUG's Vision for Street Works***[5] **–** Launched in early 2007 it reflects NJUG's commitment to supporting the implementation of the Traffic Management Act 2004 as well as existing street works legislation and codes of practice. It has gained high-level commitment from the vast majority of utility companies to deliver improvements in safety, sustainability, quality, co-ordination, communication and co-operation whilst reducing disruption and damage to underground assets, and has acted as a real catalyst for change.

4.8 **The Annual NJUG Awards** – Launched in 2008 to recognise the voluntary efforts being made by utilities and contractors to combat disruption and improve efficiency of works. There are six categories, one for each *Vision for Street Works* statement. Most importantly, the Awards provide examples of best practice, which are converted into case studies and shared across industry.

4.9 **Mayor's London Code of Conduct –** Launched in 2009, the Code is a voluntary agreement between the Mayor of London and the capital's largest utilities in order to reduce the unfortunate disruption sometimes caused by essential utility street works. In its first year it delivered:

- Significant increases in the use of plating, out of hours working and first-time reinstatements;
- Better co-ordination and communication including improved signage on sites;
- Increased joint safety visits of local authorities, utilities, the Health and Safety Executive, and police who audit any works within the highway (from skips and scaffolding to highway and utility works), with any serious digressions tackled through a Joint Review process;
- **996 days saved occupation of the street.**

4.10 **National Code of Conduct**[6] **–** The content of the London Code has been modified by NJUG so that it can be applied to the whole of the UK, and is intended to mirror the success the Mayor and NJUG members have achieved in the capital**.** The Code was jointly launched with the London Mayor in Summer 2010, and is being rolled out across industry. Discussions are well advanced in developing a HAUC(UK) Code in conjunction with authority colleagues.

4.11 **Regional forums / conferences –** NJUG holds seminars to share good practice around the country and attends national/regional conferences to spread good practice.

4.12 **Improving co-ordination –** NJUG has also initiated many other voluntary initiatives and worked closely with highway colleagues – including:

- Sharing plans of major works up to 2 years in advance, allowing better co-ordination;
- Giving longer periods of notice than legally required for shorter-duration works;
- Participating in the successful Workathons introduced by TfL – which take advantage of a road closure to bring in numerous different organisations to do small short-term works.

4.13 **HAUC(UK) Strategy and Business Plan**[7] **-** With local authority colleagues, NJUG has developed a strategy and business plan to support the delivery of the DfT Business Plan and Devolved Administration priorities, as well a range of voluntary initiatives to improve the quality of road and street works. This is currently being updated to reflect new government priorities.

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[5] http://www.njug.org.uk/category/3/pageid/8/
[6] A copy of the National Code of Conduct can be found here: http://www.njug.org.uk/uploads/1006_NJUG_Code_of_Conduct_-_final_.pdf
[7] The latest version of the HAUC(UK) Strategy and Business Plan can be found here: http://www.hauc-uk.org.uk/category/3/pageid/95 /

5.0 The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 (NRSWA 1991) and the Traffic Management Act (TMA) 2004

5.1 The TMA built on and improved the provisions of NRSWA 1991. Under the TMA there is a wide range of legislation / regulation to enable local authorities to deliver their Network Management Duty. The success of local authorities in carrying out their network management duties and effectively utilising these legislative provisions has been very varied. However NJUG does believe the current legislative provisions have delivered many improvements in the management of street works, a summary of which is below:

Improved Noticing (introduced April 2008)

5.2 The improved Noticing provisions require greater periods of notice to be given when utilities wish to undertake works. This allows local authorities more time to co-ordinate street works.

5.3 Correct and timely Noticing helps local authorities co-ordinate and manage street works. Utilities have focused heavily on improving the timeliness / quality of Noticing, with numerous authorities reporting significant improvements since the Noticing requirements were enhanced in April 2008. Sustained awareness campaigns / training have emphasised the importance of correct Noticing, with many utilities reporting 97+% compliance. Equally, streamlining processes has reduced inadvertent non-compliance. Utilities continue to monitor their compliance levels and introduce proportionate and cost-effective measures to further drive towards 100% compliance.

S74 Overstay Charging (originally introduced in 2002 under NRSWA 1991 and then increased in April 2008 under the provisions of the TMA 2004 – with further increases being considered)

5.4 Utilities are required to agree with the local authority the number of days that works will take. When introduced in 2002 S74 delivered a step-change in the reduction of duration of works. Further increases in the charge levels were introduced in April 2008, but with considerable shortening of durations already achieved further significant reductions won't be easily deliverable.

Fixed Penalty Notices (FPNs) (introduced May 2009)

5.5 In May 2009, the Government introduced the option for local authorities to serve a FPN including a fine of £120 (or £80 if paid within 29 days) for a range of Noticing infringements, such as late or incorrect Noticing. Local authorities retain the right to take a utility to court for persistent non-compliance, but the FPN provides a quick and cheaper alternative to penalise utilities for not telling authorities about their works in a timely and accurate manner.

Permits (introduced January 2010)

5.6 Currently local authorities, either singly or together, may apply to the Secretary of State to run a permit scheme, which requires utilities, and local authorities' own highways teams to apply for permits to undertake works. In granting permits, local authorities can apply conditions, including when works can take place. As with Noticing, permit schemes require greater notice to be given of works, including three months for works of 10 days or more. This allows local authorities to better co-ordinate both their own and utility works and thereby reduce disruption.

5.7 So far, only three schemes have been approved. The common permit scheme in London requiring permits for all works in all streets of those authorities who have introduced it, regardless of whether the street is busy or not. In contrast, Kent's permit scheme takes a more proportionate approach, by focusing on the major works on the busiest streets to deliver maximum benefit for minimum administrative burden and cost. This is based on the general principle that about 80% of the disruption is on approximately 20% of the streets. The final scheme is in Northamptonshire, which has just gone live in January 2011 and like the Kent scheme, it focuses on strategic roads only which equates to around 19% of their road network.

5.8 NJUG is also working constructively with other local authorities to develop robust workable permit schemes that efficiently tackle congestion without placing unnecessary burdens on utilities and their customers, whilst also ensuring that essential street works programmes take place.

5.9 **However, NJUG has concerns about some local authorities' operation of permit schemes.** The London Permit Scheme, introduced in January 2010, is not targeted to prioritise works on the most traffic-sensitive parts of the network. It is therefore unlikely to reduce congestion as intended, whilst imposing significant additional costs on utilities and their customers, particularly given inconsistent application of the scheme. Interestingly, on the day the scheme came into force London Mayor Boris Johnson commented that permits would **not** be effective in reducing congestion in London (despite having pushed for its early implementation) and that he wanted lane rental. In contrast, because the Kent Permit Scheme focuses on only the most congested roads, it enables utilities to prioritise those works. So far, the County Council has seen a 50% reduction in complaints about street and road works.

5.10 It is also worth noting that differing schemes add unnecessary additional costs to utilities, their customers and indeed local authorities, and increase inadvertent non-compliance because of the many differences between schemes.

5.11 During the passage of the TMA through Parliament, the previous Government committed to evaluate the effectiveness of permit schemes one year after their implementation. This was a commitment that we welcomed, to enable the relative benefits and costs of differing schemes to be assessed and lessons to be learnt and shared. However, since the election, the DfT has stated that due to funding restrictions this evaluation will not now be carried out by the Department. Instead local authorities will report on the effectiveness of their own schemes. NJUG believes that an independent assessment of both the London and Kent schemes will not only demonstrate their respective effectiveness and identify the full costs incurred, but will also provide a valuable comparison of the two different schemes, enabling analysis and sharing of the most effective practices, for other authorities to consider when developing their own schemes.

5.12 **NJUG therefore urges the Transport Select Committee to emphasise the importance of the need for an independent assessment of the initial period of operation of permit schemes, and in the absence of the Department for Transport carrying out such an assessment, we urge the Committee to consider launching an inquiry of its own.**

Government's current policies

5.13 The DfT's recent Business Plan includes proposals to devolve permit approval powers to local authorities (delivery deadline April 2012); increase S74 Overstay Charges (delivery deadline October 2011); and to consult on and deliver lane rental regulations (delivery deadline December 2011). These measures will have a significant financial impact on utilities and their customers.

5.14 NJUG is concerned that implementation of these policies will require utilities to redirect their efforts to meeting specific regulatory requirements, rather than continuing to deliver further improvements through successful self-regulatory measures.

5.15 NJUG contributes to and supports robust workable regulation which does not impose unnecessary additional costs on utilities and their customers. For several years, we have been working closely with DfT and local authority colleagues to develop essential regulations and codes of practice to improve the quality and safety of works. As part of the Government's desire to not impose further burdens on business, these workstreams have been delayed to allow further consideration of how to reduce their financial impact. However, in contrast, the DfT continue to press ahead with lane rental and increases in S74 which will have significant financial implications for utilities and their customers.

5.16 The administrative cost of managing and complying with these new regulations has increased substantially for both utilities and local authorities at a time when both are under pressure to make efficiency cuts. Furthermore, NJUG is concerned that, in light of how high the potential financial implications of these new regulations are for both parties, a greater focus will be placed on charging or avoiding charges at the expense of improving the quality of the works or developing new innovative ideas to limit the associated unfortunate disruption.

5.17 **Therefore NJUG believes that the existing regulations, if implemented consistently and effectively by all local authorities, would further reduce disruption caused by utility and highway works and therefore negate the need for more regulation. However, if the DfT wish to pursue additional regulations then NJUG would welcome an early opportunity to work with them to ensure that they are fair and workable, do not place unnecessary burdens on utilities and their customers and apply to all works equally.**

Lane rental (S74a of the NRSWA 1991)

5.18 Lane rental would be an additional charge imposed on utilities (ultimately paid for by their customers) for every day they occupy the highway regardless of how efficiently they undertake works. Given the myriad of regulation already available and the numerous voluntary measures introduced by NJUG, we do not believe that lane rental will necessarily deliver significant additional benefits over and above the existing legislation, whilst increasing utility costs considerably.

5.19 However, if lane rental was to be implemented it could only be effective if applied to all works promoters - highway authorities as well as utilities. Additionally, NJUG believes it should be targeted only at pinch points on strategic roads, where there are very high recorded traffic densities, and only in cities where there are a significant number of pinch points. **Any scheme should also be incentive-based, providing an opportunity for works promoters to work safely outside of critical / peak times and use plating during the busiest times to return the road to use, where practical and safe to do so, or working in collaboration with others, and in doing so avoid the charge**. This is a view that has been endorsed by DfT. However, the additional financial and social cost of personnel working out of hours, and the additional time factor of putting down and removing plating each day needs to be considered when assessing the costs and benefits of lane rental.

5.20 The DfT has come under considerable pressure from key stakeholders to expedite lane rental proposals as soon as possible. However, to have a chance of making a difference on overall levels of disruption, any lane rental proposals must be equally applied to local authority works, who account for nearly half of all works, but which currently face no financial incentives or penalties to carry out works in an efficient and timely manner. According to TfL's own figures[8] 38% of London's traffic delays are caused by road works, with half from utility works and half from local authority works. Prematurely implementing the proposals targeting only utilities would raise false expectations of having a major reduction in congestion, while imposing significant costs to utility customers. Therefore robust analysis of costs / benefits is vital before any implementation.

5.21 NJUG is also concerned that there may be a perverse incentive for authorities to manage works in such a way that delivers maximum revenue, rather than always reducing disruption which must be addressed.

5.22 **Given the Government's interest in enabling the implementation of lane rental, NJUG would welcome the opportunity to work with DfT / TfL to develop an initial scheme targeted at pinch points on selected strategic routes in London. This should include rigorous assessment of the costs and benefits, with a full review prior to consideration of implementation elsewhere. Such benefits should be over and above those already claimed in the Cost Benefit Analysis for the introduction of changes to the Co-ordination Code of Practice, Improving Noticing regulations, FPNs, Section 74 Overstay Charges and Permit Schemes.**

[8] "Progress Report No 1 (Feb 2010) – Mayor's Code of Conduct for Road Works", TfL, February 2010, p6
http://www.tfl.gov.uk/assets/downloads/mayors-code-of-conduct-roadworks-progress-report.pdf

Increased S74 Overstay Charges

5.23 Since its introduction in 2001, Section 74 Overstay Charging has delivered a step-change in reducing durations.

5.24 However, Government is now considering a substantial increase in S74 charges. With considerable shortening of durations already achieved, NJUG has serious doubts whether a similar step-change to achieve even shorter durations is possible, given the need to maintain safety, quality and environmental standards.

5.25 NJUG is also concerned that any such increase may lead to (i) increased utility costs disproportionate to any benefit and ii) encourage some local authorities to use S74 as an income stream because of the large numbers of works involved, resulting in an increase in spurious s74 charges and FPNs not in the spirit of the HAUC(UK) Advice Note on FPNs[9].

5.26 Utilities are alive to the cost/reputational damage of overrunning works, and are already incentivised to be efficient and minimise durations of works through their economic regulatory settlements (gas, water and electricity) or commercial pressures (telecommunications).

5.27 Utilities acknowledge the perception that nothing is happening if there is no-one on site, but there are often good reasons for this – such as concrete drying, waiting for a unique part to be manufactured (given that gas and water mains can date back to Victorian times) or workers having been diverted to an emergency. However utilities are taking positive steps to minimise these and also improve communication with the public. For instance a number of companies have introduced new street signage explaining why there appears to be no activity on site and the expected date works will be completed.

5.28 However, as part of the NJUG National Code of Conduct (Section 4.0) we continue to encourage utilities to minimise durations of works at all times.

5.29 **NJUG does not therefore believe there should be any further increase in S74 charges, as in the current economic climate S74 at its existing level remains a potent drive for utilities to minimise the duration of their works**.

Permits

5.30 NJUG is concerned that the Government's drive for localism and consequent decision to devolve the approval of permit schemes by the Secretary of State to local authorities may lead to schemes being less focused on major disruption and more towards generating fees, all of which increases the administrative and financial burden on utilities and their customers. Additionally, with local authorities approving their own schemes, there is a risk that a) without a sense check by the Secretary of State, local authorities will unwittingly misinterpret the regulations and introduce overly burdensome requirements and b) numerous different schemes will lead to inadvertent non-compliance, and increased costs / administrative burden for utilities.

6.0 Recommendations

In summary, we would like to make the following recommendations for the Committee's consideration:

6.1 Following the decision of the DfT not to undertake the one-year review of the effectiveness of permit schemes, **NJUG urges the Committee to emphasise the importance of there being an independent assessment of the initial period of operation of permit schemes, and in the absence of a DfT assessment, consider launching an inquiry of its own.**

[9] The FPN advice note can be viewed here http://www.hauc-uk.org.uk/publication/15

6.2 **We urge the Committee to call on Government to ensure that, in devolving the approval of permit schemes to local authorities, there are suitable safeguards in place** to ensure that:

- Authorities are appropriately incentivised to deliver a balance between reducing disruption and ensuring the efficient and cost-effective supply of essential utility services;
- Authorities don't use existing/new regulation as a way of increasing income;
- It is recognised that inconsistency of approach will add costs and bureaucracy, and also potential non-compliance by utilities and highway authorities;
- Mechanisms are in place to share best practice so that individual local authorities do not all 're-invent the wheel'.

6.3 **NJUG also asks the Committee to consider the proposed increases in S74 overstay charges and implementation of lane rental, in light of the Government's commitment to not impose further additional burdens on business, and given the myriad of legislation already in place to regulate utility street works**. The combination of significant self-regulatory measures initiated by NJUG along with the TMA provisions has already resulted in considerable improvements in the quality of works and reduced disruption. However, further improvements and consistency in implementing the TMA could negate the need for more regulations.

6.4 **We therefore ask the Committee to urge Government to demonstrate that any new regulations deliver additional benefits over and above existing regulation; that costs to utilities / their customers are minimised; and that benefits considerably outweigh the costs.**

6.5 **Finally, we urge the Committee to acknowledge that utility works only contribute to a small percentage of overall congestion and that without applying equal incentives to local authority works, any new regulations will have little impact on reducing congestion.**

February 2011

Supplementary written evidence from the National Joint Utilities Group Ltd (NJUG) (ETM 29a)

I am writing further to the National Joint Utilities Group Ltd's. (NJUG's) oral evidence to the Transport Select Committee on 10 May 2011, at which my colleague Dave Turnbull gave evidence, as I was regrettably out of the country, and therefore unable to appear before you.

Inevitably, the session went very quickly, and there were a few key points we would like to emphasise to the Committee. These are within the attached supplementary evidence.

However, in addition, I would like to take this opportunity to correct an inadvertent but genuine mistake in the provision of the statistic in respect of the financial cost of a blanket application across England, based on the current proposals of a maximum of £2,500 per day. Dave Turnbull indicated in his evidence that the cost would be £2.5 billion per year, however the correct figures as estimated by NJUG, are between £1.5 billion and £2.0 billion. We apologise for this error and wish to set the record straight.

Finally, we understand that the Committee is visiting a National Grid street works site on 9 June, and we hope that this will provide a useful insight into the practicalities and challenges of undertaking works in the street. We also hope our supplementary evidence is helpful too. However, if NJUG can assist the Committee by providing any further information or clarity please do not hesitate to contact me.

1.0 Introduction

NJUG would like to thank the Transport Committee for the opportunity to provide oral evidence on 10 May as part of the Committee's inquiry into Effective Road and Traffic Management. We also hope the Committee will find this supplementary evidence useful.
It is worth re-iterating that utility services are part of the essential fabric of the UK economy – and utilities are investing billions each year in maintaining and improving their networks. Network providers undertake street works for four primary reasons – safety, security of supply, to connect or upgrade customers' supplies, or to divert apparatus for major transport or urban regeneration projects.

There is a myriad of existing legislation available to local authorities to manage street works. Additionally NJUG's Vision for Street Works / National Code of Conduct are delivering real results. NJUG therefore believes that local authorities already have a range of tools with which *to* manage their own and utility works. However, use of all these measures is patchy, and so their impact is varied. If the existing legislation is applied more consistently and effectively then it would deliver the reduced disruption everyone wants.

Also, nearly all existing and proposed legislation applies only to utility works, yet utilities only undertake 50% of the works on the highway network, with local authorities making up the other 50%. If Government is serious about tackling disruption from works on the street, similar incentives are needed for local authority works.

NJUG is therefore concerned that Government is considering introducing yet more regulation without first analysing the impact, costs and benefits of all the existing legislation. We strongly believe that the best way of tackling congestion is for utilities to work together with authority colleagues to plan for and co-ordinate works under the existing legislative regime. We continue to urge Government to focus on supporting the self-regulatory initiatives already delivering higher standards and reduced disruption, which will be more effective than imposing yet more regulation and resultant costs on utilities, which ultimately will be passed on to end customers.

2.0 Congestion

As recognised by a number of witnesses, the vast majority of congestion is caused by volume of traffic, with accidents and incidents the next biggest contributor. Only around 10% of congestion comes from works in the street, split equally between utility street works and road maintenance.

NJUG regrets the disruption that sometimes arises from essential street works and is working hard to reduce the duration and size of works, improve communications, and work with local authorities to flex works on major streets to avoid the busiest times.

The *NJUG Vision for Street Works,* introduced in 2007, has driven a sustained improvement programme delivering real benefits in improved safety, quality and communication of works and reduced disruption.

In 2009 NJUG worked closely with the Mayor of London / TfL to develop and implement a London Code of Conduct focusing on reducing disruption, **saving 996 days disruption in its first year.** The National Joint Utilities Group Ltd April 2011

Building on the London Code, in June 2010, NJUG launched its own National Code of Conduct (copy attached), and, working with JAG(UK), we are pleased it will now become a HAUC(UK) Code of Conduct for both utilities and local authorities.
The volume of works is not going to go down for the foreseeable future, as utilities continue to undertake sustained replacement programmes and invest in upgrading their networks to meet future UK needs. Therefore utilities and authorities need to continue to work together to co-ordinate works. There are many examples of good co-ordination across the UK – some examples include:

- **Staffordshire Kinver Project** – Staffordshire County Council worked together with utilities and contractors to co-ordinate works - resulting in a 20+ week job being completed in 7 weeks.

- **Borough High Street in London** – TfL, London Borough of Southwark, utilities and contractors worked together - saving 384 days disruption.

Copies of these case studies and others can be found at www.njug.org.uk.

3.0 Lane Rental

NJUG does not believe that lane rental will provide additional benefits in terms of reduced disruption, over and above the existing legislation that exists for local authorities to manage street works, which we believe should be used more consistently and effectively. However, if the Government is intent on implementing lane rental, NJUG believes it should be:

- **Targeted only at pinch points on strategic roads** - where there are very high traffic densities and in cities where there are significant numbers of pinch points e.g. London.

- **Operated on an incentive basis** – with utilities and highway authorities incentivised to work outside rush hours and to use techniques such as plating to return the road to service where safe and appropriate to do so, in return for avoiding a lane rental charge.

- **With a 3-tiered approach** (advocated by London First) – whereby lane rental applies to the busiest streets; then permit fees apply to other busy A roads; and the smaller B roads or backstreets do not attract any fees at all – thus allowing prioritisation on those roads where congestion is greatest.

Whilst utilities' costs would be increased, either through choosing to pay the lane rental charge or avoiding them by working out of hours or using plating, it may not always be possible to avoid charges, as working outside normal hours may be prevented or restricted by the Local Authority Environmental Health Officer due to noise constraints. This would mean that disruption would not be reduced yet utilities would have no choice but to work during the day, thereby incurring lane rental charges, with no consequent benefit.

4.0 S74 Overstay Charge Increases

During our oral evidence to the Committee, there was little mention of the Government's proposed very significant increases in Section 74 Overstay Charges, over which NJUG has real concerns.

Since its introduction in 2001, S74 Overstay Charges have delivered a step-change in reducing durations. NJUG believes that Government's proposals for further substantial increases: The National Joint Utilities Group Ltd April 2011

- Will not deliver the same improvement, as much of the possible reduction has already been achieved.

- Will increase utility costs disproportionately to any benefit, particularly for smaller scale works such as utility connections, which customers will have to pay on top of their connection charge.

- Are not necessary, given that Transport for London recognise that on their roads (the busiest London streets) only around 2% of utility works now overrun as utilities are already incentivised to be efficient and minimise the duration of works, through either their regulatory settlements (gas, water and electricity) or commercial pressures (communications).

- Could drive the wrong behaviours by:
    - Potentially leading to cutting of corners in order to avoid large costs.
    - Encouraging some local authorities to see S74 as an income stream, due to the large numbers of works and figures involved, resulting in spurious issuing of S74 Overstay Charges not in the spirit of HAUC(UK)'s objectives of working together, better.

Utilities recognise the common perception that nothing is happening if there is no-one on site, but there are sometimes good reasons for this, such as – concrete drying, waiting for a unique part to be manufactured (given that gas and water mains can date back to Victorian times) or resources diverted to an emergency. However the Code of Conduct focuses on reducing disruption from works in the street, and NJUG continues to highlight the importance of minimising occupation of the street.

5.0 Permits

NJUG continues to offer assistance to local authorities developing permit schemes to seek to develop workable and robust proposals that focus on reducing disruption whilst not placing unnecessary burdens on utilities and their customers.

We therefore believe that those schemes that focus on major planned works on the busiest streets are the most likely to deliver benefits in terms of reduced disruption, such as Kent and Northamptonshire. This approach enables authorities and utilities to work together to plan and co-ordinate works, whereas those schemes which cover all works on all streets mean that the volume of permit applications impacts on the ability to focus on those works which cause the most disruption. This is borne out by **Kent's scheme which has resulted in 50% less complaints from the public about works in the street in its first year.**
However, in addition NJUG is concerned that:

- **One-year Review of Permits** – The Coalition Government has confirmed that it does not propose to honour the previous Government's commitment to undertake a review of permits one year after their implementation – thereby missing the opportunity to assess any merits against costs of different types of schemes, which would be invaluable to other local authorities considering implementation of a permits scheme.

- **Devolvement of approval of permit schemes** – Government devolving approval powers of permits to local authorities is likely to lead to numerous differing schemes. This will create inconsistencies in interpretation, coupled with application of the maximum allowed permit fees, regardless of the actual costs incurred by authorities, resulting in additional burdens and potential inadvertent non-compliance by utilities.

Additionally, Government currently reviews all existing approved schemes prior to approving them. **In all cases this lead to amendments before their final approval. Without this independent scrutiny there is a real risk of inadvertent misinterpretation of the permit regulations and potentially high levels of costs being unnecessarily imposed on utilities and their customers, with little or no reduction in disruption.**

6.0 Long Term Damage and Potholes

NJUG and individual companies continue to strive to improve the quality of reinstatements and ensure compliance with the recently revised Specification for Reinstatement of the Opening of the Highway Code of Practice, which authorities and utilities worked with Government to develop.

If a utility's street works are not reinstated to the right standard and this is brought to their attention by the authority, they will return to put it right at their own expense.
However, the UK has definitely seen an increase in potholes as a result of the bad weather over the last two winters. Potholes occur for many reasons – extremes of weather (both hot and cold), the original quality and construction of the road, the frequency and standard of road maintenance, the volume and size / weight of traffic, and reinstatement by either authorities or utilities.

NJUG has therefore agreed with JAG(UK) to form a HAUC(UK) Coring Group to look at the causes of potholes, the quality and methods of taking cores (to assess the reinstatement), the quality of reinstatements and what leads to failures, and raising awareness of the need for both accurate corings and quality reinstatements for every job, whether by a utility or an authority.

Finally, it is worth noting that utilities already pay £1.3 billion for the right to locate their apparatus in the street, and it may be that such monies could be ring-fenced to supplement local authorities' highway budgets.

7.0 Specific Points Raised by the Committee

Noticing – During the oral evidence session the Committee spent some time examining the detail of the Noticing provisions, which were enhanced in 2008. NJUG wants to make it clear that utilities adhere to the Noticing requirements. Indeed, utilities are routinely achieving 98+% compliance in terms of timeliness and accuracy of Noticing.

All works (except emergency works) require Noticing in advance of them commencing. In respect of emergency works, the Noticing regulations require utilities to notify local authorities within 2 hours of arriving on site. Utilities adhere to this requirement, sending the Notice within the 2 hour period, even if the emergency occurs late on a Friday afternoon. Specifically, the Co-ordination (Noticing) Code of Practice states.

"Immediate notices must be given as soon as reasonably practicable and, in any event, within two hours of the works starting. Where immediate works are identified and undertaken outside the normal working day the notice should be given within two hours of the start of the next working day, i.e. by 10:00. Some authorities may be able to respond to notices outside the normal working hours and would expect immediate notices to be given. These hours should be set out in the authority's operational district data (ODD)."

As most authorities do not operate their EToN systems (electronic transfer of Noticing system) over the weekend, this sometimes means that they are not aware of works until the following Monday, although if the works occur on one of the main thoroughfares the utility can, and indeed should alert the authority by phonecall, albeit this is not a statutory requirement, more a voluntary initiative which supports HAUC(UK)'s objective of working together better.

Evidence of the Effectiveness of the Existing Legislation – The Committee asked about evidence on the effectiveness of the existing legislation. NJUG would like to stress:

- NJUG continues to be concerned that Government is considering increasing S74 charges and introducing lane rental, when there has been no measurement of the existing legislation, some of which has only been introduced relatively recently – such as permits.

- Since 2001 there have been numerous new regulations, most of which claim the same benefits over and over again, with none being evaluated for their effectiveness against the additional costs to utilities and their customers.

- Government continues to add layer upon layer of regulations on utilities, increasing utility costs and administrative burden. In NJUG's view, simply applying similar incentives to authority works and encouraging utilities and authorities to work together to plan and co-ordinate works would have a far greater effect on disruption.

- There have only been two reports measuring the impact of street works on congestion - The 1992 Transport Research Laboratory Report on trunk roads, and a more recent TfL report on their network. But there is no definitive report on the costs and causes of congestion, nor the effectiveness and cumulative impact of street works legislation / regulation.

NJUG believes that it is vital that Government establish the:

- **Baseline cost and causes of congestion.**

- **The total costs to utilities** – including direct costs such as permit fees as well as one-off costs (system upgrades, process changes, training) and residual administrative costs arising from the street works regulations, which may ultimately be passed on to end consumers.

- **The total cost to authorities** – including imposing the same permit terms and conditions on their own works as those on utilities, one-off costs and residual administrative costs.

- **Reduction in disruption** - in terms of saved days resulting from each set of regulations.

May 2011

Written evidence from Stagecoach Group plc (ETM 30)

1.0 Introduction

1.1 Stagecoach Group plc welcomes this opportunity to contribute to the inquiry into Effective Road and Traffic Management and to present evidence to the Transport Committee.

1.2 Effective road and traffic management is a fundamental pre-requisite of an attractive bus service; it is therefore an issue which is very important for all bus operators.

1.3 Our views are given below in response to the questions the Committee has posed.

2.0 Stagecoach Group

2.1 Stagecoach Group has extensive operations in the UK, United States and Canada. The Group employs around 35,000 people and operates bus, coach, rail, and tram services.

2.2 In the UK, our fleet of around 8,400 buses connects communities in more than 100 towns and cities across the country. We have been consistently highly placed in national UK Bus Awards in each of the last four years.

2.3 Two million passengers travel on Stagecoach bus services outside the capital every day, using a network stretching from south-west England to the Highlands of Scotland. We serve major cities, including Manchester, Liverpool, Newcastle, Sheffield, Hull, Oxford, Cambridge and Exeter, as well as key shire towns and rural areas. We have also recently re-entered the London bus market with the acquisition of the East London and Selkent bus companies, which run 15% of the capital's bus services.

2.4 We operate a range of local scheduled services, express coach networks and school bus operations. Most of our services are operated on a commercial basis in a deregulated environment. We also operate contracts on behalf of local authorities and other organisations.

2.5 Since 2006 Stagecoach has invested £398 million in new state-of-the-art buses. This is part of a long-term commitment to improve our environmental performance and ensure all our vehicles are fully accessible to the elderly, disabled and families with young children. As part of our strong commitment to the safety and security of our passengers and our people, all our new vehicles are fitted with digital CCTV systems.

2.6 We also operate express coach services linking major towns within our regional operating company areas including the Oxford Tube connecting London and Oxford at high frequencies 24 hours per day, 365 days per annum. The Group runs the market-leading budget inter-city coach service, megabus.com, which carries over two million passengers a year on a network covering more than 50 locations and the bus/rail integration product, megabusplus.com. Scottish Citylink, our joint venture with ComfortDelGro, is the leading provider of inter-city express coach travel in Scotland.

2.7 Putting customers first is our priority. We continue to focus closely on the recruitment and training of our people, and we have one of the best records of any major operator for vocational training among our frontline drivers and engineers. Our UK Bus division is also a major employer, providing jobs for around 23,000 people at over 110 locations in our 19 regional companies.

2.8 Stagecoach Group is a major rail operator and has an involvement in running almost a quarter of the UK passenger rail network. The Group operates the East Midlands and South Western rail franchises, the latter incorporating the South West Trains and Island Line networks. South West Trains, the UK's biggest commuter franchise, runs nearly 1,700 trains a day in south-west England out of London Waterloo railway station. In addition, Stagecoach Group has a 49% shareholding in Virgin Rail Group, which operates the West Coast inter-city rail franchise.

2.9 We also operate Supertram, a 28km light rail network incorporating three routes in the city of Sheffield, and have a 10-year contract to operate and maintain the Manchester Metrolink tram network.

2.10 We are committed to investing over £200m in our rail franchises to improve the quality and range of our services. This has included station and car park enhancements, making ticket purchase simpler using smart media and ticket vending machines, depot extensions and rolling stock refurbishment.

2.11 Stagecoach is the largest operator of hybrid buses outside London and also has fleets in Kilmarnock and Cambridge operating on 100% biofuel produced from re-cycled cooking oil. In 2010 the Group was awarded the Carbon Trust Standard for its achievements.

2.12 Stagecoach Group has a five year sustainability strategy designed to reduce carbon emissions across all areas of the business. The £11m programme aims to reduce buildings' CO2 emissions by 8% and road vehicle emissions by 3% per annum by 2014. To achieve the premises targets the Group is investing in improved management of its energy and water consumption at all its sites and through the appointment of green champions among UK Bus staff, ensuring that wastage and inefficiencies are minimized. Adopting a similar approach, East Midlands Trains has appointed energy wardens and South West Trains is also retrofitting regenerative braking to its Class 458 and Desiro rolling stock and is currently piloting an in-cab train energy management system designed to help drivers to reduce electricity consumption by up to 10%.

2.13 Of particular relevance to this Inquiry is the programme to reduce bus CO2 emissions. All 14000 UK bus drivers are being trained in eco-driving techniques and buses are being fitted with in cab technology to help them deliver the target. While the early year targets are challenging, delivery of subsequent annual targets without the aid of more effective traffic management measures in congested areas may not prove possible.

3.0 The prevalence and impact of traffic congestion and likely future trends

3.1 Internationally, it is generally accepted that the volume of traffic is closely related to the state of a nation's economy. In times of economic growth traffic volumes rise and so does congestion, unless measures are taken to mitigate the impact. It is therefore very likely that, without intervention to constrain the growth in traffic once economic growth returns, congestion will increase.

3.2. Traffic delay is far more prevalent than is generally acknowledged. In many places, the delays caused by the rising volume of traffic slowly increase and bus operators continually have to adjust their timetables in order to maintain a reliable service. For example, in Manchester the number of buses operated by Stagecoach in 2005 was the same as in 1996. However, the mileage those buses operated was reduced by 10% as services were slowed down to compensate for increasing congestion and more buses were deployed on each service.

3.3 Congestion and delay have a particular adverse impact on bus services, which we endeavour to operate to advertised timetables. This impact is felt in two ways:

a) Bus journeys are delayed, necessitating the lengthening of advertised journey times. This increases the cost of providing the service, which results in higher fares and a slower, less attractive service, which in turn results in fewer intending passengers. It also increases fuel consumption and therefore, harmful emissions.

b) Day to day delay is both variable and unpredictable. This can result in buses having to wait for time en route when delays are less severe. Passengers find this practise irksome, particularly when they wish to complete their journeys in the shortest time possible.

3.4 Apart from the practical difficulties of trying to maintain advertised timetables in congested situations, bus operators can be fined by the Traffic Commissioner for failing to operate a punctual and reliable service. In extremis, the Commissioner can ban an operator from providing services altogether.

4.0 The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so.

4.1 The economic consequences of congestion are currently around £11bn per annum in urban areas. Additionally congestion leads to poor air quality which results in ill health, and has similar costs to society[1], It is our view that these are compelling reasons for government and local government intervention, particularly in the present economic circumstances.

.4.2. Road vehicle emissions are directly related to fuel consumption and all motor vehicles consume proportionately more fuel at slower average speeds. This is particularly marked in stop start operating conditions, which are an inevitable consequence of queuing traffic.

4.3 While Government, through the Highways Agency, takes responsibility for addressing these problems on the motorway and trunk road networks, it is a matter for local Highway Authorities to deal with in urban areas.

4.4 In urban situations there are only two basic approaches to addressing these issues.

4.5. The first involves reducing the volume of traffic using the congested roads. This can be achieved by a number of measures; e.g. by restricting access, congestion charging, introducing park and ride schemes to encourage transfer to buses or trains, and by limiting the supply and increasing the price of parking spaces at the ultimate destination.

4.6 The second involves improving the flow of traffic on the congested roads. This can be achieved by preventing parking, restricting loading, managing road works effectively and by reducing or re-phasing the number of traffic signals which interrupt traffic flow.

4.7 The appropriate mix of measures which should be adopted will vary from location to location and their introduction needs to be accompanied by improved public transport alternatives. These can be delivered in partnership as the following example shows.

4.8 Stagecoach has worked with the Authorities in Cambridge for the past ten years to provide bus priority and provide attractive local bus services. There are now 5 Park and Ride sites ringing the city offering 5000 spaces to motorists. These now generate over 3.8 million bus trips per annum. The city's bus service has also been transformed, with the

[1] Cabinet Office Urban Strategy Unit – An Analysis of Urban Transport November 2009

result that twice as many passengers use the local buses now than did so in 2000. Such outcomes require resolve, investment and sustained commitment from all parties.

5.0 The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code;

5.1 The most common selfish or unthinking behaviour by road users is the abuse of parking restrictions and indiscriminate parking where no restrictions exist. The prevalence of such behaviour is usually inversely related to the amount of enforcement exercised.

5.2 Knowledge of the Highway Code is a pre-requisite to being a professional driver. It should be required reading for all road users, but most tend to only refer to it when preparing for driving tests. As a consequence, their understanding of more recent signing and regulations is often limited. DVLA should automatically supply a copy of the Highway Code on each occasion a driver renews an expired driving licence photo card, and the licence holder should pay for the publication at cost.

6.0 Intelligent traffic management schemes, such as the scheme which has operated on the M42 and their impact on congestion and journey times.

6.1 Stagecoach understands that the M42 scheme has been successful in increasing the capacity of the road and reducing delays to users, although there has been some criticism of its day to day management[2]. It therefore welcomes such interventions where they are judged to be cost effective investments.

7.0 The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004

7.1 Bus operators are invariably the most frequent users of urban road space, with a typical ten minute bus service traversing the same section of highway in both directions over 900 times each week. Stagecoach therefore has a particular interest in the effective application of this legislation.

7.2 So far as we are aware, the provisions to create and manage toll roads in the 1991 Act have only be used once so far; the construction and operation of the M6 Expressway.

7.3 The street works management provisions of the 1991 Act require undertakings to give notice of road works and Authorities some control over their activities. These powers have been strengthened by the Traffic Management Act 2004 which contains a number of important and wide ranging provisions which are designed to deliver more effective road and traffic management.

7.4 We have been unable to establish the number of instances of road works in Great Britain in a typical year, although in Scotland, where there is a Road Works Commissioner, there are approximately 80,000 and in London over half a million[3]. We also understand that there are over 200 utilities with authority to place their services beneath the highway and therefore potentially needing access to them. It is therefore evident that the effective management and control of road works can play a major part in reducing traffic delay.

7.5 The 2004 Act places network management duties on local Highway Authorities requiring them to manage their highways effectively, with specific reference to congestion reduction. They are also required to appoint a Traffic Manager who is charged with identifying the

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[2] Local Transport Today LTT561

[3] Kelvin Ranger: Transport Adviser to the Mayor of London – The Times 21 January 2011

causes of congestion and considering any action which may be taken to address these issues. Further provision is made requiring Authorities to monitor and assess how well they are carrying out their network management duties. The Government may also require information to be provided on Authorities' network management performance and for intervention and the appointment of an external Traffic Director, in the event that an Authority is judged to be failing in its duties. There has to our knowledge, been no objective assessment of Traffic Managers' overall performance beyond the reporting of average morning peak vehicle speeds on a number of key corridors. We also understand that the Department of Communities and Local Government is now planning to remove this limited reporting requirement.

7.6 The Act also enables Highway Authorities, upon receipt of government approval, to issue permits allowing them to charge utilities for access to the highway for a specified period with an accompanying financial penalty regime in place for non compliance with the terms of their permit. Regulations to enable such applications were not laid before Parliament until 2007 and Guidance was first issued to Authorities in 2008 and again in November 2010. The first two schemes, (London and Kent), commenced in January 2010 and Kent County Council reports it has been issuing over 30,000 permits each quarter. It also believes that the scheme is resulting in an overall significantly shorter duration of road works. It would appear that a growing number of Authorities are now interested in taking on these powers, which should result in fewer, less disruptive and better coordinated road works.

7.7 In our view, the civil enforcement provisions of the Act are one of its greatest benefits. By 2006, 50% of Authorities had taken advantage of this enactment. Currently, over 85% of Authorities have been granted civil enforcement powers for parking offences. Where this is the case we note that there has been an increase in enforcement activity and consequent improved compliance with parking restrictions in particular. The Act also provides for the enforcement of specified moving traffic offences, but government has yet to lay regulations before Parliament bringing these provisions into effect outside London.

7.8 While the Traffic Management Act 2004 is potentially a powerful piece of legislation in terms of the range of measures which may be implemented to reduce traffic congestion, progress with implementation of its provisions has been frustratingly slow, as identified above.

7.9 We would also suggest that while some Traffic Managers have readily embraced their new duties, overall there is little accountability for their performance in the manner the Act originally intended and therefore no certainty that they are all delivering the best possible outcomes.

8.0 The impact of bus lanes and other aspects of road layout.

8.1 Bus lanes can be an effective means of reducing delay to buses and their passengers. They are most effective where they produce the maximum time saving, which aren't necessarily the locations where it is easiest to install them. They are one of a package of measures which can be adopted to achieve more reliable and faster bus journey times. Faster bus services are more attractive to passengers, less expensive to operate, enabling lower fares and lower emissions. These factors together encourage more people to use the bus.

8.2 Bus lanes are also a powerful reminder to all road users that the local authority regards its bus network to be an important part of its local transport solution. Provided the capacity at the junction which causes delay to all traffic, is not reduced, then well designed bus priorities should not delay other traffic overall, but merely enable buses to queue jump. For

these reasons we deplore the decision of Ministers to remove the M4 bus lane at Heathrow Airport, since it implies that the government sees no value in bus priority.

8.3 There is a tendency to introduce new roundabouts or additional traffic signals at junctions where significant new development takes place and needs access to the main highway. This is often funded by developer contributions. While some form of traffic control is often necessary, the cumulative impact of such measures is to slow through traffic down and increase journey times. Unless compensatory bus priority measures are introduced to enable buses to recover this lost time there is gradual erosion in bus operating efficiency with the same consequences as identified in 3.3, above, particularly where there are a number of new developments along the line of any given bus route.

February 2011

Written evidence from the Road Haulage Association (RHA) (ETM 31)

Summary of main points

- Encourage night deliveries of freight
- Scrap out-dated London "lorry ban" scheme
- Make greater use of under used M6 Toll road
- Greater emphasis on 24-hour working on road maintenance and co-ordination of road works between the Highways Agency and local authorities
- "Freight buses" – ie. trucks, should have greater access to priority lanes
- Police should show greater urgency in opening roads after crashes and have better co-ordination with recovery operators

Introduction

1. The Road Haulage Association (RHA) is the trade and employers organisation for the hire-or-reward sector of the road haulage industry. The RHA represents some 7,500 companies throughout the UK, with around 100,000 HGVs and with fleet size and driver numbers varying from one through to thousands. Generally, RHA members are entrepreneurs, including many family-owned businesses as well as some plcs. Without the activities of RHA members the UK would come to a halt both socially and economically.

2. In an informal 2008 survey, RHA large members estimated that they had lost around 20% on-road productivity due to congestion. The annual cost of congestion to the UK economy has been estimated at around £20 billion. http://www.scotland.gov.uk/Publications/2006/11/01103351/8

3. Our members' trucks are being caught up in continuing traffic congestion. The negative impact of road congestion is acknowledged in section 7, headed "Managing traffic to reduce carbon emissions and tackle congestion" of the "Creating Growth, Cutting Carbon" White Paper.

Key issue

4. The RHA would assert that in tackling congestion the focus should be on the use of the motor car because most congestion is car related. In 2009 there were 415,000 heavy goods vehicles registered (by tax class). These formed part of the 34.3 million vehicles licensed, most of which were cars. http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/statistics/datatablespublications/vehicles/licensing/vehiclelicensingstatistics2009

Specific issues

5. The Transport Select Committee has called for evidence about how roads and traffic can be better managed in order to reduce congestion, encompassing both the major

road network and urban roads. We will address the issues in the order raised by the committee.

The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so

6. Government and local authorities should encourage the adoption of night time deliveries to public and commercial premises. This would allow trucks to deliver at non-peak times, with the advantages of greater road safety, reduced emissions as well as cost and time savings to the truck operator.

7. In London there is the additional complication of the London Lorry Control scheme more commonly called the London lorry ban, which has operated for over 25 years. This scheme has long outlived its usefulness. Most obviously, the completion of the M25 means trucks now go around London, not through it. In addition, trucks are far quieter and far cleaner than they were when the scheme was introduced.

The extent to which road user culture and behavior undermines effective traffic management, including the relevance to today's road users of the Highway Code.

8. We would welcome a greater focus in the Highway Code on the difference in driving techniques of car and lorry drivers. Such a focus might to some extent help to reduce accidents involving HGVs which in turn can lead to congestion. The RHA's view is that many motorists and some cyclists are unaware of how HGV drivers have to manoeuvre vehicles at junctions, or of issues like HGV braking distances. Having said this we also accept the need for the haulage industry to work continuously to keep the standards of HGV driving high.

Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times

9. Managed motorway schemes help to control congestion. Hard-shoulder running in peak flow periods, whilst a temporary solution only, has worked quite well. However we have not yet seen sufficient evidence that through junction running has been successful, as it may impede vehicles trying to join or exit the motorway, thus causing backed-up congestion.

10. The M6 Toll remains a national scandal driving heavy investment in managing traffic on the Highways Agency's M6. It cannot make sense for the M6 Toll to remain little-used, while the HA road is heavily congested and we urge the government to pump-prime a transfer of trucks to the tolled road.

The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004

11. We urge more night working, and 24 hour working on road maintenance projects to aid quick completion and minimise the economic and environmental costs of

congestion. We are concerned that budget cuts may be making this macro-efficient approach less likely.

12. We urge that prior notice be given of major road works on a consistent basis. The RHA has on several occasions managed to persuade roads authorities to rethink work patterns, road closures and diversions. Greater co-operation between the Highways Agency and local authorities is needed. The positioning of works inevitably diverts traffic onto other parts of the network, leading to more congestion if the secondary routes are unsuitable. The RHA would like to see measures adopted in a co-ordinated manner, such as the alteration of traffic light phasing, that could assist the flow of diverted traffic.

The impact of bus lanes and other aspects of road layout

13. Trucks should have greater access to priority lanes, by considering them as buses for freight – or freight buses. The RHA has coined the term to support a more progressive approach to trucks in and around urban areas - in particular, to have greater access to priority lanes, such as bus and high occupancy vehicle (HOV) lanes.

14. The RHA has had some success promoting freight bus schemes – for example, South Gloucestershire's Statement of Reasons for allowing trucks above 7.5 tonnes into the HOV lane on a stretch of the A4147 near Bristol specifically gave the RHA's freight buses argument as the rationale for the change. Hauliers' trucks have to be on the roads to serve customers, and will have a minimal impact on the HOV lanes and the trucks' increased efficiency will save carbon.

15. The RHA would argue further that trucks are in reality more efficient than buses because they only have to run when there is demand and they can vary their route to make sure they maximise loading. Also, there is no alternative to a truck in making deliveries to shops and industrial estates.

Other issues related to congestion

16. The role of the police in managing and clearing accidents - different strategies used by police in different areas in handling accident sites can affect congestion significantly, particularly if roads are kept closed for long periods. We would urge that the policy is re-examined. Accidents are cleared too slowly in many cases, leading to severe tail backs.

17. Recovery operators – a number of which the RHA has in membership – could be better used by police forces. At present, the picture is patchy. Hampshire police work closely with their contracted recovery operator to ensure that the accident site is cleared up as soon as possible. Other police areas do not co-ordinate as well. We would welcome the dissemination of good practice nationally.

18. Positioning of road signs is also important - A piece of work currently being undertaken on the causation of bridge strikes has revealed that often the signs are in the wrong place or the bridge is signed incorrectly giving insufficient notice for the

driver to divert causing massive disruption whilst the driver tries to turn the vehicle round or worse gets stuck.

Conclusion

19. We do not believe there is a magic bullet solution to congestion but would suggest that a positive impact could be made if government and local authorities used the planning regime to facilitate change, perhaps by encouraging people to live closer to areas of work such as city centres.

20. However any successful planning based solution would have to be well worked through, for example because for those with children provision of affordable accommodation close to work would have to be balanced by the availability of good accessible schooling and other amenities. For people in rural areas motor transport might be the only practical means of gaining access to work and amenities and so initiatives to discourage road use might not have the intended effects - as an example, the RHA has anecdotal reports of increase thefts of fuel in rural areas as the high fuel price has increased the cost of motoring.

21. Crucially we see a tension between any desire for efficient strategic planning and the current localism agenda pursued by the Coalition government.

February 2011

Written evidence from Capita Symonds (ETM 32)

1 EXECUTIVE SUMMARY

1.1 Capita Symonds

Capita Symonds is a wholly-owned division of The Capita Group Plc, a FTSE 100 member and a leading provider of integrated professional support service solutions. With over 4000 UK employees Capita Symonds is a multi-disciplinary consultant delivering property and infrastructure projects and specialising in the Transport Sector.

The Company has over 40 years experience in designing, building, operating and maintaining roads on a local, national and international scale and has many staff who have worked for the Department for Transport, the Highways Agency or Local Authorities during their careers.

1.2 Basis of Submission

In preparing this submission we appreciate that in some cases our view may conflict with current policy. However, we believe effective road and traffic management can only be achieved on a national scale by a step change to the way roads are currently managed and operated.

We have deliberately not used technical statistics as we believe these can often be misrepresented and / or misinterpreted to support a particular point of view. Instead our evidence is presented from a "Road User's perspective, and from that of an objective practitioner with long term experience of planning and designing roads, and applying technology to solve traffic problems. Added to our experience and the lessons learnt from it as "technologists", our instinct is to find new ways of doing things better and our evidence is based on a combination of "fresh eyes" along with an informed view.

We have outlined a new approach to managing roads and traffic. There are a plethora of issues which must be faced to achieve this and it is not possible in this submission to cover them all but we have attempted to identify some which we believe are key.

1.3 Institutional Arrangements

UK roads are a complex network of carriageways, each with their own characteristics which demand different operational objectives and priorities. Added to this complexity is the fact that different roads are operated by different authorities, each with their own policies and objectives.

The Department for Transport has devolved its operational obligations for the "Strategic Roads Network" to the Highways Agency (HA), but virtually all other operational issues are managed by the Local Authority (LAs).

Whilst strategic and local objectives and priorities are bound to be different, they are currently delivered under institutional and financial arrangements which have evolved over the years and which no longer serve to make the best use of past investments in roads, or provide a basis for how we should invest in the future.

1.4 Possible Approach

A radical approach is needed where roads are operated and managed as a single entity according to traffic routes and demand between origins and destinations, regardless of the road operator.

This means creating ***"Managed Route Network"***, formed from the strategic road network operated by the Highways Agency along with significant number of all purpose roads operated by Local Authorities. This concept would support two basic congestion relief measures:

- ***Route and Traffic Management:*** By giving priority to routes that carry the most traffic and making sure we manage alternative routes properly. This is already done to a limited extent for strategic diversions but on a Managed Route they would be invoked or encouraged dynamically on all viable routes at a local level;
- ***Influencing Travel Behaviour****:* By giving timely and accurate information as early as possible i.e before road users leave the office, town centre, car park or motorway. Congestion is compounded because road users encounter a problem too late in their journey when alternatives are no longer available i.e. they join their route only to find they could have been given information that would have given them an alternative route rather than joining the back of a queue.

To achieve a Managed Route Network dynamically requires real-time traffic data from all parts of the Managed Route, and converting this into coherent "Traffic Intelligence" enabling road operators to manage their route, and road users to select the most advantageous route for their journey.

To further support this we need to introduce new methods of dealing with our traffic signals, changing them from their current arrangement to a regime where they stop the minimum number of vehicles for the minimum amount of time. This is particularly relevant where there are large numbers of HGV's where its introduction would offer both better air quality and better traffic flow.

1.5 Conclusions

The UK is at the forefront of road and traffic management techniques and practice but, whilst we have the intellectual and technical ability to create the optimum Managed Route Network, we do not have a policy or institutional or financial frameworks to deliver it.

A strategy should be developed which explores the concept of Managed Routes in more detail which will eventually lead to changes in policy. This will require the best people from the Department for Transport, the Highways Agency, Local Government and the Private Sector working collaboratively as an Integrated Team towards a set of common objectives.

Creating the Managed Route Network means abandoning many historically based policies and the thinking behind them but there is strong evidence to show this will save money and deliver wide ranging benefits.

2 EVIDENCE POINTS

2.1 Prevalence and impact of traffic congestion and likely future trends

Many sections of roads have bottlenecks at peak hours but these are generally predictable. Incidents and breakdowns on the network are random and represent a large proportion of the cause of congestion. When taken as a whole they have a greater impact on people and the economy since they cannot be planned into journeys.

On motorways, the consequences of incidents are more significant due to the volume of traffic affected both on and off the motorway which has a knock-on effect over a large geographical area.

Severe congestion on many major town and city ring roads and by-passes is an economically damaging feature of everyday life. There are many junctions where poor traffic priorities, sub-optimal layout or signal phasing causes extensive and unnecessary congestion.

With few much lower capacity alternative routes and no hardshoulders, even a simple breakdown can cause major problems for the non- motorway network. Statistics of breakdowns and “damage only” accidents which can have the same impact on the road network as fatal and injury accidents are not recorded, even though these represent a large proportion of the causes of delays.

It is predicted that congestion will get worse as a result of projected increase in population and the recovery of the economy, both of which will generate traffic growth. Congestion can be reduced by the following measures:

- By increasing capacity e.g. new roads and managed motorways;
- By reducing demand e.g. more use of public transport and reducing travel needs;
- By making better use of available capacity e.g. the Managed Route Concept outlined in our Executive Summary.

Future trends are open to influence by transport policy in each of the above areas but in the case of the latter the message is clear: “simple changes could have highly beneficial effects at a low cost”.

2.2 Extent to which the Government and Local Authorities should intervene to alleviate congestion and the best means of doing so

In our submission we advocate the concept of Managed Routes. This would require the Highways Agency and Local Authorities having a "service contract" which requires them to work together rather than just consult.

The Managed Route concept means operating the route as a single entity, with (i) capacity maximised on all significant roads and (ii) true network management at all times, not just when there are incidents. This requires a single road network policy, funding and support which should be overseen by an impartial but knowledgeable body.

Managing the throughput of traffic on a dynamic basis and having effective data to do this will help address the issue of congestion. In simple terms, the way we currently try to deal with or disperse congestion is based on moving the most traffic on any “main” road. We do not look at the air quality issues this creates nor do we look at the traffic queuing on other lesser roads. A wider network of Managed Routes encompassing roads currently administered by both Government (via the Highways Agency) and Local Authorities would enable the impact of congestion on wider and locally important areas to be addressed.

The available capacity on the existing All Purpose Road Network could be significantly improved by carrying out an audit on each of them to determine which of the fixed features on them inhibit their ability to carry their design capacity. Obvious issues are junctions, access points, alignment, traffic signals, bus and cycle lanes etc.

2.3 The extent to which road user culture and behaviour undermines effective traffic management – issues of in-car information and reliable and useful information

Red light infringement, average speed cameras and other enforcement systems can produce beneficial modifications in driver behaviour. However, driver behaviour is notoriously hard to influence and there is inconsistency in the use and application of these systems which undermines the road user's confidence and compliance. A single cohesive approach to these issues would bring significant benefits in many areas.

All too often information on a total closure or stationary traffic on a section of motorway is received too late or is presented in too obscure a way for many drivers to take alternative routes before they are committed.

The advantages of fixed and variable signs are that they can be seen by all road users. To achieve the same with in-car information means having every vehicle fitted with suitable equipment.

To make the safest and most constant use of such features may require consideration of some external control of vehicles rather than trying to present the driver with visual and audible displays, which can be distracting and will still have variable driver reaction. This is significant step in the way vehicles are driven and what would be required to introduce would need further study.

There is work that can be done now to obtain more accurate data and provide road users with more effective messages in the correct locations.

2.4 Intelligent traffic management systems, such as the scheme which has operated on the M42 and their impact on congestion and journey times

The M42 is claimed to have been successful in reducing the time the motorway is heavily congested. There are, however, fears of how emergency services will cope to access a major accident when the carriageways, including their hard shoulders, are completely occupied by stationary vehicles.

There are other solutions possible which can achieve most of these benefits at much lower cost, freeing funds for investment in the rest of the Network.

2.5 The effectiveness of legislative provisions for road management under the New Roads and Streets Works Act 1991 and the Traffic Management Act 2004

The New Roads and Street Works Act gave utilities the right to take possession of roadspace for repairs or works on their equipment but without the need for sufficient responsibility for coordination with other utilities and highway authorities. The co-ordination of roadworks, and their impact on traffic, does not appear to have been significantly improved by the NR&SWA.

We believe that a review of roadworks procedures should be undertaken where impact rather than time is the key issue to address.

2.6 The impact of bus lanes and other aspects of road layout

Bus lanes, and to a lesser degree cycle lanes, create congestion and make very poor use of lane capacity.

Traffic signal control was developed when maximising overall junction capacity was considered beneficial. This needs to change to a position where we now need to stop the minimum number of vehicles for the minimum amount of time.

The most cost effective way to maximise real time capacity would be a programme of small scale improvement schemes targeted at roundabouts, signal-controlled junctions, pinch points and any other capacity restricting features, together with using technology to provide the means to ‘balance’ the traffic.

3 RECOMMENDATIONS

In preparing this evidence we have touched on several areas which have the potential to improve road and traffic management and extract more benefit. For practical reasons we are not able to present all the information needed to support the points we have made but set out below a list of recommendations to be considered by the Committee:

1) Set up a Steering Committee, chaired by a Department for Transport appointed independent expert, to identify and subsequently set policy for the roads which will constitute the "Managed Route Network". Local Highway Authorities (County Councils, Metropolitan and Unitary Authorities) and the Highways Agency to be represented. The key objective would be to maximise use of the current available road network capacity in real time and to have this supported by targeted investment where capacity improvements will bring most benefit;

2) Set up group(s) under this Steering Committee to deal with the institutional, financial and technical issues needed to achieve goals set. Industry wide experts; Highway Authorities Local Highway Authorities; HA; Transport for London; Department for Transport, Emergency Services and other relevant parties to be represented;

3) Produce effective tools needed for making proper assessment of the impact of congestion on all roads in the Managed Network (equating all purpose roads with motorways) and identify the type of events which create that congestion;

4) Review the Highways Agency’s focus on Managed Motorway schemes and (i) look for more cost effective ways of achieving the same results and (ii) balance funding to focus not just on motorways but the significant benefits which can be achieved by better and more intelligent use of technology;

5) Set up a group to produce operational procedures for formal control of roadworks on all roads within the Managed Route Network;

6) Review the Department of Transport’s specific role in addressing consistency across all relevant areas of road network signing;

7) Review rules on the use of consultants/contractors as opposed to in-house staff. What we need is the ‘best’, wherever they may be employed;

8) Re-introduce the once excellent research programme to help properly inform decision making;

9) Re-focus on the carbon footprint caused by stationary vehicles as opposed to those which are moving – different classes of vehicle have different impact;

10) Look at concept of using tolling to allow other vehicles to use Bus Lanes without affecting bus journey times;

11) Introduce a suitable programme to assess how current traffic signal algorithms can be changed to maximise throughput in (i) normal route operation and (ii) in route managed operation;

12) Review roadwork procedures to find better ways of managing the impact of roadworks on traffic flow;

13) Find a means to provide proper basis for the funding and focus of technology developments for the whole of the road network.

We hope that the Committee find value in our submission and we would welcome the opportunity to discuss any detail that may be required by way of clarification or to provide further background needed with respect to our recommendations.

February 2011

Written evidence from Donald Bowler (ETM 33)

For 25 years I worked in Local Government as an Environmental Health Officer, specialising in Environmental Protection (or Pollution Control). That included measurement of air pollution, the majority of which was due to traffic emissions. For the last four years I have been Climate Change Manager, one of my roles has been to try and reduce energy use and therefore carbon dioxide (CO_2) emissions.

The factual information of which I want the Committee to be aware is :-

Poor Road and Traffic Management leads to :-

- Longer journey times
- Inefficiencies for businesses
- Increased accident rates, due to more close up stop start driving and impatience caused in drivers
- Reduced vehicle efficiency
- Reduced fuel efficiency, and hence greater CO_2 emissions

Greater experience amongst drivers of European roads leads drivers to expect better practices, including :-

- Faster clear up accident scenes after dead or injured people have been removed from the scene
- Specifically allowing undertaking on the inside on motorways
- Allowing turning Left on a red light (equivalent of US practice of turning Right on a red)

Local Authorities tend to maintain the status quo where congestion is concerned, being disinclined to improve traffic flow so as to act as encouragement to drivers to change travel mode to public transport

Bus Lanes:-

- Delay other traffic
- Reduce road capacity for other users
- On occasions delay buses because the bus cannot reach the start of a bus lane, because traffic is held up by a reduction in road capacity ahead caused by the bus lane taking up a lane that could otherwise be available for other traffic
- Act as a punishment for all those who cannot take a bus, including those driving lorries, vans, delivery vehicles, those whose start and end journey points are not served by bus routes

For 29 years I have driven the same route of 16 miles to work and 16 miles from work, from the village where I live, to a town centre.

It is not practical to take public transport, as it would involve either a bus and a train, or two buses, with total journey time being 2½ hours. By car, it takes 25 minutes if I leave home at 6.50, which I usually do, but if I were to leave home at 08.00 it could take me 1¼ hours to do the same journey. There is a similar variation in time taken to drive home; depending on what time I set off from work. My fuel consumption on the journey that takes 25 minutes is consistent at 39 mpg; my fuel consumption on the journey of the same distance that takes 1¼ hours is around 24 mpg.

There is actually no good reason for this difference in time, because if the traffic lights on the journey were adjusted correctly, and made proper use of traffic sensors, most of the delay would disappear. A further problem in school term time is the activities of School Crossing Patrol staff, those that are based on Pedestrian Controlled Crossings delay road traffic by being in the road helping children (most of whom are accompanied by parents) after the lights have changed to green for the traffic.

We don't make efficient use of our road infrastructure. Where there are specific bottlenecks, such as where the M1 at J19 and the A14 join, nothing has been done to improve the junction, it needing grade separation, thus meaning that those adjacent parts of the M1 and A14 are not used to their full capacity, being, in effect, very expensive parking areas. The A1 to the north of Sandy has some very sharp bends in it (radius = 150m) and a very dangerous roundabout at Black Cat, the latter being built only a few years ago, these are crying out to be improved and yet several years ago the A1M by Peterborough, which had a much better layout than near Sandy, was widened to 4 lanes each way. These are examples of the worst areas not being dealt with first.

Many new roundabouts are designed very badly, with unnatural lines through that the traffic must follow, leading to unnecessary slowing down.

February 2011

Written evidence from Stephen Plowden (ETM 34)

Introduction

The committee has chosen a very important subject. If the term "traffic management" is widely interpreted, it is, and has been for decades, the most important issue in transport planning. A wide interpretation would cover not only the rules, including but not only pricing, governing how people behave when driving, but also what drivers and vehicles are allowed to use the roads at all. Reforms to the regulatory and fiscal framework would remove the case, such as it is, for investment to produce a general increase in road capacity (some local increases, especially to serve new development, would still be justified).

Reforms to the rules for the use of the roads would have a profound bearing on rail policy too. At present, roughly half the costs of the railways are borne by users and half by the taxpayer – a huge and regressive subsidy. A principal justification for the subsidy is that rail causes fewer external costs than road, so it is desirable to encourage people to choose rail rather than road. This is a "second best" argument for subsidies. Road externalities can and should be drastically reduced by changes to the user rules. If that were done, this argument for rail subsides would disappear, perhaps entirely, at least in very large part. In some areas, however, rail subsidies can be justified on social grounds, which would still apply.

Because time is pressing this reply is very short. Another reason is that I have made the same points in various earlier submissions to the Transport Committee: Keith Buchan's and my reply to your inquiry on road pricing in 1995, my own submission on the same subject in November 2004, my submission in December 2001 to the inquiry on speed, my submission in February 2008 to the inquiry on road safety, and most recently my reply last September to the inquiry on transport and the economy. It will become apparent next month whether this last reply has been heeded, but none of the others were and I very much doubt whether they were read. Despite this discouraging experience, if the committee has any queries on any of the points raised in any of these documents, I would be happy to answer them.

Alternatives to road pricing

The wording of the committee's inquiry suggests that it holds two beliefs, that congestion is an especially pressing problem, and that it would be very difficult to deal with it without road pricing. These beliefs are, indeed, in line with those traditionally held by advocates of road pricing. Until recently, their discussions treated congestion as if it were the only problem, and either failed to consider alternative ways of dealing with it at all or else dismissed them as clearly inferior.

Congestion is, of course, an important problem, but most people probably now accept that combating global warming is the most important task, and I would argue that road safety, seen as reducing not only crashes and casualties but intimidation as well, is also more important than tackling congestion. However, there may not be much point in prioritising these tasks, since much the same policies are required to deal with all of them. The excessive emphasis on road pricing, to the neglect of more promising alternatives, is a more serious obstacle to progress. Here are two recent examples of the mindset.

> There are a range of policy options to tackle congestion, other than road user charging. They include regulations designed to move traffic efficiently, such as one-way streets, parking restrictions and zebra crossings, and restrictions on certain types of vehicles in city centres. Yet these approaches have obvious limitations. As a market-based solution to tackling congestion and reducing emissions, road pricing has the potential to provide clear, transparent, yet strong signals to drivers about the true costs of motoring.
>
> Jeegar Kakkad and Ann Rossiter, *Road User Charging: A Road Map,* Social Market Foundation, 2007

> Most disappointing of all is the Mr Hammond's determination to ignore the overwhelming evidence that the best way to tackle congestion is by traffic restraint on the most grossly congested parts of the strategic road network. That is best done by price . . . by ruling out road pricing, he has ensured the continuance of a Soviet-style command economy on the roads in which scarce space is allocated haphazardly by queuing.
>
> Adam Raphael, *Mr Hammond is ducking the issue of congestion,* Transport Times, November 2010

The commercial equivalent of saying that pricing is always better than other approaches would be to say that pricing policy is always more important than policy on product design, which as a general remark would clearly be ridiculous. This is a good analogy. To cycle on a cycle path or on a traffic-calmed street would be to experience a different product than to cycle in the present maelstrom of traffic, and one that would fetch a lot of people out of their cars. Driving a light, low-powered (and therefore low-polluting) car on roads on which low speed limits were properly enforced would be very different, in particular much less intimidating, from driving on present roads, where limits are much too high and are not enforced. And so on.

The most important single reform on roads of all classes is not mentioned in either of the above extracts, to set and enforce lower speed limits. The crucial role of speed control has been shown over and over again, but successive governments have been amazingly cowardly both about setting lower limits and about enforcing even the existing limits. Lower speeds would reduce traffic (vehicle kilometres) and nuisance rates (crashes, fuel consumption, emissions, noise) per vehicle kilometre simultaneously, whereas pricing, by increasing speeds, though it would reduce vehicle kilometres would usually put up these rates. The assumption that the distribution of incomes is fair, on which the validity of an approach based on pricing depends, can hardly be defended at the present time.

In towns, the alternatives to road pricing are so rich that it would not much matter if road pricing for cars were not available at all. (There could, however, be a case for road pricing for light goods vehicles as well as for HGVs.) Various towns all over the world have tackled their problems with some success without road pricing – it is astonishing how road pricing advocates have managed to close their eyes to this experience, while always appealing to that of the handful of towns that have introduced road pricing. The main ingredients of an alternative approach are lower speeds, the reallocation of road space (including banning all motor vehicles, and possibly cycles too, from town centres and bans on HGVs and powerful motorcycles on some other streets) and parking controls. On-street parking restrictions are now firmly established, even though sometimes there is an over supply of metered space because local authorities are

reluctant to give up the income they bring, but they should be supplemented by more control over off-street parking spaces. Many people commute by car only because they have free or highly subsidised parking at their place of work. Whether or not workplaces have such spaces is a matter of chance, and where they exist their allocation is more often based on seniority than on travel need. Parking spaces at supermarkets can also affect travel and traffic patterns in undesirable ways. Local authorities now have the power, which very few have used, to tax workplace parking, but they need to be able to reduce the number of private non-residential parking spaces of all kinds, not just to tax them.

More comprehensive traffic restraint in towns would have a feedback effect on roads outside towns. Otherwise, the main method of restraint outside towns, in addition to road pricing for HGVs, should be lower and better enforced speed limits. In our report *Cars Fit for Their Purpose*, published by Local Transport Today in December 2008, Simon Lister and I calculated that enforcing the 70mph limit on motorways properly would reduce car mileage on them by between four and five per cent and enforcing a 55 mph limit properly would reduce it by some nineteen or twenty per cent. The same formula suggests that the reduction from a strictly enforced 60mph limit would be some thirteen per cent.

If it should turn out that a significant degree of congestion on motorways and selected A roads remained after these measures had been taken, then it would be sensible to institute a simple system of charging for driving on those roads. That would be easy to do because of the limited number of points of entry and exit.

Recommendations
I hope the committee will urge the government to take the following steps.

1. Increase spending on speed cameras.

2. Commit itself, and use its influence in Europe to get the EU also to commit, to the principle that all new vehicles should be fitted with variable speed limiters With the EU undertake research on the best type of variable speed limiter. Study the costs and benefits of a programme to retrofit vehicles already on the roads with variable speed limiters. Obtain permission from the EU to make it mandatory for British registered HGVs to be fitted with variable speed limiters in advance of their being made mandatory for other vehicles.

3. Change the default urban speed limit from 30mph to 20mph.

4. Conduct trials with properly enforced speed limits on certain motorways, dual carriageway A roads and single carriageway A roads. The speed limits to be considered would range from the existing 70mph to 50 mph for motorways, from 70mph to 45mph for dual carriageways, and from 60mph to 30mph for single carriageways. The effects to be studied would include traffic volumes by type of vehicle, crashes and casualties by severity, fuel consumption and emissions, noise, driver stress and acceptability.

5. Introduce legislation to give local authorities powers over non-residential off-street parking, including the power to reduce the number of such spaces already in existence. Conduct demonstration projects with selected local authorities, if necessary in advance of these powers being made available to all local authorities, on the use of these powers.

6. Study the extent to which telecommunications are already acting as a substitute for personal travel, distinguishing by journey length and journey purpose (principally commuting, business, shopping), what developments can be expected in the future, and what transport or other polices could reinforce these trends. Assess the likely effect on travel volumes and patterns by road, rail and air.

February 2011

Written evidence from the City of London Corporation (ETM 35)

Introduction

1. The City of London Corporation welcomes the opportunity to contribute to the Committee's inquiry into Effective Road and Traffic Management. The City Corporation was an early advocate of a Code of Practice for Roadworks in the late 1990s produced a Voluntary Code on the Coordination of Streetworks. The Code, produced at a time when roadworks were creating significant disruption on City streets, contains principles aimed at facilitating efficient road management. It has three pillars – a notice system (now in place under the statutory permit scheme), special treatment for 'sensitive' streets, and coordination tools. Importantly, the Code recognises that a balance must be struck between the needs of all parties and that those who are inconvenienced by roadworks are often also consumers of the utility.

Reinstatement

2. Key provisions in the New Roads and Street Works Act 1991 that would give highway authorities significant powers to ensure efficient and effective road management have not yet fully been brought into force. Sections 78 and 78A of the Act set out a scheme which would provide highway authorities with a power to require utility companies to contribute to the cost of repairing long term damage to the street and to costs of resurfacing. One example of the relevance of such powers is that when a length of highway has been repeatedly excavated and reconstructed numerous times, that activity invariably leads to a general and dramatic deterioration in the quality of the road surface and sometimes leads to road collapse[1]. In such circumstances, street authorities, under current rules, find it impossible to recover the cost of remedial works. While s78 of the Act is technically in force, the operative provisions are activated by Regulations and no such Regulations have been made. Section 78A of the Act is not in force. Authorities do not have alternative powers to ss78 and 78A.

3. The need for the general power to require utility companies to contribute, as just described, is emphasised by the difficulty of allocating responsibility for surface or structural failure to the last contractor in a line of contractors, all of whom have added to the overall deterioration of the street.

Lane Rental

4. The City supports the Road Management Concordat recently reached between the Mayor of London and The Congress of Leaders. The Concordat reflects some of the main principles of the City Code mentioned above, and advocates lane rental, but provides little detail. The City may be able to support lane rental provided it is applied to all major routes and not, for example, only to a narrow category of roads (e.g. TfL roads), and provided that other issues, such as the costs of administering the scheme, were satisfactory. Having it apply to just a narrow category of roads would tend to force utility companies to concentrate resources in these areas, or to alter their planned routes to the detriment of other (borough) roads.

[1] Note that each undertaker is, separately, responsible for reinstating highway. Thus where multiple undertakers dig up and replace highways one after another, each undertaker's work is carried out in isolation from the others. Highway authorities have no power to recover the cost of "final" remediation works –so as, for example, to properly repair an entire road surface or to create a uniform surface following a series of works.

5. The City does, however, have some reservations. Lane rental is intended to apply a financial value to street occupation, such that the utilities take this into account when planning their works. Whether this has any impact on reducing the duration of works remains to be seen; whether this can be done effectively without other consequences (like disturbance through night working) also must be assessed, and if it has any impact on the utilities costs depends on whether those costs are passed on. In this latter respect, an assessment must be made of the possibility that utility companies will pass on the cost to consumers – such a move would reduce the impact of lane rental as an incentive on the utility company to speed up its street works. The utilities have always argued the cost would simply be an addition to domestic and customer bills. For planned works, they would no doubt press the regulator for more leeway. On customer connections (and some of these in the City are of very long duration) they might pass the cost to developers. Emergencies too would have a cost, no doubt reflected in customer bills.

6. Trying to implement lane rental has lead to entrenched attitudes between utilities & local authorities, to the point where its introduction has taken a considerable period of time, with one inconclusive trial. What is needed, in the City's view, is something that builds on the better working relationship that permitting has stimulated, whilst encouraging the utilities to improve. In this respect, lane rental may have a role, but it is not clear how it might be used to encourage the utilities to improve their excavation techniques, or their record keeping, or their working together to minimise street occupation.

7. Other options should, therefore, be considered that develop the longer term responsibility of the utilities towards minimising street occupation. Any policy should encourage utilities to improve continually and the City has proposed a scheme that would run alongside the permit scheme under which utilities would propose a target time for every type of work. Early reaction from the main utilities on this so far has been unenthusiastic, citing the national utilities' usual views on the current legislation, but the City is seeking other major utilities' views on its workability. Key to the process would be the commitment to continuous improvement, offsetting occasions when utilities finished early in some locations against times when they overran (measured over a period), and perhaps with any 'fines' for overruns being reinvested in either underground mapping or whole-road reinstatement (as set out above) .

8. The City acknowledges that this proposal's drawback might be that it did not appear to 'hit' the utilities in the way that lane rental purports to do. But in the long run, it is in street authorities' interests to find a way of co-existing with the utilities and simply punishing the utilities would be counterproductive.

Permit Schemes

9. The permit system requires an undertaker to notify a highway authority of proposed works but does not control the duration of a company's activities. Nevertheless, by ensuring highway authorities have notice of planned works, permit schemes improves the ability of authorities to plan around those works. Permitting has encouraged co-operation and pre-planning, to the point where City highway inspectors are now much more engaged with the utilities on settling the details of every site before a permit is submitted. As a result, the City has not recently had to issue any statutory notices for overruns.

10. The fundamental shortcoming of duration management through the current permitting system is that while it appears to provide highway authorities with powers to coordinate street works, it does not, in the City's view, in practice give authorities that

power. It is only possible to coordinate to the extent that highway authorities have advanced knowledge of the utilities' plans and the notice periods given under permitting are often too short to do that.

11. More effective road management would, therefore, be facilitated by requiring undertakers to lodge permits for planned works further in advance. This would enable highway authorities to coordinate works better among and between undertakers and go some way to stop the main complaint we hear from the public about the same road being dug up twice in quick succession. If authorities were given a further power to timetable works within a bracket of time around the dates set out in a permit, they would be in a position to bring together multiple undertakers to work on one site at one time. Such an initiative could have significant beneficial effects for effective road and traffic management.

Mapping

12. Some of the delays in the completion of highway works are due to the absence of maps showing underground subways, basements, pipes and other obstacles. One consequence of this is that undertakers may not have an accurate understanding of the best route for their works before they start. Furthermore, an undertaker may be held up if it discovers an unexpected underground obstruction.

13. In many locations there is no more room underground. This problem is felt especially acutely in the Square Mile. This for example has caused a gas main to be laid twice, the first time too shallow (within the carriageway construction) as the route first planned was not practical but the permit time could not be extended. A second set of works were required to remedy the initial problem - so the road was dug up twice. Thames Water's programme of replacement in the City has taken more than double its original projected time - partly because they simply underestimated the difficulty of weaving their main among all the others.

14. One of the ways to mitigate such problems is to mandate an underground mapping system so that when a highway is excavated the undertaker plots the obstacles and feeds the data into a central coordinating body. At present no-one is responsible for the mapping of what is under the street, or for holding the data although several organisations are working on this and it is understood that at least one trial is nearly funded.

Pipe Subways

15. The City of London owns and operates over 6km of existing pipe subways (fully accessible utilities tunnels) which were constructed between 1869 and 1995 and are used to deliver gas, electricity, water, telecommunications and decentralised energy services. These have proved invaluable over the years in supplying City buildings. The pipe subways are located in various geographical areas across the Square Mile, although they do not provide comprehensive connectivity across the main utilities' supply routes in the City. There is, however, potential to extend the network which would provide benefits to utilities companies - allowing easier installation, maintenance, and access of their plant, a reduction in the level of street works and associated disruption, and prevention of weakening of road surfaces caused by repeated excavation. Utilities companies are required to use pipe subways (where they exist) under the City of London (Various Powers) Act 1900, and are not allowed to deploy infrastructure elsewhere within that highway. Utilities currently pay a small rental fee, which is calculated to cover bare maintenance costs, for each metre of plant installed in the pipe subways. The current rental structure may, however, serve

as a template for a scheme designed to return investment funds for the construction of new pipe subways.

16. The City has recently completed a feasibility study to extend the pipe subways network, and further research is progress. The research will consider funding options and detailed technical constraints involved in delivering new pipe subways throughout the City of London.

February 2011

Written evidence from the Chartered Institute of Logistics and Transport in the UK (ETM 36)

1. The Chartered Institute of Logistics and Transport in the UK ("the Institute") is a professional institution embracing all transport modes whose members are engaged in the provision of transport services for both passengers and freight, the management of logistics and the supply chain, transport planning, government and administration. We have no political affiliations and do not support any particular vested interests. Our principal concerns are that transport policies and procedures should be effective and efficient and based, as far as possible, on objective analysis of the issues and practical experience and that good practice should be widely disseminated and adopted.
2. The Institute has a specialist Transport Planning Forum, a nationwide structure of locally based groups and a Public Policies Committee which considers the broad canvass of transport policy. This submission draws on contributions from all these sources.

Alternatives to road pricing

3. The Committee seeks evidence on how road traffic can be better managed to reduce congestion in the light of the Government's decision not to introduce road pricing on existing roads. In the short time available we have not been able to assemble detailed recent evidence about the relative effectiveness of different measures; but we can offer some broad comparisons and comments on appropriate policy choices, which we hope the Committee will find helpful.
4. In considering these it is relevant to consider how far they would achieve the results that road pricing might have delivered. These can be summarised as bringing about a more efficient balance of supply and demand by:
    i. shifting some demand from the peak to the off-peak
    ii. reducing the use of cars by a broad range of measures including encouraging car-sharing, mode shift to non-car modes (public transport, cycling and walking); and the use of trucks by encouraging mode shift from long-distance road freight to rail, among other possible measures including reducing food – and other avoidable - miles through changes in the structure of the industry;
    iii. raising funds to improve both roads and public transport.

5. We take also the opportunity to comment on the impact the recently introduced Localism Bill might have on traffic management issues.

Traffic Growth

6. Before the recession car traffic had been growing much less fast than forecast, although some of this shortfall was made up by a rapid growth in light vans. We believe that a better understanding of the reasons for this change in trend is urgently needed. But even a return to traffic levels experienced before the recession plus growth in line with population growth implies road congestion on a level leading to a high social cost (see for instance the detailed estimates made in the UNITE project Deliverable 8 that in 1999 the social cost of congestion in Britain was £12.4b) (www.its.leeds.ac.uk/projects/unite).
7. We need therefore to plan for increased travel demand. The Eddington report forecast the increased cost of congestion if no action is taken and we see no reason to question those forecasts. Better managed use of roadspace can also reduce social and environmental costs.

Local roads and traffic

8. In most urban areas[1], apart from London and some of the Integrated Transport Authority areas, serious congestion is restricted to the morning and evening peaks. In the absence of road pricing, peak hour commuting can be tackled by a combination of:
    i. parking regulation including charging, particularly all-day parking in and around employment, business and retail centres;
    ii. measures to encourage mode shift, such as bus priorities, cycle lanes and (in some places where the cost is justified) trams or bus rapid transit;
    iii. park and ride schemes;
    iv. smarter choices including travel plans at the workplace and school;
    v. more efficient operation of traffic control systems
    vi. better management of streetworks and road accidents.

Parking Regulation

9. Of these measures, parking controls are likely to be the most effective as they are perceived most directly by motorists. Unfortunately, past attempts to use parking controls to influence peak hour traffic have been undermined by high levels of private non-residential parking (PNR) in city centres and at employment and retail centres. Under current legislation, local authorities have the power to introduce Workplace Parking Charges to overcome some of these problems, but so far only Nottingham has seriously proposed doing so. Other authorities known to have considered the option have not proceeded, possibly dissuaded, in part, by limitations in the legislation and potential enforcement difficulties.
10. Local authorities also have powers to regulate PNR parking charges but have to compensate PNR operators for any loss of income; to our knowledge, these powers have never been used. Some changes in existing legislation could provide local authorities with improved powers that could increase their willingness to use them.
11. We consider that parking is an area requiring further policy development, but we are concerned by what appears to be the emerging approach of the Department for Transport that such measures are solely the responsibility of local government. That is correct so far as adoption and implementation is concerned, but the Department is responsible for providing the legislative powers they need.

Encouraging Mode Shift

12. Measures to **encourage the use of public transport** will be most effective if combined with measures to discourage the use of cars (the Central London Congestion Charge illustrates clearly the positive effect of combining better bus services with a charge for car use). In the absence of complementary measures to restrict car use, measures to increase public transport use may have only a limited effect on car use, with some of the extra passengers making new (generated) journeys or having transferred from cycling or walking. To the extent that the roads are relieved of traffic by a switch to public transport use that may itself tend to generate new car trips or transfer existing car trips from other congested roads.
13. Nevertheless successive Governments have recognised the benefits of a proactive approach to public transport and the **Quality Partnership** approach first advocated in the Chartered Institute of Transport's report "Bus Routes to Success", now enshrined in legislation, has had significant success in cities and towns such as Brighton, Cambridge, Leeds, Oxford and York. Unfortunately the impacts of the traffic management policies adopted in such Partnerships are not terribly well documented, only the headline figures of increases (or arrested downward trends) having been studied. However there are some valuable before and after studies where significant new infrastructure has been provided, for example in association with the guided busways and High Occupancy Vehicle Lane in Leeds, West Yorkshire (see paragraph 15).

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[1] Although congestion is primarily an urban and inter-urban movement problem there are instances of severe congestion in small towns and around beauty spots in tourist areas. Such congestion is often prevalent from mid-morning to early evening but its characteristics and management may be considered concurrently with urban problems.

14. **Bus priorities** can be very effective and cost-efficient. If applied at junctions that are saturated at peak times, they will reduce capacity for other traffic (although good design of the schemes can minimise this), but increase capacity overall in terms of the number of people per hour that can pass through the junction[2]. This will only be true, however, if the buses are well-patronised. The extra congestion suffered by the non-bus traffic may encourage some drivers to switch to bus, but higher peak time (and all-day) parking charges are desirable to maximise bus patronage and free delivery vehicles from congested conditions. Similar considerations apply to traffic signal control plans and exemption of buses from turns banned to other vehicles.
15. The West Yorkshire studies confirm that one of the most significant impacts is what happens to road capacity released by car journeys transferred to bus. In one case, the A61 corridor it was shown that the capacity released was quickly taken up by car journeys transferring from adjacent corridors, primarily the heavily congested A660. In another case, the pioneering A647 High Occupancy Vehicle Lane, the capacity released was not taken up but the reduction did not correspond to the increase in bus use. Because of the concentration of surveys in a relatively narrow sector, the investigators were forced to conclude that either there was a large number of unnecessary journeys which was unlikely, or that some journeys were being made more efficiently (for example car sharing on the school or journey to work run perhaps as vehicles occupied by 2 or more people were allowed to use the HOV lane) or that displaced traffic was dispersed over a wider area than the study could encompass which was feasible given the location of the HOV lane in relation to the Leeds Outer Ring Road and its many connections.
16. The potential to relieve traffic congestion through improved bus services and performance is likely to be adversely affected by the current austerity measures, with cuts in both bus subsidies and forthcoming changes in the Bus Service Operators Grant (BSOG) and the CILT has been examined on these impacts in response to the Committee's Inquiry into Bus Services after the Spending Review.
17. The use of higher (and more widespread) parking charges – particularly in the peak – in central areas should be explored as a means of both increasing patronage of public transport services and helping to fund their provision.

Park and Ride

18. Park and Ride (P&R) can be very effective, but only if combined with parking controls in city centres and bus priority measures to give uncongested access to the central area for the buses serving the scheme. However, many P&R schemes require public subsidies both for the capital and operating costs. Such subsidies are generally justified on the basis of congestion relief, reduction in central area space required for car parking and environmental benefits, for which no monetary transfer to public transport budgets is made. Not only is the expansion of the coverage of such schemes under threat but the Institute understands that some existing schemes could be closed.

Smarter Choices and Travel Plans

19. Recent research suggests that a major effort to promote **smarter choices**, which encompass a range of interventions at organisational and personal level to increase awareness of travel choices and promote use of healthier and more environmentally friendly options can have a significant impact. Smarter Choices includes programmes such as School, Workplace and Personal Travel Planning.
20. **Travel Plans** at major traffic generating locations (workplace, hospitals, schools, etc) can be highly effective by encouraging car-sharing and the use of non-car modes. They need to be well thought out and provide alternative means of transport if the car-share arrangement breaks down on a particular occasion (some schemes offer free tax rides home in these circumstances). They require a major staff effort by the local authority in collaboration with

[2] They can therefore provide additional capacity (compared with growing car use) to support growth in the central area economy of cities.

major employers and Chambers of Commerce. Increasing the use of cycling also requires the provision of secure cycle storage and shower/changing facilities at places of work.

21. If applied on a large scale, smarter choices initiatives are labour intensive and local authorities may not be able to afford the cost in the current financial circumstances. Indeed, it is our understanding that this is an area in which local authorities are planning to cut back substantially as part of the required cuts in their spending which appears perverse in both economic and environmental terms as the Benefit:Cost ratios for, for example, the DfT's Sustainable Travel Towns programme have been estimated at a minimum of 4.5 to 1 and probably significantly more, comparing very well with many highway improvement schemes which are being allowed to proceed.
22. Given rising travel costs (bus fares, train fares and fuel costs) and the increasing pace and dexterity of IT applications smarter choices might also explore the opportunity for people to travel less e.g: by staggering their journeys more or working from home or from a base closer to their home location

Traffic Control Systems

23. Most large cities already use efficient systems to manage their traffic lights (mainly the SCOOT dynamic control and TRANSYT fixed programme systems). But all systems need regular review and updating to ensure that they are operating in an optimal fashion. This requires both funding and a high level of technical skill, both of which are under threat with the current austerity measures.

Management of Streetworks and Accidents

24. Recent studies by Transport for London (TfL) have brought out the disruption caused by streetworks (particularly by the multitude of utility companies with rights of access), as well as by accidents and other incidents. All need to be managed more efficiently. We need to gain experience from large-scale introduction of lane rental for streetworks and the rapid management of accidents, learning from the Highways Agency's Traffic Officers (as well as the management of incidents on the M6 Toll).

Inter-urban roads

25. Congestion occurs on motorways and trunk roads mainly at peak times in the vicinity of major cities. It is caused predominantly by peaks in car traffic, particularly commuting to work. In the short to medium term, hard shoulder running coupled with greater lane discipline and regulated speeds (managed motorways) can increase capacity at relatively low cost. Speeds are reduced to 50mph or less, but journey times are improved and more reliable.
26. These measures will buy some time, but because of long lead times for the construction of new capacity, policies need to be formulated now to deal with further traffic growth. Moreover, the closer system is running to capacity, the lower its resilience to incidents and poor weather, leading to increasing and more frequent delays, and thus unreliability.
27. Apart from increasing capacity (including hard-shoulder running and other "managed motorway" techniques) or introducing peak time charges on the motorway itself, reducing congestion on motorways is unlikely to be achievable without measures to manage levels of peak hour urban commuting.
28. CILT's view is that the Government cannot therefore discharge its responsibilities for the proper management of motorway traffic and the efficient movement of freight without taking an interest in the management of urban car commuting. Conversely, it would be wrong to try to control motorway traffic (for example by ramp metering) without considering the impact on local roads, taking account of the local demands upon them as well as the requirement to distribute traffic from the national network. Motorways and trunk roads form a key part of many metropolitan area networks and should be managed as part of an overall strategy agreed by both local and central government, the latter acting through the Highway Agency.

Fuel Tax and Road User Charges

29. Some people suggest increases in fuel duty as a way of reducing overall traffic growth. In our view this would be unfair and inefficient. People travelling at off-peak times and in rural areas already pay more than the external costs of their journeys and road users generally pay more in fuel duty than would be justified as a carbon tax. Moreover, as the use of electric cars becomes more widespread, an unfair distinction will arise between electric car users, who make no contribution to the cost of providing and managing the road system through fuel duty, and petrol or diesel users who do. This distinction might be thought reasonable in the early days of electric cars, as a means of encouraging their use, but in the medium to longer term it will be grossly inequitable.
30. Apart from unfairness, higher levels of fuel duty would affect all journeys, including those in places and at times where and when there is no reasonable alternative to the car, and would not have a sufficient effect on peak hour congestion, where very large increases would be needed to reduce external costs to an efficient level. Electronic charges for road use related to distance and time would be much fairer as well as economically more efficient.
31. CILT has long advocated fair pricing for all road users. Although the Government has decided not to introduce a national road user charging scheme, it has not said that individual local authorities cannot do so. The powers for local authorities to introduce local road user charging are still on the Statute Book[3]; and if a charging scheme appears to be more effective and fairer than other measures (workplace parking levies, for example) local authorities could still promote it. They ought certainly to examine the option in broad terms so that proper comparisons can be made. Charging has the potential to provide a local funding stream to support capital investment in local transport schemes. In an era of increasing localism and lower central government grants, the alternative to road user charging may be one or a combination of measures and effects including higher local council taxes, higher local parking charges, poorer public transport, increasing congestion and travel time unreliability, and deteriorating roads.

Enforcement

32. Many of the measures identified in this evidence depend on effective enforcement. Effective in at least three respects:
    i. the necessary legislation is in place and is beyond reasonable challenge when applied properly.
    ii. levels of non-compliance are low – sufficiently low to discourage some from deciding that non-compliance is worthwhile, because the combination of the chances of being caught and the impacts of the penalties when caught are less than the disbenefits of compliance.
    iii. the costs of enforcement are low, and are at least offset by the revenues obtained.

33. These requirements serve to emphasise the key roles the Department must continue to play, both legislative and technical, and to do so at a high level of professional competence.
34. They also discriminate between the suitability of some of the measures we have outlined in this Evidence. For example, the ROCOL Working Group that advised the first London Mayoral candidates on how they might use the charging powers provided under the Greater London Act (1998) concluded that the provisions of the Act would make enforcement of Workplace Parking Levies with London very difficult, and costly. It is also important that enforcement does not need to involve the police, that measures can be enforced using civil proceedings, as is the case where parking and bus lane use offences have been decriminalised.

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[3] These powers for road charging have not so far been widely used with the Central London Congestion Charging Scheme and small access control schemes in Durham City and the Derbyshire Dales being best known. Nottingham City Council is considering the alternative of workplace parking levies.

Localism and the Role of Central Government

35. CILT welcomes and supports the devolution of powers relating to transport and land use planning from Central to Local Government. It considers that too many powers and functions have moved from Local to Central Government over recent decades. However, to be effective, it is essential that local authorities have greater financial independence, in both the raising of funds (both capital and revenue) and in their expenditure, as well as in their ability to adopt policies best suited to their locality. The Institute is of the view that much more needs to be done in both areas.
36. But, it is essential that Central Government provides the support Local Government requires to fulfil its responsibilities. The Institute is very concerned that the Department for Transport might use "localism" as a rationale for cutting many support services, including research and the development of frameworks that Local Government needs. In particular, the Institute is concerned that the Department ensures that the legislation, both primary and secondary, required by Local Government, is prepared and managed through the Parliamentary processes in a timely and efficient manner. The Department can stand back from the development and implementation of local policies but it cannot, it must not, stand back from its critical enabling role. Similar requirements apply to the Department of Communities and Local Government.

Summary

37. In conclusion, we believe that there are alternatives to road user charges to tackle congestion. But whereas road user charges can produce substantial net revenue, the alternatives generally tend to cost money. Resources for such measures are in very short supply. Thus we regard including road user charges in the set of measures considered in tackling congestion as being even more crucial in the current circumstances than when money was more plentiful.

February 2011

Supplementary evidence from the Chartered Institute of Logistics and Transport in the UK (ETM 36a)

1. At its oral session on 29th March, the Select Committee asked whether bus lanes reduce congestion. The short answer is that bus lanes generally reduce congestion in terms of the aggregate delays to people (not necessarily vehicles) using a road but may well increase the length of traffic queues, depending on the circumstances. It may be helpful to the Committee if we set out in more detail why this is so.

2. The basic mechanism by which bus lanes can reduce congestion is by making bus services more attractive and bringing about a mode shift from car use. As a well-occupied bus can carry far more people than a car, buses can transport more people into city centres and other key locations than cars, a key policy consideration when vehicular traffic demand exceeds the capacity of the local roads. To illustrate this point, if all the passengers now travelling by bus into city centres were to switch to cars, there would in most cases be a large increase in congestion and in many places the roads would not be able to cope. Conversely, if people now travelling by car switched to bus, there would be a fall in the vehicular demand for road space.

3. But there are some very important provisos to this:

   a. A bus lane may reduce capacity for other traffic on the section of road containing it. Delays to other traffic are often minimised by stopping the bus lane short of busy junctions (the main constraint on capacity in cities). For the bus lane to have a positive economic impact there needs to be a regular flow of well–patronised buses whose passengers benefit by more than the disbenefit suffered by car users. However, there are also likely to be environmental benefits resulting from any significant switch from car to bus.

   b. In some cases (of which examples were referred to in paragraphs 12 and 15 of our initial memorandum) the bus lane will reduce congestion for other road users as well. For example instances have been recorded where the discipline imposed by the bus lane (principally through stopping lane switching) actually improves the flow of other traffic through saturated junctions.

   c. But in some of the cases we cite, the initial drop in congestion led to a growth in non-bus traffic leaving the local congestion the same as before. Much of this extra traffic was found to have switched from other congested routes, but it is also possible that some traffic was generated rather than transferred, a familiar consequence of creating (actually releasing in this case) additional highway capacity.

   d. The detailed design of bus priority measures is important. If the demand for non-bus traffic is great enough, bus lanes can cause traffic to block back to junctions further back, which prevents the buses from getting to the bus lane in the first place. This can be mitigated by using techniques like traffic signal priority for approaching buses or segregated “bus advance” lanes giving buses earlier green signals than general traffic at the preceding junctions – such techniques have been used successfully in London, York and elsewhere.

4. As a general observation, bus lanes (or other traffic management measures for that matter) implemented in isolation are rarely as effective as packages of complementary traffic management measures implemented together on a route or

corridor basis. A good example of this is the London Bus Priority Network implemented by the London Boroughs in partnership with Transport for London.

5. The way to avoid the problems of generated or transferred traffic, referred to in paragraph 3c above, and to reinforce the mode switch from car to bus, is to use demand management measures to discourage car use in congested areas and keep overall traffic levels comfortably within the capacity of the network– for example by restricting the supply of all-day parking and/or increasing the price. The most successful park and ride schemes do this:

April 2011

Written evidence from Jonathan Smith (ETM 37)

It is with utter amazement and deep concern I learn that on the 20th May 2011 the Devon and Cornwall Constabulary are to remove, without a contingency, dedicated Roads Policing patrols from the two counties. These officers work to deny criminals the use of the road by enforcing the law, reducing road casualties, tackling the threat of terrorism, reducing anti-social use of the road, enhancing public confidence and reassurance by patrolling the roads. They also engage with members of the public, spread a positive message about road safety and target those who seek to spread death and misery on our roads.

As a tax payer, I have over the years seen an increase in the council tax aimed at ensuring the Chief Constable of Devon and Cornwall is best able to provide a safe environment for me to live and go about my daily life. The high number of fatalities and serious collisions that were evident on our roads over the past decade has shown a steady decline during the last two years as a result of the high visibility roads policing patrols that the traffic and dedicated firearms officers provide. This has been enhanced by the provision of a balanced and proportionate response by the Safety Camera Partnership. These changes are being driven through purely from a financial and budget saving point of view, are shortsighted and will result in the “safer roads” trend being reversed.

The integration of these officers with the local community has been vitally important, intelligence lead taskings and an adherence to the last Government’s policy on local neighbourhood policing has been of immense importance. Indeed, the policing of the major arterial roads and motorway was very often the only contact and visibility that commuters had with the police, so to remove this dedicated high visibility patrol is a damning indictment of the current reforms. It also provides a very real danger to the local residents as well as the many tourists that visit our two countries.

The loss of the more experienced police officers under regulation A19 is undoubtedly going to have an impact on policing, combine this with the removal of new officers entering the service due to a ban on recruitment the future looks anything but rosy. To expect to an adequate response from the remaining police officers will have to mean that their shift patters are changed so they work longer, their workload more taxing which will have a profound effect on their morale and sickness levels. This will compound further a reduction in the service to the public caused by a cynical and politically motivated attack on the front line policing, by the Force, in response to what it sees as enforced budget cuts.

I would ask that these plans are urgently reviewed prior to the launch date of 20th May 2011, to try and prevent the loss of experienced roads policing officers which will be difficult to redress. It would also be prudent for the Police Authority to provide assurances that a timescale is considered to monitor this proposal in order to ensure there is no escalation in anti social driving and road collisions, which would result in an increase in those seriously injured or killed on our roads.

January 2011

Written evidence from Tony Wyer (ETM 38)

I would like my views to be taken into account with the consultation on traffic management that is going on.

As a disabled wheelchair user I have great problems trying to get about anywhere it may be either at home or on holiday in the UK.

The problems arise from inconsiderate motorists who continually park on pavements (as my enclosures prove)[1] or over dropped kerbs. This is a daily occurrence and very annoying if I want to go out. I can be forced to go back home as there are not always dropped kerbs for me to get off the pavement, or forced to use the road to which my wheelchair is not licensed as it only does 4mph.

The problem is nationwide and needs to be treated so by legislation, not leaving it to the local authorities (Police or Highways authorities) as they do not want to do anything as it is not a priority to them but it is a priority to us wheelchair users, to which the government wish to turn a blind eye.

All it needs is the wording changed in the Highway Code from “do not park over dropped kerbs or park on the pavement” to “you must not park on the pavements and dropped kerbs”. As I have said this problem causes problems all over the county in every town/city and village and needs a national decision and a national solution.

This may not be in your preferred version but this is the first time I have filled in something like this and the only way I can see of getting my point over.

I hope you will see your way to include this problem in your deliberations and make our lives that little bit easier.

February 2011

[1] Not printed

Written evidence from the Institution of Engineering and Technology (ETM 39)

Effective Road and Traffic Management

1.1. The Institution of Engineering and Technology is one the world's leading professional bodies for the engineering and technology community. The IET has over 150,000 members in 127 countries and has offices in Europe, North America and Asia-Pacific. The Institution provides a global knowledge network to facilitate the exchange of knowledge and to promote the positive role of science, engineering and technology in the world.

1.2. This evidence has been prepared on behalf of the IET Trustees by the Transport Policy Panel. The IET would be pleased to provide further technical assistance and evidence as part of this inquiry.

Summary

1.3. The Eddington Transport Study shows that a 5% reduction in travel time for businesses and freight can lead to a reduction in costs of £2.5 billion and through general reduction in traffic levels and the derived benefit of more predictable journey times on the road network, around £7-8 billion of GDP per annum could be generated. The Department for Transport in estimating the feasibility of introducing a national road pricing scheme, suggested that time savings and the value of increased journey reliability could total £12 billion a year to the UK economy.[1]

1.4. Such examples show the increasing need for traffic management schemes and measures which can reduce congestion. Such schemes need to be developed with the user in mind, with the impact of road and traffic management schemes on drivers and the wider public being properly addressed as part of any project. This would ensure high levels of compliance, an understanding of the rules and an appreciation of the unintended consequences that may arise.

The prevalence and impact of traffic congestion and likely future trends

1.5. In December 2006, Sir Rod Eddington submitted his Transport Study to government. The study looked at the long term links between transport and its impact on the UK's economic productivity, growth and stability. The report shows that 73% of passengers and 65% of freight travel are moved using the UK road network.[2]

1.5.1. The report used figures from the 2001 Census and the National Travel Survey 2005, which showed that of the 30 million commuters in the UK, 55% of their journeys are destined for large urban areas and over 52% of business journeys start or end in the 22 largest urban areas.

1.5.2. Within freight, 72% of journeys are over 100kms, with their surface access routes to ports and airports, often being the same routes shared with urban and inter-regional passenger traffic.

1.6. Looking to the future Eddington makes some stark observations. If no action is taken to address congestion, there will be a 31% increase in road traffic and a

1 Feasibility Study of Road Pricing in the UK: A report to the Secretary of State for Transport, DfT, July 2004
2 The Eddington Transport Study, December 2006

30% increase in congestion, which would waste £22 billion worth of time in England alone by 2025.

1.7. The cumulative impact of all this will be an increased cost to business of £10 billion a year, a cost of £12 billion in wasted time for households and 13% of road traffic being subjected to stop-start travel conditions, primarily in urban areas where most journeys take place. It should be acknowledged that the recent recession may have slightly reduced these figures but the overall trend is still valid.

1.8. Additional figures for London, the UK's largest urban area, show that with no intervention there would be up to a 20% increase in vehicle delay by 2031, and with both funded and unfunded intervention measures and projects taken into account, up to 14% increase in vehicle delay.[3]

1.9. International examples such as the 100km traffic jam in Beijing which lasted for almost two weeks, demonstrate that where no alternative plan exists for motorists, traffic congestion will get worse. There, a combination of freight from Inner Mongolia and urban and inter-regional passenger traffic, combined with scheduled road works, led to 11 days of stop-start traffic. Such examples illustrate the need for government and local authority action to manage congestion, but also crucially information sharing with the wider public around traffic disruptions and changes.

1.10. The availability of efficient transport is a heavy influencing factor in overseas businesses decision to invest in new offices and employment in the UK. A report by PricewaterhouseCoopers came to the conclusion that "transport infrastructure stimulates FDI inflows to a country, since companies looking to invest will benefit from better accessibility and reduced transport cost."[4]

The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so

1.11. The Department for Transport in its published Business Plan for 2011-2015, has made clear its intention to 'no longer micro-manage', but there is a clear distinction between fostering development where a national solution is more practical and involvement on a day to day basis. With the financial pressures facing the public purse and local authorities, concerns must be raised about who will be tackling traffic congestion.

1.12. National networks are managed by the Highways Agency, and are interlinked with local routes, yet evidence suggests that little joined up management or strategic planning exists between the two and where it does (such as the Highways Efficiency Liaison Group), the focus is on finance and funding not strategic planning. As we have seen in the example above from China, if we leave it to the individual traveller nothing will get done. The Government has a clear role to play as arbiter at least in the interim, to ensure more strategic planning in congestion hot spots.

1.13. The Highways Agency through its work *Tackling Congestion by Influencing Travel Behaviour* (centred around 'Travel Plan Schemes' and 'smarter travel choices'), has tried to engage with the public and local authorities to develop a package of measures to reduce reliance on cars, tailored to each individual

3 Mayor's Transport Strategy, May 2010
4 Transportation & Logistics 2030 - Volume 2: Transport infrastructure, PricewaterhouseCoopers, 2010

area.[5] However the evidence is that traffic congestion is still going up and will continue to rise.

1.14. More effective measures must be pursued such as achieving a modal shift to public transport, which is one method of tackling congestion; additional measures include ensuring delivery of a more reliable journey using existing road space. The Government should proactively engage with bodies which can contribute smart systems to achieve both outcomes without the need for more road space, and encourage the development, testing and deployment of such systems nationally.

1.15. Despite the examples across the country of schemes being used to tackle congestion, there does appear to be an element of short-termism and limited leadership in both current and past government strategy. Road user charging on a national scale has been ruled out (aside from HGV's) by the current government as a measure to tackle congestion.

1.16. The evidence from large urban areas (where the majority of journeys commence or terminate) demonstrates that such schemes can be configured to work in some cases. The Government should make it clear to local authorities, that where traffic congestion is a key problem, they should not rule out some element of congestion charging, if it would encourage modal shift to public transport or changes in behavioural patterns (e.g. travelling outside rush hours or car sharing).

1.16.1. In London with the introduction of congestion charging, traffic has been reduced by 21% and a shift to public transport of 6% has been recorded during charging hours. In Stockholm, where a similar scheme was piloted in 2006, there was a 20% reduction in traffic and a subsequent referendum, after the pilot, asked residents if they wanted to keep the scheme and this was won with residents in Stockholm voting yes.[6]

1.17. There is also an important role for information and data sharing if we are to alleviate congestion. The second Quarmby Report on Winter Resilience, published in December 2010, highlighted the improvements made by some local councils in providing up to date traffic information on their websites, including traffic cams, state of roads and opportunities to sign up for updates via text and social media.[7] However, such action is undertaken by motorists at a time of urgency i.e. if they can't leave their homes, rather than before a standard daily commute.

1.18. While the actions of local councils who have taken measures to upgrade the information provided to road users must be applauded, more needs to be done to share information between local authorities and between the traffic agencies and local authorities, so that a unified and real-time system is available to road users when needed. If a local authority is unable to support its own traffic information service then at minimum it should make the underpinning data available to potential users, as advocated by the EU Directive on deployment of Intelligent Transport Systems.

1.19. The most important part of congestion management is reliability and the ability to plan journey times, local authorities do not generally have the expertise

5 Highways Agency, http://www.highways.gov.uk/knowledge/9575.aspx
6 Road User charging Fact file, The Institution of Engineering and Technology, 2010
7 The Resilience of England's Transport Systems in December 2010, David Quarmby CBE, December 2010

to consider and implement such systems. The Government must do all it can to ensure such services do not suffer as a result of reduction in local authority funding. There is also a key role for the Government to play in setting standards and ensuring openness of data, to allow the 'Digital Economy' to develop information sharing solutions.

1.20. The commuting environment has changed profoundly over the last few decades, such activity can no longer be done by humans alone as it is now too difficult. Managing traffic today demands intervention, as it is too difficult for the large numbers of very independent individual drivers and it requires management on much larger areas than was the case 5 years ago, local and national networks have to be linked and co-managed as a result. All of this requires Government intervention to set the technical standards and the management frameworks to ensure effective operation.

The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code

1.21. In most professional walks of life, where an exam is required to receive certification to practice, Continuous Professional Development forms an integral part of ensuring existing knowledge is kept up to date. Unfortunately such CPD is lacking for car users (for practical reasons), and a culture has developed which requires road users to pass a driving test and not necessarily to learn to drive a car, the lack of respect for rules (i.e. 'they are for everyone else') is also a key issue that needs to be tackled.

1.22. The Quarmby Report raises questions about the general understanding amongst the public around the realities of snow and ice on roads. Driving lessons and tests take place in normal weather conditions and because increasingly drivers are taught to just pass the test, this has a knock on effect on future knowledge levels outside 'normal' conditions.

1.23. Driving has become an ever more complex activity, the pass rate for driving tests is on a constant downward trend from 63% in 1935 to 43% in 2003-2004[8], questions have to be raised about the 18 year old who passes their driving test today, who can be expected to drive for over 50 years without receiving any update on changes in the environment in which they are allowed to drive, or any information being provided on changes to the law. It is also worth noting that the DfT Business Plan states the Government will no longer 'waste money' on ineffective national advertising and marketing campaigns.

1.24. The Highways Agency implemented a scheme on the A14 which uses average speed cameras to monitor compliance with the national speed limit. This is an example of speed camera use which has delivered some results in mitigating road traffic accidents. Since their installation in 2007 on the Bypass between Huntingdon and Cambridge, the fatality rate has remained at zero and delay caused by incidents and roadworks has decreased in both directions. However, the increase in traffic flow has lead to a marginal increase in recurrent delay attributed to the total weight of traffic.[9]

8 Driving Standards Agency, http://www.dft.gov.uk/dsa/category.asp?cat=344
[9] A14 Huntingdon to Cambridge Safety Cameras - LNMS Evaluation Report, Highways Agency, July 2009

1.25. An independent review commissioned by the RAC Foundation[10] on speed cameras, found that:

1.25.1. they lead to a considerable reduction in speed and collisions in their vicinity, which has persisted over time. One study in West London showed a reduction across the wider road network beyond the area of the camera

1.25.2. there was an increase in speed recorded at sites where speed cameras were clearly out of action.

1.26. Of course, compliance can only take place in a system where the rules are known and ideally uniform. The Highways Agency currently sets speed limits for motorways and trunk roads, with various traffic authorities able to set the speed limits on other roads. In the UK, speed limits can vary from 20mph to 70mph. This wide range creates the conditions for confusion, especially when the limitations of driver knowledge mentioned above, are factored in. For example there are currently signs for maximum speed limits, speed limit zones, speed limits on motorways and minimum speed limits, including differences in the national speed limit between single and dual carriageways and rules on speed limits where roads with differing speed limits intersect at a junction.

1.27. If road users are to be expected to self-comply with speed limits, steps need to be taken to ensure people know what the rules and speed limits are; this may not be as straightforward as it seems. There needs to be an acceptance by policy makers that drivers are human and as such are fallible. On that basis a safety system needs to be created where traffic management is looked at as a whole, where driver exposure to risk is designed out and minimised, rather than one which looks at issues in isolation.

Intelligent traffic management schemes, such as the scheme which has operated on the M42 and their impact on congestion and journey times

1.28. The M42 Managed Motorways, Active Traffic Management Scheme is an example of an innovative scheme which uses a combination of controlled motorways, hard shoulder use and ramp metering, to develop a solution to traffic congestion. The evidence of its success is well documented, which includes a 24% reduction in average journey times, 27% improvement in journey reliability and a rollout which was 40% cheaper than building an extra lane. Personal injury accidents also decreased from 5.1 to 1.8 per month.[11]

1.29. Such a successful scheme works because the driver is actively engaged in complying with the rules; the Highways Agency should be encouraged by the government to be more creative with other uses of traffic management, including the planned rollout of more Managed Motorways schemes.

1.30. Localised control schemes exist such as SCOOT, which is used in many large urban areas, the implementation of which has an average reduction of around 20% in traffic delay. SCOOT is an adaptive traffic control system. It coordinates the operation of all the traffic signals in an area to give good progression to vehicles through the network. Whilst coordinating all the signals, it responds intelligently and continuously as traffic flow changes and fluctuates

10 The Effectiveness of Speed Cameras – a review of evidence, A report by Richard Allsop for the RAC Foundation, November 2010

11 As reported by Mike Wilson from the Highway's Agency at the IET's Management Motorways event, December 2010

throughout the day. It removes the dependence of less sophisticated systems on signal plans, which have to be expensively updated.

1.31. Data collected from such schemes could be used to better understand the relationship between congestion, demand, management measures and emissions. Such information, currently not often used by traffic managers, could be useful to the general public to inform in-trip decision making.

1.32. Getting the most out of roads needs an integrated network approach and a network-wide management approach, which means an ICT based system. Traffic control centres operated by human monitoring, can't cope with the volume and changes in traffic congestion any more than the national air traffic control system can run with just air traffic controllers and no automated computer monitoring systems.

The impact of bus lanes and other aspects of road layout

1.33. One of the most effective ways to reduce traffic congestion would be through a modal shift from cars to public transport where such capacity exists. This would free up space on the road network for non-passenger journeys such as freight. Buses are an efficient way of transporting passengers in an urban setting when compared like for like with cars. To ensure that buses do not suffer from the same plight of traffic congestion (which would reduce their overall benefit); bus lanes are used to reduce delays for public transport.

1.34. Even where bus lanes operate, there are opportunities for innovation. Just as signals on the rail network can be used to prioritise express trains over local services, signals can be used to divide up the bus lane network into blocks, to allow cars to use bus lanes when no buses are nearby. Several aspects of such a system already exists, buses in some UK urban areas update the countdown timers at bus stops using GPS, they could therefore update roadside signals or in car systems, to make them aware of their position in advance and as such clear that section of the bus lane of car traffic. This concept is not dissimilar to the hard shoulder running aspect of the Management Motorway Schemes used on the M42.

1.35. Other innovations include allowing taxis to use bus lanes, however as mentioned earlier, a uniform and consistent approach across an area is needed. The Newcastle experience of 'no car lanes' is an example of bad practice, with differing rules for different times of day, different councils opting for different rules on what constitutes a 'car', and virtually no traveller information provided in advance of a necessary lane change. All this has the effect of a system being created, which causes much confusion for the road user. Compliance levels can be expected to fall under such a system and the net effect is less effective traffic management.

February 2011

Written evidence from the Transport Planning Society (ETM 40)

Introduction

1 The Transport Planning Society (TPS) has as its key aim: to facilitate, develop and promote best practice in transport planning and provide a focus for dialogue between all those engaged in it. In pursuing this TPS has regional and national branches, holds regular seminars and meetings, supports the Transport Planning Professional (TPP) qualification, and runs a bursary scheme for young professionals. The elected Board takes responsibility for policy development and planning the society's core events programme.

2 This submission responds to the call for evidence on "*effective road and traffic management, in the light of the Government's decision not to introduce road pricing on existing roads (except in relation to HGVs)".*

3 Our first observation is that this is potentially a huge subject area, and we have therefore attempted to structure our response to the specific questions in a framework which distinguishes between the demand for road traffic, and managing whatever traffic results from that demand. Road user charging (RUC), parking space management (for which there are even more options than RUC), and HGV user charging seek to manage demand, but of course the demand in the first place comes from the interaction between land use and human activity (the latter often closely linked to economic activity).

4 TPS thus always starts by recognising that land use and transport need to be seen as processes that need to take place at the same time and interactively. Strictly speaking, transport should always include communication, because much (though not all) of transport is designed to achieve this purpose.

5 While the argument that land and transport planning must be considered together is familiar, if still widely ignored, the inclusion of communication gives a clue to possible changes in future patterns of demand. For example there is clear evidence throughout the developed world that the "connected culture", especially the linking of smart mobile phones and the internet is having a major impact on young people's attitudes towards owning cars and learning to drive. The percentage of younger people who hold full driver licences has fallen quite significantly over the last decade[1]. This is no longer a "right of passage" nor is owning a car so vital in terms of defining status[2].

6 The second observation is that the way in which people pay for passenger transport, and how they perceive that cost, is a key factor which influences travel demand. Public transport is often charged at average cost per journey, although there is now a large bus constituency paying nothing for local travel, while the marginal cost of car use has traditionally been low, with high entry costs plus annual charges for ownership. The introduction of car clubs is now providing evidence that wider choices are made (usually with lower overall levels of car use) when the system of charging is closer to that for public

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[1] For example see the National Travel Survey 2009, Table NTS 0201, reproduced at the end of this submission

[2] For example see the Financial Times 1st October 2010, *Alternatives: Mobile phone generation cools on cars*

transport. It will also influence the balance between physical movement and other means of communication.

7 A final general observation is that costs should not be defined simply as those currently represented in the market. Managing demand has major benefits in terms of reducing congestion, but also in terms of lower environmental damage, in particular greenhouse gas emissions. In passenger transport the former is likely to be more important. It is also surprising that little account is taken of how even the current changes in technology will mean that car engines are far less polluting in congested conditions in future, often zero. Pollution will become less associated with congestion and the arguments for cycling or walking for shorter journeys will have a greater emphasis on health benefits.

8 For freight, the failure of some of the heaviest goods vehicles to pay their infrastructure and environmental costs has distorted the bulk and the long distance freight markets for some considerable time. Congestion is also an issue, particularly since the methods for measuring the road space occupied by such vehicles do not distinguish fully between small HGVs and the largest articulated vehicles currently permitted on the UK's roads. The anomaly which causes the largest non-UK HGVs to avoid their marginal road user costs has received wide publicity and underpins the Coalition commitment to Lorry Road User Charging (LRUC). The wider failure to meet such costs has received less attention so far.

9 There is thus an argument for changing the pattern of user charging as a first step, and for relating these better to those costs which are external to the users' current internal costs and perceptions. Smart card ticketing is an interesting example of how even a modest move away from perceiving costs per journey for public transport (as well as convenience and boarding benefits) can change mode choice[3].

10 Charging for external costs also has the advantage of producing short term revenue and creating better balance between demand and capacity in our transport networks.

11 We now consider the specific questions raised by the Committee.

Committee Questions

Q1 The prevalence and impact of traffic congestion and likely future trends

12 It remains true that the road network overall runs very far below its capacity, for example at night and in rural areas for much of the day. Congestion at specific places and times usually reflects an economic activity, of which the journey to work is the most obvious. It is interesting to observe that the very high costs often attributed to congestion do not result in more behavioural change, for example staggered or flexible working hours.

13 It is also important to distinguish between different types of congestion which are often merged into a single term.

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[3] A recent UK example of this is the effect of introducing the Oyster card in London.

14 One occurs where high levels of traffic on a road network may flow at speeds comparable to that at a lower level, but will be more vulnerable to disruption and loss of capacity. This is not just in terms of reported incidents such as traffic accidents. One vehicle can slow down slightly, or manoeuvre, and cause a major impact on hundreds of other vehicles where cars and lorries are travelling close together at speed[4]. In this sense disruption may not necessarily occur, but is much more likely.

15 Traffic engineers rely on a continuous relationship between higher levels of traffic and lower speeds – the speed flow curve. This can be confusing because lower speeds should mean less braking distance between vehicles (headway) and thus higher capacity despite lower speed. This is very important in answering the Committee's later question on intelligent traffic management. It should be noted, however, that the benefits of managing and reducing speed can show up poorly in appraisal because it may lower the theoretical average speed used in most modelling. What it can do is increase capacity and reliability (resilience).

16 The final stage of a speed flow curve is where traffic becomes so high that flow breaks down in an irregular manner, and instead of higher flows leading to lower speeds, both flow and speed fall together. The speed flow curve is thus a horizontal U shape. This is what most people recognise as serious congestion, with stop start conditions, severe delays and unpredictable journey times. The latter have become particularly important for the road freight industry.

17 As stated earlier, congestion is most likely where economic activity is high, and thus the potential costs are high. The impact is not just to cause longer journey times on average, but to make them less predictable. Future congestion trends will rely on the extent to which:

- transport and land use planning are undertaken together, rather than one depending on the other
- non-RUC methods of demand management (including land use guidance such as limits on parking provision) are introduced, both by local and central Government
- roads are actively managed, including speed, entry flows and accidents.

Q2 The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so

18 Given the answer above, congestion can be mitigated, although it is unlikely to be eliminated. Intervention can thus be justified, although in a country with a very extensive road network (as Eddington recognised) this requires demand management as well as traffic flow management.

19 If there is a criticism of the pure economic approach to demand management represented by RUC, it is that more change could be achieved more quickly using other, often cheaper, methods, and that such change could be made in a more equitable manner. This is typified by the push-pull approach (which is probably now called nudging) where one type of behaviour is made a bit less attractive at the same time as another is made a bit

[4] On motorways this is often referred to as the "wave" effect.

more attractive. The combined effect is much stronger than the two actions undertaken separately. The successful combination of parking management and pricing with travel planning was documented in DfT research in 2002 and confirmed by many studies since.

20 There is one important aspect to such policies which are often locally based. It is that there has to be a national framework for any push type polices otherwise there will be a so called “rush to the bottom” in terms of authorities seeking to attract new development. This is clear in terms of parking standards, and was one of the key reasons for setting maximum standards in planning guidance such as PPG13. It should be noted that these were intended to be further strengthened through Regional Transport Strategies. This need for a clear framework also applies to more comprehensive area wide parking management, including pricing. In this context the Society is working with other professional bodies in the Green Light Group, which has been considering the potential for schemes which guide parking provision of all types, and manage it, by price and other means, across a wider area.

21 Given the Government’s desire to reduce congestion, and its rejection of a national RUC scheme, it is crucial that legislative obstacles to such area parking plans are removed. It would, however, be possible to make them conditional on other policies, such as travel planning, to produce the push-pull effect. Charges would create funds for travel planning and transitional costs, such as priority measures or short term public transport support.

22 In terms of last summer’s member survey, it is interesting to note that for local charging schemes with a demand management element, a charge placed on all parking, including retail, was virtually as high as workplace parking: 3.27 compared to 3.30 (both out of a maximum score of 5).

Q3 The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today’s road users of the Highway Code

23 This is a very specific matter on which we have not conducted our own research and do not wish to comment.

Q4 Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times

24 Given the analysis in paragraphs 14 to 17 above on the nature of congestion and demand management, the Society supports this approach as a contribution to improving capacity, but just as importantly, reliability. It probably has lower risks in terms of traffic generation or diversion, although we would like to see this monitored and properly researched as schemes are implemented.

Q5 The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004

25 While supporting the responsibilities on local authorities to manage road networks, including use by utility companies, we would wish to see a greater emphasis on:

- the responsibility to assist all traffic, including those on foot or cycle[5]
- the need to manage demand as well as ensure "expeditious movement of traffic"
- wider financial powers to manage demand through charging schemes other than RUC (see answer to question 2 above).

26 In last summer's member survey their priorities for transport spending placed far greater emphasis on active management of the trunk road network (25.4%) than expanding it (8.6%). This of course reflects the fact that building new capacity has less and less impact as the base network increases in size and can even be counter productive. This helps to explain why mature networks tend to be managed rather than expanded.

Q6 The impact of bus lanes and other aspects of road layout

27 This is potentially another very extensive subject. We wish to limit our evidence to two key points.

28 The first is that the quality, inventiveness and level of response to local conditions and the knowledge of local people is crucial to successful bus lanes, cycle or walking schemes, and changes to junction layouts. In terms of trunk road signing and design this is often of a high technical standard. We would wish to see included a greater emphasis on informing the driver and encouraging careful and considerate behaviour within the maximum speed limit and lower as required by driving conditions. Given the remit of the Society, it would be wrong not to point out the importance of maintaining and developing the highest possible level of skills in the transport planning and engineering professions at local and national level.

29 The second is that the provision of bus lanes in particular has seen major advances in the past few years. A route based approach rather than addressing congestion "hot spots" has enabled planners to prioritise buses with lower impact on general traffic, for example through queue relocation and distributing traffic more evenly. In fact, this can have benefits for other road users, including car users and pedestrians. It is important that these techniques are fully understood by local people as well as professionals and this is an area where more work is required. It is also the case that it is hard to reflect modern bus priority in road network models, and this may be undermining their performance when it comes to appraisal. This is another area we have identified where further work is needed.

Overall Conclusions

30 If the Government wishes to tackle congestion without Road User Charging it must undertake a range of actions.

- This should start by ensuring that land use planning fully takes into account the long and short term effects on transport demand. This is widely recognised as important but still not implemented in terms of decision making "on the ground".

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[5] For example, pedestrians are included in traffic but this is in a definitional note at the end of section 2 of the 2004 Act

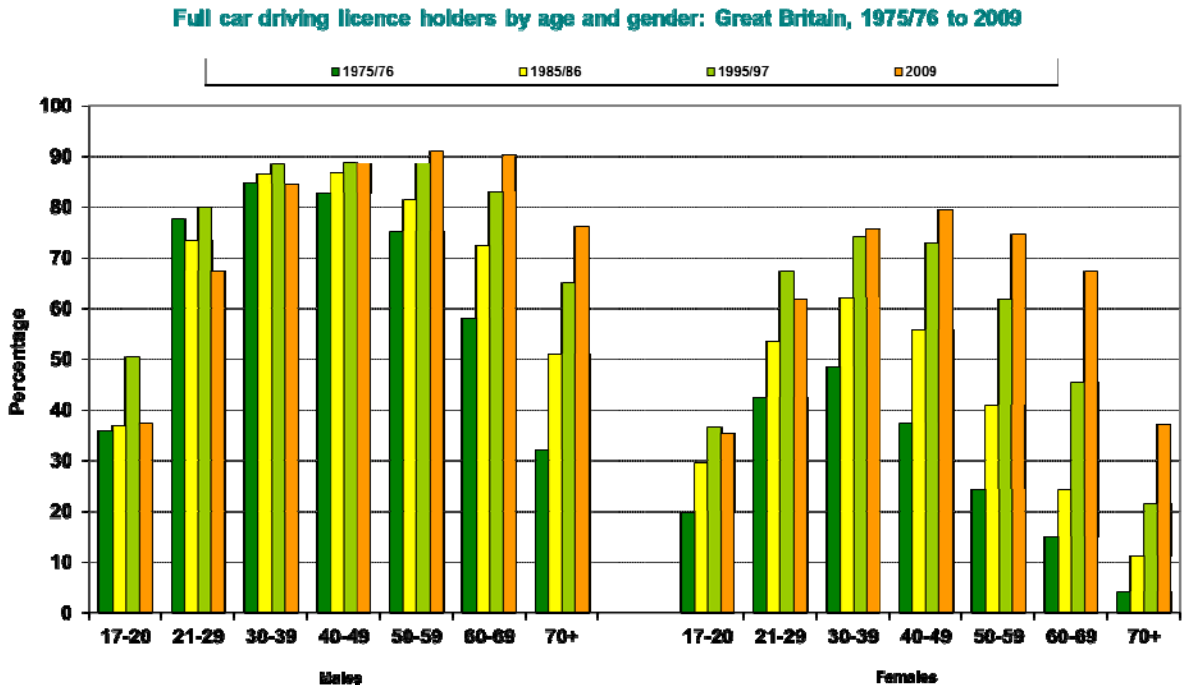
- In the immediate future the most effective approach would be comprehensive area parking control and charging for all types not just at the workplace.
- This must be combined with a pro-active and well funded travel plan covering at least the same area as the parking control.
- It is important that such areas do not simply control urban centres, but a wider catchment, to avoid damaging conflicts between such centres and out of town developments.
- This will help to define and then support a range of initiatives which may include priority measures for public transport, walking and cycling. However these should follow on from the results of the travel plan and not seek to pre-empt it.
- Transport authorities are best placed to develop these plans and they could be funded from parking charges.

31 National Government will, however, need to define a clear framework to avoid one local authority creating a context in which introducing demand management in other authorities becomes politically impossible. In this sense the apparent relaxation of national parking standards sends all the wrong messages.

Annex

Figure referred to in paragraph 5 above

Table 0201 from the National Travel Survey



February 2011

Written evidence from the AA (ETM 41)

THE VIEWS OF THE AA

1. Introduction and summary

1.1 Throughout its 106 year history the AA has been looking after the interests of drivers. It has sought to improve the condition of the roads they drive on, looked after their safety and campaigned to ensure they are treated fairly. The AA is the UK's largest motoring organisation. It engages with its members through numerous communication channels, ranging from the internet, a mailed magazine, direct contact by letter, telephone and through polling. The AA 'members' panel' which comprises of 170,000 people, who agree take to part in monthly AA/Populus surveys on a range of motoring issues, was created in 2008. The panel is the largest dedicated motoring opinion panel in Europe. The AA website also hosts a motoring discussion 'zone'.

1.2 Private motoring is an essential part of 21st century life and is something people continue to aspire to, and even enjoy – although it is certainly no longer a luxury and should not be treated as such. Motoring is the main form of transport for 86% of passenger journeys. Many people are dependent on the car and the mobility of the car benefits society in many ways. However, congestion and unreliable journeys are a significant problem for motorists and businesses. The 'quality' of the roads is also an issue for members. In a survey in February 2011, 81% said that road surface condition had deteriorated over the last three years (57% said it had deteriorated significantly). The way that roads are managed is also a key issue for drivers. In AA/Populus research 72% said they did not agree that the Government and local councils were doing all they could to facilitate road use. A majority of AA/Populus panel members support the construction of new and improved roads. Motorists accept they must pay for their motoring but resent being seen as a 'problem' and oppose unjustified escalation of costs such as fuel, road tax, parking charges and road pricing. AA members often have very differing views on many of the key motoring issues.

1.3 The UK's road system is critical to the national economy and at local level to daily household life, business vitality and social need. Most trips, even ones by rail, involve a road element and the majority are completed entirely by use of roads. At local level there is a feeling that congestion is a fact of life and that nothing can be done to alleviate it. Roads are by far Britain's most extensive and comprehensive transport system – nothing can replace them in terms of fulfilling households' and businesses' needs for goods and services distribution and also for providing access to education, work, pleasure and a myriad of other things.

2. Comments on specific issues raised in the call for evidence:

2.1 The prevalence and impact of traffic congestion and likely future trends

2.1.1 Traffic congestion is a daily fact of motoring life for many drivers in the UK. At peak travel times numerous vital road links are often reduced to a slow crawl. Routes to and from most towns and cities are often congested, and even our motorways suffer congestion in places, often at key interchanges, with traffic often backing up onto the motorway traffic lanes. This is a common occurrence just yards from our office in Basingstoke where the limited capacity of the adjoining road network junction often forces traffic to queue on the M3 – this situation has existed

for decades despite (never fulfilled) plans for a major improvement to the Black Dam roundabout. In economic terms this is very wasteful to business and individuals and it also impacts on traffic safety as standing traffic on motorways is potentially very dangerous. This is just one example of a situation which exists throughout the UK.

2.1.2 An AA/TrafficMaster study in 2009 found that in the first 8 months of 2009 1,700 accidents and incidents resulted in over 5,000 hours of motorway closures. The following were identified in the study:

Top Ten Motorways closed (Jan-Aug 2009)

M25 (closed for 206 hours)
M1 (189 hours)
M6 (179 hours)
M5 (153 hours)
M40 (124 hours)
A1(M**)** (74 hours)
M4 (73 hours)
M62 (53 hours)
M2 (48 hours)
M11 (41 hours)

Other notable closures outside the top ten were in Scotland, the M74 (29 hours) and M8 (25 hours).

The M32 near Bristol suffered from 12 hours of closure as did the M3.

2.1.3 It is perhaps unsurprising that UK roads suffer more congestion than many other EU countries. We have a dense pattern of roads which often follow centuries old routes, we also have a large driving population and public transport networks often lack penetration and frequency. Our inter-urban routes have largely by-passed communities, but we have not upgraded our local roads anywhere near enough to reduce congestion hot spots.

2.1.4 The AA believes that congestion will continue to blight journeys in the UK and believes it will worsen as the economy moves out of recession. The reduction in road building and improvement in the last decade will undoubtedly lead to a worsening of congestion in the next few decades. Even our motorways will not be immune as the policy of 'making best use' could backfire when the recovery is fully under way and traffic levels start to grow again – perhaps more rapidly than in previous times of economic cooling and prosperity.

2.1.5 Congestion is wasteful to the economy and bad for the environment. The AA estimates that an average petrol car, consumes 0.72 litres of petrol per hour and each litre produces 2.36kg of CO_2. Therefore 1000 cars idling in a queue for 10 seconds would produce 4.7 kg of CO_2. Five days a week and 48 weeks a year, they would produce 1.128 tonnes of CO_2 while stationary.

2.2 The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so.

2.2.1 At local level there is a feeling that congestion is a fact of life and that nothing can be done to alleviate it. As mentioned above traffic congestion is wasteful to the

economy and unhelpful in terms of achieving our CO2 targets. Highway authorities have a legal duty under the Traffic Management Act 2004 to act expeditiously to facilitate the smooth flow of traffic for road users. They should indeed intervene to make this happen. However, the AA believes that not enough is being done to evaluate and minimise congestion at national and local level. Some progress has been made in monitoring journey time reliability on the worst 100 or so strategic roads but even here some of the improvements have been due to less traffic over the last few years not road management and construction. In some instances improvements to journey time reliability occur simply because road works have ceased.

2.2.2 Solutions, particularly at local level, are often simple and straightforward, for example re-phasing traffic lights, making junction improvements, widening roads or cracking down on disruptive road works. To some extent the relatively new role of 'traffic manager' within local highway authorities is helping, although we think there is considerable variation in the importance this is given from authority to authority.

2.2.3 The AA believes in the importance and integrity of a national traffic signing system and does not support wholesale abandonment of national standards and local variations. Drivers must expect key types of traffic sign to be the same whether they are in Bradford or Brighton especially as failure to comply can result in a traffic offence or perhaps an accident. Many traffic signs are not 'clutter' but are essential for directing or regulating traffic. Temporary signs to events like those erected by the AA are essential traffic management tools which can be erected and removed quickly and fulfil a useful traffic management function.

2.2.4 The AA has supported the role of Highways Agency traffic officers but thinks more should be done to improve incident management on motorways. Numerous initiatives have been promised but so far a number remain to be fully implemented for example, privacy screens to prevent 'rubber necking' at accidents, proper signed diversion routes around key motorway junctions, quicker accident investigation and variable speed limits at motorway road works. We welcome recent adjustment of motorway central barriers at some key points to allow trapped traffic to be released and think this should be rolled out fully. We remain concerned about the 'welfare issues' which occur when motorways are closed for long periods and people are trapped. The biggest complaint from people in these circumstances is lack of information. The AA also supports the need for the quicker closing of key motorway slip roads to prevent traffic joining already blocked motorways.

2.2.5 Some argue that demand management measures are the only way to reduce traffic congestion and manage roads efficiently. They include road pricing/congestion charging and workplace parking levies as prime examples. However, these measures are deeply unpopular and lead to significant unintended consequences, for example pricing those, who can least afford to drive, off the road.

AA/Populus polls have found that:

- 45% oppose national road pricing
- 42% support the principle of 'pay as you go' motoring
- 86% do not believe government would deliver any promised quid-pro-quo reforms to motoring taxation if road pricing was introduced
- 67% are opposed to local congestion charging schemes
- 78% in the NW opposed local congestion charging schemes (Manchester)
- 68% in London opposed local congestion charging schemes

- 84% agreed that a workplace parking levy was simply another way of taxing people who work

2.2.6 The Central London congestion charging scheme initially took around 20,000 private cars off the road in the morning peak, in traffic flow terms this is a very small number. Traffic congestion did reduce but this was mostly because 'complementary measures' were introduced to improve traffic flow for example, junction improvements, the re-phasing of traffic lights and the removal of road works. However, congestion levels are now back to the level they were before the scheme started, despite a continuing small decline in the number of private cars entering the central area in the morning peak. In Central London the speed of traffic has not changed significantly in almost a century, largely because of all the activity involved in servicing a capital city - buses, delivery lorries, taxis, building works, road works, incidents, events and so on. Traffic problems are not all due to private motoring - many other cities in the UK also experience this to a more limited degree.

2.2.7 Bona-fide and fully accredited roadside assistance organisations are granted 100% discount from the Central London congestion charging scheme. This is because their role is regarded as being crucial in keeping London's streets moving, through delivering prompt service to vehicles broken down at the roadside. This concept could be extended by allowing these defined organisations to use bus lanes to enable them to reach and deal with breakdowns in traffic quicker than at present. It could apply to bus lanes across the UK.

2.3 The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code.

2.3.1 It is interesting that much is made of driver attitude and behaviour in Britain. However, despite anger and concern with the 'irresponsible minority', UK road accident casualty statistics are at record low levels and are the best in Europe. This does not mean we can be complacent.

2.3.2 It is also often said by some that car drivers are selfish and only comply with traffic rules and laws which suit them. This generalisation is far from the mark and the majority of drivers do their best to comply and understand. However, this compliance and understanding often requires considerable effort on the part of drivers. Traffic rules, road systems and parking arrangements are often highly complex. With heavy traffic flows, congested urban areas and busy motorways it is sometimes not surprising that driving is a complex task. Highway authorities are also devising increasingly complex traffic management schemes, signing programmes, and restrictions on movement – sometimes these schemes go against the grain of 'natural' motoring behaviour. A good example is bus lanes which sometimes do not allow sensible left turning behaviour – drivers may want to decelerate smoothly without impeding the flow behind them – but to avoid getting a penalty notice drivers are forced to say in their lane until a break in the bus lane, which often occurs very close to the left turn.

2.3.3 Some say that road user culture and behaviour should actually be 'allowed' to flourish more – for example, by encouraging the removal of traffic lights, road markings, safety railings, and developing the concept of shared space. In an AA /Populus poll carried out in April 2009, 73% disagreed with the shared space concept (55% disagreed strongly). This view is perhaps an indication that British drivers expect to be controlled and regulated and prefer this to potential chaos and possible danger.

2.3.4 The AA supports experimentation in a search for more radical traffic management measures that could make our streets less cluttered and more pleasurable to use for by road users. Quite clearly these measures must be carefully tailored to traffic intensity.

2.4 Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times.

2.4.1 The AA has supported the active traffic management scheme on the M42. In an AA Populus survey in August 2008, 50% supported hard shoulder running under controlled conditions (Active Traffic Management, ATM), 29% opposed this (15% opposed strongly) and 17% were neutral.

2.4.2 However, the AA maintains that ATM is not a panacea and is concerned that putting considerable emphasis on this policy may be storing up problems for future generations. We believe that the capacity gain from ATM is quite limited and does not match full widening of a motorway (although it is acknowledged that in a time of austerity this may be a cheaper option). The problem with ATM is that benefits are relatively short lived and as traffic continues to grow widening an ATM motorway will actually be more difficult.

2.4.3 There is no doubt that the ATM scheme on the M42 has been popular with drivers by smoothing traffic flow and improving journey time. However, it has fortunately not been 'tested' in severe accident conditions. A further downside of ATM is that it has the potential to urbanise a rural motorway which might actually be left more rural if it were just widened by one lane.

2.5 The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004

2.5.1 The length of time involved in implementing the above legislation has been significant and is very disappointing for road users. They have been subjected for decades to highway works which have often been carried out at the convenience of utility companies and at the expense of the road user. The permit schemes which are now evolving, and even the prospect of lane rental schemes in places, are both very welcome and overdue.

2.5.2 The AA remains concerned that disruption caused by works is still unacceptable and fails to consider the economic cost of delayed road user journeys. It seems that we are in an impossible spiral in that the regulated utility companies must keep customers bills down, get huge value for money from their sub-contractors who dig up the roads and must do this whilst trying to minimise disruption to road users and with the prospect of charges on their street activities. It is perhaps not surprising that many are struggling to meet all these objectives and we believe the easiest one to renege on is service to the road user.

2.6 The impact of bus lanes and other aspects of road layout.

2.6.1 The AA has welcomed the removal of the M4 bus lane which was implemented to 'make a point' rather than introduce and encourage new express coach services. It did not succeed as a new breed of public transport scheme or a traffic management measure – in fact it led to longer journey times outside the peak. There are probably many similar less high profile bus lanes like this in authorities throughout the UK. The AA believes bus lane proposals must withstand economic

scrutiny in that there must be a high number of passengers carried and buses using the bus lane to justify removal of a traffic lane which is available to all road users. Research by TRL some years ago showed that sometimes buses themselves are delayed by upstream queues created by bus lanes themselves. The AA believes many bus lanes could be converted to car-share lanes and given the high cost of fuel this would encourage more to car share.

February 2011

Written evidence from the Joint Authorities Group (UK) (ETM 42)

1 The Joint Authorities Group (UK) [JAG(UK)] welcomes the opportunity to provide written evidence on the prevalence and impact of traffic congestion and likely future trends and, in particular, the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.

2 JAG(UK) represents all 200+ Street and Road Authorities in Street and Road Works matters relating to the New Roads and Street Works Act: 1991 and the relevant parts of the Traffic Management Act 2004.

3 JAG(UK) is the mechanism through which Street and Road Authorities are represented on the Highway Authorities and Utilities Committee(UK) [HAUC(UK)] which in turn advises the Department for Transport and the Government in Street and Road Works matters.

4 The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.

5 JAG(UK) would draw the Committee's attention to the Halcrow Report: Evaluation of Traffic Management Act 2004 dated 16 August 2010 which was commissioned by the Department for Transport.

6 Representatives from JAG(UK) were interviewed by Halcrow on 18 November 2009 at which JAG(UK)'s basis as to the effectiveness of the legislation provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004 was presented. (A copy of the relevant section is attached – Annex A)

7 This basis follows:

7.1 JAG (UK) believes that the Traffic Management Act (TMA) was borne out of frustration with the inability of stakeholders to embrace the requirements and spirit of the New Roads and Street Works Act (NRSWA). Although the provisions NRSWA were enough to deliver successful management of works in the highway, these were not fully embraced by authorities nor accepted by undertakers.

7.2 The TMA has been introduced to enhance the NRSWA as a mechanism to improve the management of activities on the road.

7.3 Unfortunately, there has been a delay in the implementation of a number of provisions within the TMA and the original NRSWA which would have improved further the management of activities on the road.

7.4 One example of the delay is the updating of the Inspections Code of Practice. The present Code of Practice was introduced prior to the TMA and does not allow for the sample inspection of street works on the highway in respect to overrunning works or permit conditions; permits being introduced in the TMA. Updating of the Code would also introduce more effective procedures with dealing with poor safety

measures and defective reinstatements both of which are a major factor in the disruption of the movement of all traffic on the highway.

7.5 Fixed Penalty Noticing (FPN) was also introduced in the TMA. Although the FPN system is of a sound basis and has improved the timeliness and accuracy of information provided to a highway authority to allow him to carry out his coordination duty more effectively, the system is flawed in that non-payment of an FPN cannot be pursued. Where payment has been made, often the cost (and an additional administration fee) is passed onto the undertaker's contractor; this does not encourage the undertaker to take on his responsibilities in respect to complying with the legislation.

7.6 One area that is of concern and that does have a direct bearing on the effectiveness of a Local Traffic Authority to carry out its Network Management Duty is that of the availability of being able to monitor the performance of undertakers in complying with the legislation. Within England, highway authorities use proprietary software to manage their Street Works Register; one of the main tools for the effective management and coordination of works on the highway. The proprietary software is supplied by a number of software houses and, due to inconsistencies and short comings in the legislation, this has lead to a number of compatibility problems that the software houses are not willing to address without further clarification of the legislation. This is leading to frustration amongst highway authorities as they are not able to collect full and meaningful data as to the performance of the legislation on their respective highway networks. One solution to this would be a central/regional street works register; a central register in Scotland has shown that accurate performance data can be collected and used successfully.

7.7 However, JAG(UK) does support the permit legislation introduced in the TMA. In the areas where this legislation has been introduced it has been found to be very effective in improving the behaviour of both undertakers and other bodies working on the highway in complying with legislation with the resulting increased effective management of a permit authority's highway network.

7.8 Permit schemes are only operating presently in three areas in England with another four or five areas either considering a scheme or are in the process of introducing a scheme. The legislation is presently very onerous for highway authorities to prepare schemes in both time and cost and this is one of the main reasons that there are so few schemes in operation at present. This is disappointing as permit legislation is seen as being the ultimate tool in improving the effectiveness of road management.

8 As noted previously, evidential data, that would support the above, is difficult to obtain due to the differing street works management systems and the inability to fully manage the system developers output.

JAG(UK) is currently working with the Department for Transport to try and redress this by bringing in a standardised reporting process and performance monitoring regime. Notwithstanding this, specific evidence can be gathered from highway authorities on an individual basis.

9 In respect to the legislation, two sections of the NRSWA that have not been enacted are those of s73A – E (introduced in the TMA) and s78.

10 S73A – E relates to contributions by undertakers to the costs of re-surfacing a road and s78 to the contributions by the undertaker to costs of making good long term damage.

11 It is the latter section that is of major concern and JAG(UK) would draw the Committee's attention to the Transport Research Laboratory's Published Project Report PPR386: A Charge Structure for Trenching in the Highway dated March 2009 which was commissioned jointly by Transport for London and County Surveyors' Society. (Copy attached for information.)

12 This report shows the impact of premature deterioration of highways as a result of utility trenching and the action by highway authorities in undertaking additional maintenance. This in turn has a detrimental affect on local authority budgets and increases levels of cost and inconvenience to the public and in particular the road user.

13 The provision in s78 of the NRSWA allows for the Secretary of State to make regulations requiring undertakers executing street works to contribute to the costs incurred or likely to be incurred by a street authority. As this section has never been enacted, highway authorities are having to return to rectify deteriorating roads on a more regular basis, due to insufficient funding, thus adding to further disruption to the highway user and added pressure on the public purse.

14 In conclusion, it is frustrating that it is difficult to get consistent evidential data that will be able to monitor the effectiveness of street works legislation in respect to road management. It is hoped that the present work by highway authorities and undertakers, with the assistance of the Department for Transport, will be able to provide system changes that will be able to show the actual effect that the legislative provisions have on road management.

Appendix A – Extract from Halcrow Report: Evaluation of Traffic Management Act 2004 dated 16 August 2010

6.1 Consultation with Joint Authorities Group (UK)

JAG (UK)'s belief is that the TMA was borne out of frustration because of the inability of stakeholders to embrace the requirements and spirit of the NRSWA. It considers the provisions of NRSWA were enough to deliver successful management of works in the highway but these were not fully embraced by authorities nor accepted by undertakers.

JAG (UK) hoped, and has promoted the TMA as a vehicle for driving improvement in managing activities on the network. However, 5 years down the line frustration exists at the protracted legislative programme and the delay in implementing provisions. An example of this would be the new Inspections code of practice. JAG (UK) finds frustration in the part the Department plays in the working group and the delay in turning the group's aspirations into draft regulations; a fundamental stumbling block in progress. There has been a lack of continuity in the Department resources resulting in repeated learning curves thus delaying progress and, as a consequence, allowing changes in political direction to water down parts of the proposed code.

JAG (UK) is frustrated that the legislation has failed to deliver the aspiration that the undertaker should be responsible for its activities. The FPN system is seen as being flawed in that non-payment of an FPN cannot be pursued and where payment is made then undertakers are simply passing the cost through to the contractor and, potentially, profiting by attaching administrative costs. This is viewed as a perverse behaviour and an example of where the legislation has failed to compel the undertaker to 'get it right'.

JAG (UK) would like to see a more joined up approach across government departments to the development of legislation that would help align the conflicting requirements of network management and street works control requirements with the regulation of undertakers.

JAG (UK) does not believe stakeholders have invested enough in staff, systems and training to deliver the core aims of the NRSWA. It also feels that undertakers invest to avoid rather than embrace the requirements. The almost inevitable squeeze on local authority budgets may result in even less resource for the management of street works that could well further exacerbate the problems. Consequently everything works on compromise. An example is the working groups established to develop codes of practice. Membership is made up of authority and undertaker representatives with diverse aspirations. Inevitably this leads to the compromise with neither side being truly satisfied with the outcome.

A specific example of the legislation not supporting the aspiration is in the area of first pass reinstatements. The Horne report recommended first pass reinstatements as a fundamental requirement of legislation. However NRSWA does not mandate this, but merely supports it providing the undertakers the opportunity to temporarily reinstate, which does not help with maintaining the integrity of the pavement or reducing unnecessary disruption.

JAG (UK) is supportive of permit schemes and believes it is this legislation that will be most effective in driving improved behaviour from undertakers. However it believes there could be many more schemes in operation if there was a greater interest and priority on TMA issues at a national level and if the process for applying for a permit scheme was simplified.

JAG (UK) constantly referenced the delay in the programme of secondary legislation as a barrier to progress and cited the retraction of resource by the Department as a major contributor. This delay is resulting in the TMA becoming an incomplete jigsaw with momentum being lost. Ultimately, JAG (UK) has the impression that there is a lack of commitment from the Department which is holding back real progress.

JAG (UK) provided comment on the individual NRSWA provisions of the TMA that have been commenced, although an over-arching concern was that government is not joined up in respect to the drivers in the TMA and NRSWA that focus on the better management of the network and those that work on it conflict with the drivers the undertakers face from their regulators. It does not believe self-regulation will work as there are too many undertakers operating in the arena. It believes the commercial responsibility these companies have to their

shareholders will always outweigh the desire to pay charges that would be voluntary if covered by self regulation.

With regards to the individual provisions, JAG (UK) commented as follows:

- **Increased fines**

  These provided for an initial focussing of minds by undertakers but the fact they can be passed on to the contractor provides for little, or no accountability from the undertaker. Here is also a disincentive to the authority to prosecute because the cost is prohibitive and any successful prosecution sees the fine go to HM Treasury rather than being reinvested in the authority.

- **Section 54 & 55**

  The ability to cancel or postpone works is seen as positive in respect to the administration of noticing systems, but it has had no effect on works planning practices. The practice of multiple works noticing continues and authorities are still left wondering where undertakers may be on the network on a day to day basis. It is believed the EToN Technical Specification does not deliver what the regulations and coordination code of practice intended in this respect.

- **Section 56 clarification**

  This is believed to have been a suitable clarification of the definition but JAG (UK) accepted the power is rarely used in a formal way because of informal dialogue and agreements that occur between authorities and undertakers on a day to day basis. It did again refer to the ongoing issues authorities face with noticing practice, citing weekend working as a big issue. It is felt that in modern times, where companies operate on a 7 day working week, that the NRSWA definition of the working day should be amended to reflect the same.

- **Section 56 (1)A**

  This is believed to be an important power but JAG (UK) again accepts it is rarely used. This power now provides an opportunity to clear diversion routes of works if an incident occurs on an adjacent route, something that can happen in relation to incidents on motorways and trunk roads, although highlighted that the timescales proposed by the Highways Agency in such instances are not always feasible.

- **Section 56 (A)**

  It was accepted that this power was very rarely used as there are few major infrastructure schemes undertaken and often this requirement is addressed in planning conditions.

- **Section 58**

  Authorities use the section 58 powers widely and consider the concept a good one. However the power is considered to be ineffective due of the many exemptions that exist. One improvement that is thought would be of benefit would be to include the ability to dictate the extent of reinstatement or tie it into the resurfacing regulations when they are developed.

- **Section 58 (A)**

  This power has not been used to any great extent, although JAG (UK) considers this a powerful option. However, JAG (UK) observed that there are currently few major infrastructure projects being undertaken. It was cited that if there was the potential for the authority to resurface during the potential embargo period then it is unlikely this power would be used.

- **Section 59**

  JAG (UK) noted this widening of the definition of relevant activities and suggested authorities vary the activities registered in accordance with their own requirements. Skips, scaffolds and building materials were mentioned specifically, and it was felt that the legislation allowing FPNs for such activities has continued to be deferred due to other issues being made a priority. However, an example was cited where an authority has implemented a scheme for skip and scaffold overstay charges that achieves the same result without the legislative support and it was suggested that commencing the legislation could have a detrimental effect on such initiatives.

- **Section 70**

  This provision is seen simply as a formalisation of general practice. JAG (UK) cited examples where LTAs have seen an improvement in the receipt of such information it was deemed that the impact, in general, has been neutral.

- **Section 95(A)**

  JAG (UK) cited the introduction of FPNs as a key provision to address the lack of response to NRSWA and also as one of the provisions which has had the greatest impact.

  JAG (UK) believes FPNs have, in general, had a positive impact. However, the fact that FPNs are not a debt that can be pursued, leaving prosecution as the only recourse for an authority is seen as a limitation. This has often deterred an authority in giving FPNs, particularly where they consider that Magistrates would see the issue as trivial. JAG (UK) consider that powers would be improved if the fine was a penalty charge notice, that is the offence was decriminalised in a similar way to those offences covered in Part 6 of the TMA.

  JAG (UK) also cited the inconsistency between the levels of penalty undertaker's face for similar offences. The example given was a comparison with section 74 charges. When an undertaker overruns works it can be charged up to £2,500 per day. However if the same undertaker begins works without a notice, or starts before the notified start date it will only receive a £120 (or £80 if paid early) FPN. However, the disruption caused is the same. JAG (UK) does not think this is right and does not drive the right behaviour.

  It is believed that FPNs have resulted in an improvement in the timeliness of notices. However, JAG (UK) questioned what is considered acceptable JAG (UK) believes that the target should be 100% accuracy as this is what legislation requires, however it believes the industry regulators accept 95% accuracy or, to put another way, the regulators accept a 5% failure by undertakers: this could be seen as condoning undertakers to commit NRSWA offences. JAG (UK) highlighted that whilst there was initially a surge in the improvement of noticing

as a response to FPN schemes, this has levelled off. It was noted that authorities are restricted by a lack of resource to drive further improvements in performance.

JAG (UK) is sceptical about whether the provisions have been implemented robustly and that the reason is the lack of perceived benefit to authorities or the travelling public. There is also a perception that a link to performance management needs including in regulations. JAG (UK) believes this is an area where more consistency between government departments. An example provided by JAG (UK) is in relation to inspections.

JAG (UK) cited that, with regards to parity, the legislation as it stands is not driving the right change (e.g. no requirement to notice local authority works). The requirement to place information on the register is too woolly and is open to interpretation; the industry understands the sentiment but needs positive wording to help drive the process forward.

Halcrow / TRL commented on the poor response from sample authorities to the request for management information from the systems. The information requested was considered to be normal management information that any authority would need to undertake effective management and coordination. It was expected that such information would be available at ‘the press of a button’. This proved not to be the case and JAG (UK)'s view was sought.

JAG (UK) confirmed its frustration with systems and the difficulty in acquiring robust or standardised management information. This was highlighted by a JAG (UK) exercise to collate performance data in relation to Section 74, whereby the lack of standard reporting between authorities led to difficulties. Requirements for variations to existing reports can lead to charges from system developers. JAG (UK) believes the system suppliers (EDG) have had too much of an influence. The systems and EToN Technical Specification should supply what the regulations and community require to facilitate effective network management, but the perception is that suppliers are able to dictate policy based on their priorities for software delivery. For example, assumptions that were made when the EToN Technical Specification was written have led to amendments to the codes of practice. JAG (UK) considers this to be back to front. JAG (UK) highlighted the issues surrounding the development of the EToN Technical Specification and street works systems as a fundamental problem since authorities rely on this information to manage their network.

Steps must be taken to get stakeholders to embrace the legislation and drive system suppliers to deliver the solutions. One solution would be the development of a central street works register. It is accepted this was tried and discounted in the late 1990s; however, this was a fundamental recommendation of the Horne report and has proven to be successful in Scotland.

JAG (UK) considers performance management is resource constricted and would encourage the Department to deal directly with the funding issue or take steps to protect funding streams.

JAG (UK) accepts that, whilst individual authorities do measure performance collectively there is some work to do. However, they referred back to the issue with data quality resulting from the systems and the different interpretation taken by different suppliers. It is essential that the system suppliers are engaged to provide the solutions to meet the needs of the community rather than being able to influence policy.

JAG (UK) has been influential in the development of the HAUC (UK) advice note on performance management. However, concern was expressed that since publication certain parties are undermining the philosophy of authorities identifying what is important to them (in

consultation with stakeholders) that is promoted by the advice note in favour of developing a set of national indicators.

JAG (UK) also commented on the difficulty authorities face when dealing with the Highways Agency. The Highways Agency will not register its own works and, whilst authorities are only obliged to place data on the register, it is felt the Highways Agency should consider the advantages it would have if it were to do so. The strategic road networks are the busiest roads that pass through many authorities and the impact of works and incidents and subsequent diversion onto an authority's highway network can have an immense effect in increasing disruption.

JAG (UK) suggest that there is a need to undertake a review of all legislation to ensure consistency between control and regulatory. There is also a need to bring forward legislation to deal with long term damage. This is seen as a top priority for JAG (UK) which will assist both local and national government in funding issues. JAG (UK) stated that the public purse is picking up a too higher proportion of the costs and a balance needs to be found. Placing more costs into the private sector increases customer choice.

Specifically, JAG (UK) mentioned the following as aspirations they have for improvement:

- Development of legislation to enable authorities to proactively manage active works (100% category A inspections).
- Simplification of the requirements for Permit Scheme applications.
- Introduction of a different process for the development of Codes of Practice. The current working group process only aids the compromise solution.
- Preparation of a structured business plan including a robust business case that has the buy in of all stakeholders – the Department / local authorities / undertakers, with an agreed timeline which is adhered to by all.
- Consideration of a central street works register.

February 2011

Written evidence from CTC, the national cyclists' organisation (ETM 43)

Introduction

1 CTC, the national cyclists' organisation, was founded in 1878. CTC has 70,000 members and supporters, provides a range of information and legal services to cyclists, organises cycling events, and represents the interests of cyclists and cycling on issues of public policy.

2 CTC believes that cycling is a powerful, but currently greatly underused alternative to private car use for a wide range of journeys, particularly in urban areas. In part cycling is little used because current road and traffic management policies have been ineffective, allowing private car use to grow unimpeded for decades. This has created powerful disincentives to cycle, in particular due to fear of injury when using the road network.

The prevalence and impact of traffic congestion and likely future trends.

3 Journey time reliability is now the preferred means of measuring a successful transport system and congestion is the main means by which journey time reliability declines. However, for cyclists, even in heavily congested inner London, Transport for London has found that journey time reliability is extremely good, with exceptionally consistent journey times recorded over a range of journeys.[1]

4 Cycling can also contribute significantly to reduced congestion. It is the most efficient way to use a single carriageway lane – 14,000 cycles per hour can pass compared with just 2,000 cars.[2] Use of cycles is also a much more efficient use of other public spaces – 8 cycles can be parked in the space required for 1 car.[3]

The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so.

5 Congestion is not the only economic cost that results from the failure of transport policy over the past 50 years. The Department for Transport/Cabinet Office concluded in 2009 that in urban areas (where virtually all congestion occurs) the economic cost due to congestion represents just 22-29% of the total, with the damage to public health from crashes, poor air quality and physical inactivity likely to be around 3 times greater than the economic damage from congestion alone.[4]

6 With that in mind, CTC suggests that the biggest priority should not be the alleviation of congestion, but the improvement of public health. To achieve that

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[1] Transport for London Road Network Performance & Research, *Traffic Note 11: Cycle journey time reliability.* 2009

[2] Botma & Papendrecht, *Traffic operation of bicycle traffic.* TU-Delft. 1991.

[3] Lee, A., March, A. Recognising the economic role of bikes: sharing parking in Lygon Street, Carlton, *Australian Planner*. 47(2). 2010. 85-93.

[4] DfT, *The Future of Urban Transport.* 2009

requires not the reduction of congestion, but the reduction of motor traffic volume and speed, the combination of which has created the polluted and unsafe environment in our cities contributing to a physically inactive, unhealthy and injured population. The reduction in motor traffic volume and speed will of course have the ancillary benefit of reducing congestion – but this should not be the sole objective.

7 Traffic volume reduction can be achieved by measures to reduce demand for travel, such as travel planning, congestion charging and workplace parking levies, whilst at the same time reducing the supply of infrastructure to support car use, through designing out car parking and reallocating road space away from private motor transport to public transport, walking and cycling. Examples of the latter include bus lanes, vehicle restricted areas, cycle lanes and advanced stop lines whilst systematically reducing on and off street parking.

The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code.

8 CTC is currently gathering evidence of poor road user behaviour through our 'Stop Smidsy' campaign (SMIDSY standing for 'sorry, mate, I didn't see you' – the perennial excuse of inattentive drivers). We are aware of a very high level of abuse of cyclists by motor vehicle users, ranging from inappropriate speeds and overtaking distance up to verbal and physical assault, usually carried out by passengers in cars. 74% agree with the statement that 'the idea of cycling on busy roads frightens me'.[5]

9 The antipathy of a certain minority of drivers towards cyclists is, we believe, one of the reasons why confidence in cycling has declined amongst the general population.

10 Despite many attempts by local authorities and other organisations to persuade people to take up cycling, participation rates have only increased very slightly, with 42% of the population saying they cycle, up from 39% 10 years ago, while trip numbers per person have remained constant. Over the last 8 years the proportion of those cyclists 'mainly using the road' has fallen from 46% to 37%, while those reporting that they mainly ride on off-road routes has increased from 39% to 52%.[6] This represents a failure of government policy towards sustainable travel due to increasingly hostile cycling conditions on our roads.

11 Accommodating cyclists in general traffic lanes requires specific measures to ensure safety and cooperation between road user types. For instance, the use of traffic detecting signals requires equipment to be sensitive enough to detect cycles, while phasing of lights must allow safe passage of slower moving cycles through a junction. If traffic management techniques fail to provide cyclists with a safe and adequate road environment, some cyclists may be tempted to disregard the regulations.

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[5] DfT, *Cycling Personal Travel Factsheet*. 2007
[6] DfT, *National Travel Survey*. 2009. Tables 3.13, 3.15

12 20 mph speed limits and zones create conditions more favourable to equitable sharing of the road. Their use on residential and community streets is recommended in recent Government guidance and supported by 75% of all respondents to one survey.[7] A growing body of local authorities appear to accept the need to shift to lower speeds, however many remain unconvinced that 20 mph speeds will be achieved without extensive physical traffic calming, the expense and unpopularity of which blocks this initiative. The supine nature of traffic law enforcement, coupled with a wilful abuse of speed limits has created a situation whereby half of all cars are still recorded as breaking the 30 mph speed limit – thereby creating a hostile and lawless feeling for vulnerable users of British roads.[8]

The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.

13 The New Roads and Street Works Act 1991 and subsequent initiatives have been motivated by a desire to reopen roads as fast as possible. Whilst laudable, this should not be pursued at the expense of ensuring that roads are neglected or reinstated below standard. Hasty, botched repairs of road hazards that rapidly reappear are commonplace and pose a particular problem for cyclists – around one in ten of the legal claims settled by CTC for its members occur as a result of road defects.

14 The failure of the Department for Transport to implement various aspects of the Traffic Management Act 2004 has meant that an opportunity to increase cyclists' safety and the comfort and benefits of cycling has been lost. Whereas the sections of the Act to decriminalise most moving traffic offences have been brought into force, those concerning driving and – even more seriously parking - in cycle lanes have not been. This means that police are still required to enforce mandatory cycle lanes, a duty they are reluctant to perform attentively in the many areas where they have no parking responsibilities.

15 Road maintenance doesn't just concern the disruption to the road network – road works badly damage the road surface leading to faster deterioration, of often requiring remedial repair. According to the Asphalt Industry Alliance's ALARM road condition survey: "20% of reinstatements [were] found to be [of] unacceptable quality. Remedying inadequate work consumes on average 13% of the road maintenance budget."[9]

The impact of bus lanes and other aspects of road layout

16 Bus lanes have proved a highly significant factor in reducing capacity for motor traffic, thereby locking in the benefits of other measures to restrain traffic demand. In order to provide a good quality facility for cycles, bus lanes must be at least 4.2 metres in width, to minimise conflict between buses and cyclists.

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[7] National Centre for Social Research. *British Social Attitudes: the 22nd Report.* 2005
[8] DfT, *Road Statistics 2009: Traffic, Speeds and Congestion.* 2010
[9] Asphalt Industry Alliance, *ALARM Survey*. 2010. p 12

17 Cycle-specific facilities can offer an improved experience, however, where used they must be of sufficiently high quality design (and maintenance) to ensure that the level of service to cyclists in terms of journey time is equal to or better than on-road alternatives. In any case, many cyclists will continue to use the road and adequate provision must always be made to allow cycle use of the road can be maintained.

18 Cycle lanes are generally less effective at reducing capacity for motor traffic than bus lanes. Indeed, part of CTC's reluctance to fully embrace the use of cycle lanes exists because lanes are seldom accompanied with policies to restrict parking and minimise traffic volumes. Where used, cycle lanes are often implemented as an afterthought, fitted in without regard to maximising comfort and safety for cyclists. Although guidance recommends a width of 1.5 metres, preferably 2 metres, only a tiny fraction of cycle lanes reach this standard, with many falling far below.[10]

19 Many cycle facilities, be they off or on road, suffer problems at junctions. Facilities such as off-road paths or advanced stop lines may lead cyclists into a position which is both objectively and subjectively unsafe, especially at junctions. Often these circumstances are accompanied with unrealistic expectations that cyclists will yield to traffic, for instance where cycle paths intersect with minor side roads. It is this presumption of priority given to motorised traffic which CTC feels presents the greatest barrier to providing high quality facilities for cyclists. An statement in guidance and law that cyclists (as with pedestrians) be given priority at cycle track crossings of side roads would greatly decrease latent opposition to these facilities.

20 Build-outs and pedestrian refuges in the carriageway can also create pinch-points, narrowing the available carriageway width to a point at which drivers and cyclists cannot safely interact. The use of such facilities can create conflict between road users and contributes to the feelings of hostility which acts as a barrier to cycling for so much of the population.

Examples of successful local traffic management

21 CTC is aware of several excellent examples of local traffic management that has successfully reduced motor traffic use – an objective we believe highway authorities should be aiming to achieve.

London's Congestion Charge

22 By far and away the most successful traffic management scheme in recent years has been London's Congestion Charge, the implementation which has been accompanied by huge changes in traffic, including massive increase in both public transport and cycle use, with the numbers of people cycling into central London in the morning peak more than doubling since 2003, with an annual

[10] DfT. *Cycle Infrastructure Design, LTN 2/08*. 2008

average increase of 15%. Over the same time 15,000 fewer people have driven into central London and 15,000 more have cycled.[11]

Vehicle restriction in Cambridge

23 Despite huge developments on the city outskirts and intense pressure on space, Cambridge has successfully restricted motor traffic growth in the city centre, allowing a very high level of cycling to be maintained. Cambridge meets and even exceeds levels of commuter cycling common to much of the rest of northern Europe, with 26% of residents cycling to work at the time of the 2001 Census. Individual areas in Cambridge see a third of their employees or students cycling to work or employment.

24 This achievement has been achieved principally adopted has been to restrict access and deter motor traffic as much as possible, whilst maintaining access for cyclists and buses. In some cases this has been achieved with point closures, rising bollards, turning restrictions and contraflow cycle routes. All of these traffic management techniques are effective if they exempt pedal cyclists.

25 Cambridge has only quite recently allowed cycles back into the previously fully pedestrianised town centre. This has further improved network accessibility for cyclists, enabling a traffic free and direct alternative.

Filtered permeability

26 Restricting private motor vehicle access and giving priority to buses, cycles and pedestrians increases the attractiveness of these modes. One of the means to achieving this is by town centre vehicle restrictions such as those mentioned above. Another step is the design of residential streets to provide pedestrian and cycle access but restrict through movement of vehicles. These streets are then subjected to less noise and perceived risk, but if well designed can remain busy through levels of cycling.

27 The London Borough of Hackney has pursued the latter approach, gradually creating a residential road network which is fully permeable to cyclists but restricts motor vehicle use. This has involved opening up previously closed streets with short sections of cycle track.[12]

28 In Copenhagen, on one of the major cycling routes leading north from the city centre – famously with peak flows of over 35,000 cyclists per day – private car access is now restricted for a section of the route, with cycle and bus access maintained. In addition, the street features a 'Green Wave', allowing cyclists travelling at around 12 mph to ride all the way along the street without ever meeting a red signal. Cycle traffic increased by 15%, car traffic fell by up to 80% and bus journey times improved.[13]

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[11] Transport for London, *Travel in London Report No. 3*. 2010.
[12] Cycling England, *Scheme of the Month - Restoring Permeability for Cyclists, Hackney*. November 2007
[13] European Local Transport Information Service, *Revitalisation of Norrebrogade – one of Copenhagen's most important thoroughfares.* 2010

Barriers to implementing successful local traffic management

29 Ensuring permeability for cyclists can also be achieved by permitting contraflow access to one-way streets, particularly on quiet back streets. Elsewhere in Europe it is very simple to modify existing ‘no entry’ signs to permit contraflow cycling with a minimum of changes to road layout. It is considered entirely safe. In this country, however, the use of a cycle exemption with a ‘no entry’ sign is not permitted. Alternative solutions which allow cycle contraflow access either require expensive engineering or confusing sign changes. As a result many one-way streets persist where contraflow cycle access could be made with little difficulty or problem.

February 2011

Written evidence from Halcrow (ETM 44)

About Halcrow

Halcrow delivers planning, design and management services for developing infrastructure and buildings worldwide. Founded in 1868 and working through a global network of 98 offices, drawing on the skills of some 6,000 employees, we contribute to the construction, operation and maintenance of the built environment, and the protection, enhancement and maintenance of the natural environment. We take on the big issues that affect us all – water, transportation, energy, and creating places to live and work. Our work is guided by our ethos, comprising our values, our code of conduct and our purpose: to sustain and improve the quality of people's lives.

Introduction

1.1 The Transport Select Committee's inquiry looks specifically at "Effective road and traffic management", an area in which Halcrow has considerable expertise. The inquiry's terms of reference are framed "in the light of the Government's decision not to introduce road pricing on existing roads (except in relation to HGVs)". This submission of evidence responds to two of the issues raised for consideration within the terms of reference: these relate to the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004; and to the impact of bus lanes and other aspects of road layout.

1.2 Our evidence also gives consideration to the issues around the policy decision that triggered the Committee's inquiry; that is the decision not to introduce road pricing on existing roads.

The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004

2.1 The previous Government set out its future transport strategy in the Future of Transport White Paper, published in July 2004, which recognised the importance travel plays in offering real benefits to people and in contributing to building an inclusive society. The transport system helps underpin the international competitiveness of the economy. This does not, however come without a cost and the benefits of mobility and access must be weighed against the impact on other people and the environment, now and in the future.

2.2 The White Paper also recognised the need to account for the way in which travel was changing. The growing demand for the use of the country's road network by the travelling public conflicts with the needs of highway authorities and undertakers to occupy the road space in order to maintain and improve it. The management of this interface is crucial.

2.3 The New Roads and Street Works Act 1991 (NRSWA) has been in force since 1993 and provides the basis for highway authorities and undertakers to coordinate and cooperate in the execution of work. The fundamental principle of the legislation is that the undertaker would plan and execute work in such a way as is reasonably practicable to avoid unnecessary delay and obstruction whilst the street authority coordinates the activities to ensure that unnecessary inconvenience is not caused.

2.4 Despite this, conflict has continued between authorities and undertakers and consequently the Traffic Management Act 2004 (TMA) was introduced. This sought, amongst other things, to update the NRSWA legislation through clarification and amendment of some existing provisions and introduce new provisions to expand the powers available to street authorities.

2.5 In addition the TMA introduced the Network Management Duty on all local traffic authorities. This duty requires them both to secure the movement of traffic on their networks and to facilitate it on the networks of others. The TMA also introduced Permit schemes, which are structured to provide alignment and commonality with the base NRSWA but providing the street authority with a greater degree of control over undertaker's activities.

2.6 Halcrow believes the fundamental principle of NRSWA referred to above has been lost through the advent of initiatives arising from the legislation, such as the Section 74 overstay charging regime and Permit schemes. The plethora of secondary legislation and associated statutory and non-statutory guidance that supports it, in the form of codes of practice, has resulted in confusion. It has created an environment that is very controlled. Confusion reigns amongst stakeholders and there is no clear ownership to facilitate a positive development of a coordinated and cooperative approach; something that all the representative bodies maintain is an overarching aim for them all.

2.7 Halcrow believes the community itself, both street authorities and undertakers and their representative bodies (HAUC (UK) and the National Traffic Managers Forum) must grasp the issues and develop clear governance arrangements to assert a business structure to control or influence the behaviour of stakeholders, who could then in turn develop their own business rules that describe the individual approaches each will take to meet their objectives whilst having regard to the wider governance.

2.8 There has also been a fundamental failure in the implementation of the network management duty legislation with respect to performance management. Despite the duty being in place for more than six years and the fact that it includes the specific requirement for local traffic authorities to monitor their effectiveness and assess their performance; such monitoring regimes are not in place. There is no excuse for this. The community itself recognises that this has not been done and there is a need for a formalised structure for performance management that will promote an evidence-based approach. By taking such ownership the community can ensure the right behaviours are promoted and a culture of continual improvement is developed.

2.9 The recent Halcrow/TRL evaluation report on the TMA[1] made recommendations regarding the governance arrangements that could be developed to facilitate ownership, improve data accuracy, develop consistent approaches and measurable indicators, establish a robust reporting mechanism to identify good practice and areas of opportunity and share the same within the community. Such arrangements will start to establish the understanding of all stakeholders of the desired outcomes of performance management, rather than focussing on scores, which can encourage a ‘blame culture’ and be counter productive.

2.10 Whilst we understand the new Government’s desire to move towards an environment where there is less rather than more legislation, there is a case for the development of clearer but simpler legislation that will provide for the duties and obligations of all stakeholders to be simplified and facilitate the ownership by the community described above.

2.11 As we have already mentioned, the various initiatives that have been developed to ‘rectify’ the fact that the fundamental principle of the NRSWA has been lost has merely shifted the responsibility for the planning and execution of street works to avoid unnecessary delay and obstruction from the undertaker to the street authority. We believe this balance should be redressed. It is possible that a return to the fundamental principle of the NRSWA could do that, but this would require the undertakers discharging their obligations under Section 66 of the NRSWA and the street authority fully understanding and using the powers available to them to coordinate works and minimise the inconvenience to persons using the street. However history suggests that this desirable outcome is unlikely to happen.

2.12 We would suggest consideration is given to further development of the powers available under Section 74A of the NRSWA, or lane rental. By developing the lane rental scheme in such a way that drives a better consideration of the planning of works it will place the ownership for minimising unnecessary delay and obstruction back with the undertaker. By its nature, a lane rental scheme and the charging regime therein should be developed to ensure the charges an undertaker would face would reflect the real cost of the delay the works are causing. By focussing the charge in such a way that it is linked to a predicted delay which is, in turn, dependant on works and/or reinstatement category and an estimate of traffic volume, it will drive the correct behaviour from the undertaker to reduce the duration of works. Additionally, including punitive lane rental charges that

[1] Evaluation of Traffic Management Act 2004, Part 2 – Network Management Policy and Part 4 – Street Works, Final Report_0280, August 2010

tackle unnecessary occupation relating to defective workmanship and/or multiple phase works will reinforce that correct behaviour.

2.13 Such a self-enforcing scheme would also release the street authority resource to concentrate on network coordination. The combination of the two would result in coordination at both the micro and macro level. Each works on the network would be optimised in terms of minimising unnecessary delay and obstruction (by the undertaker) and the programme of all activities would be coordinated to maximise the availability of the network and contribute to the expeditious movement of traffic (by the street authority).

2.14 Careful consideration must also be given to the interaction of the various regimes available to manage the activities taking place on the network. As we have explained, some of the initiatives have shifted the responsibility for planning the works. As such, we do not believe a street authority would gain any additional benefit from operating lane rental and Permit regimes on the same part of the network. The additional effort required by the Permit scheme is negated by the self-enforcing philosophy of a lane rental scheme, with the perceived benefit in reducing occupation, whether it is necessary or unnecessary occupation, being the same.

2.15 Of course, the occupation of the road space by any activity has the potential to cause delay and obstruction. This applies to works for road purposes (local authority), street works (undertakers) and private development work. There is a case for having an independent body to control the road space.

2.16 The Scottish experience could perhaps lead the way, where the Scottish Road Works Commissioner is legally responsible for the Street Works Register and for the performance of all stakeholders. Such a regime could be replicated in England and Wales, with either a national Street Works Commissioner or regional commissioners, coupled with a central street works register. Whilst such a register has been considered but discarded in the past, we believe its merits should be reconsidered. There may be less expensive yet viable options available that would still provide the robust data set to underpin the performance management regime described earlier. Such robust data would also provide the basis for the development of future policies, whether that is by the community through self regulation or by the Government where there is a need for it to intervene with new or amended legislation.

The impact of bus lanes and other aspects of road layout

3.1 Whilst the number of bus journeys declined from the mid 1980s to the mid 1990s this decline has been arrested or even reversed in some areas over the past eight years. Bus mode share or patronage is rising in a number of areas where operators are providing frequent, high quality services and Integrated Transport Authorities (ITAs), public transport authorities and highway authorities are pursuing supportive, integrated policies. There will be fewer major local transport schemes as we enter a period of austerity. However the Government has acknowledged that buses will continue to provide the backbone of UK public transport. This is set against a forthcoming 20% cut in funding to bus operators available through the BSOG.

3.2 Thus bus operations need to be as cost-effective as possible for a number of reasons:

- efficient operations will allow operators to maximise the number of services they operate commercially, reducing the call on local funding through service subsidy agreements – this is important especially at a time when the availability of public finance is much reduced;
- efficient operations will offer the best opportunities for operators to maximise service quality;
- efficient operations will result in attractive service levels that will continue to provide the best means of attracting new customers – in particular encouraging people to switch from the car for some types of trip.

3.3 Whilst bus priority and other road public transport measures have formed the basis of many major scheme bids in recent years, key strengths of bus based measures are that they:

- can be implemented as one-off localised measures addressing a specific shortcoming on a route;
- are often relatively low cost measures offering good returns for modest levels of expenditure;
- can be easily matched with operator investment through statutory or non-statutory partnership agreements; and
- when part of a wider programme such as a corridor scheme can be implemented in phases according to the availability of funding.

3.4 There are numerous examples across the UK of successful individual bus priority measures. However there are three themes that appear to offer particularly good opportunities and that are in keeping with current constraints:

- getting the best from bus operations in urban centres – securing efficient and attractive operations that offer good penetration of centres. The Birmingham Bus Mall scheme, associated with the Big City Plan, is a series of proposals aimed at making bus operation in the city centre more efficient and more “legible” to users;
- getting the best from bus operations in urban centres – looking again at how buses penetrate urban centres. Some authorities are examining the creation of “bus spines”, often in pedestrian areas, with low emission buses sharing space at low speeds in areas where the public realm has been improved but where buses are forced to operate at low speeds, sharing space with pedestrians, cyclists and other road space users. Blackett Street in Newcastle upon Tyne is a good example where buses continue to operate but on a much reduced carriageway, thus maintaining penetration but at the same time reducing severance. Bus operators have generally been supportive of the proposals as they have enabled them to retain core penetration whilst improving reliability and safety;
- getting the best from bus operations in urban centres whilst managing the capacity of centres – the Nottingham city centre access scheme where, through a Statutory Quality Partnership, bus access to the city centre is rationed and regulated in terms of capacity and emissions levels;
- small schemes, good potential returns – park and ride “pockets” where parking areas are identified in urban catchments and promoted as park and ride sites that are served by high frequency passing services rather than dedicated services. Often on a weekday basis only, parking is at existing facilities that have capacity on a weekday such as sports centres, hotels or garden centres. The comprehensive park and ride system in Norwich grew from this type of initiative and the concept has been revived recently in Nottinghamshire;
- small schemes, good potential returns – increasingly bus lanes are also open to cars with two or more passengers – a more palatable form of bus priority that is now more easily enforced through camera technology. Many bus lanes in West Yorkshire are now open to shared cars.

3.5 A further category of highway that may result in gains in road network efficiency through public transport is the strategic or trunk highway network. The Highways Agency (HA) carried out

research in the early part of this decade and an important conclusion reached was that the interface between the HA and local highway authorities could be improved through better dialogue and partnership.

3.6 At present some of the operators of the Managing Agent Contracts for the HA are investigating how to integrate bus priority and traffic management initiatives that may have been realised on the local road network to similar effect on the strategic network.

3.7 The HA is conscious that a lot of infrastructure upgrades stop on reaching the strategic network. Some would not be appropriate at the strategic level but others are not implemented due to the complexities of delivery that result on roads beyond the jurisdiction of local highway authorities. They are working to try and develop a list of improvements in the areas that they manage through consultation with operators, ITAs and so forth.

3.8 It is recognised that the impediments are often institutional, procedural or financial rather than purely technical. The research currently being carried out involves the examination of current procedural and governance arrangements and the outcomes are expected to involve better cross party and cross-agency working arrangements, and partnership procedures that more directly involve the HA and MAC managers.

Road pricing - a debate which needs to be held

4.1 Halcrow believes that road pricing is an idea whose time has come. Congestion on Britain's road network represents a major and increasing cost to our economy with knock-on negative implications for our environment. Road pricing might be viewed as analogous to the metering of water consumption. Prior to metering, water was a resource that was considered to be "free" or at least covered by a set charge. In those households where a meter has been installed, there is now a very clear link between use and cost.

4.2 Like water metering, we recognise that road pricing will never be popular. Consequently, to develop a road pricing scheme will require an act of political courage by the coalition Government which no previous government has been willing to consider in the face of public hostility. However, we believe that the global economic downturn, accompanied by the high levels of public indebtedness experienced in the UK economy, mean that ideas previously considered unacceptable should now be reconsidered. In our view, road pricing will help in the management and conservation of a scarce resource (road space) and play a role in reducing our national debt, while at the same time enhancing our transport network.

4.3 It is quite clear that traffic congestion on Britain's roads represents a considerable cost to our society. The Eddington Study of 2006 suggested that the then current cost was in the region of £7-8 billion and predicted that unchecked, this would rise to £22 billion by 2025.

4.4 Road pricing has long been viewed as a means of improving the economic efficiency of national and urban highways networks. Put simply, pricing of a scarce resource (road space) at the point of consumption is the most efficient means of allocating that resource amongst competing users. The growing experience of congestion charging and road pricing schemes is that they both increase the economic efficiency of networks (by reducing congestion and increasing traffic speeds, while increasing the attractiveness and performance of public transport) and can produce a significant financial return (London recorded net revenues of £140m - TfL 2008).

4.5 Thus far, despite evidence demonstrating the economic and financial benefits, urban congestion charging schemes are rare. Experience of road pricing schemes in London and Stockholm suggests the following benefits:

- in London the net annual economic benefits of the London central area scheme range from £216 million (with a £5 charge) to £245 million (for an £8 charge). These benefits exceed annual scheme costs of around £145 million (under both charging regimes) and provide a benefit cost ratio (BCR) of between 1.5 (£5 charge) to 1.7 (£8 charge)
- in Stockholm, the benefits have been calculated over 20 years and total SEK 8 billion and costs total SEK 1.9 billion, giving a BCR of 4.3.

4.6 Halcrow believes that the current economic climate may provide a strong incentive for governments to reconsider the case for road pricing at a national level. However, despite the Netherlands and the UK considering such schemes in the past, no such national scheme has thus far been progressed. The Coalition Government has committed itself to driving down the budget deficit while reducing state indebtedness. Road pricing could be deployed in the pursuit of both these desirable outcomes. Our belief is that a national road pricing scheme would generate a significant income for the Government, equal to that of servicing the debt generated by the banking bail-out and the Government's economic recovery programmes.

4.7 To date, road pricing has not been widely proposed as a form of general public revenue raising (i.e.: taxation). The rationale promoted in the vast majority of published literature has been economic (promoting a more rational use of scarce road-space, see Rouwendal & Verhoef, 2006), environmental (effecting a modal shift from polluting private transport to public transport, see Proost & van Dender, 2001) or policy driven (constraining demand and reducing congestion in congested corridors, see May & Milne, 2000). Where road pricing has been proposed, the tendency has been to suggest that it would be done in a fiscally neutral way i.e. if introduced other motoring taxes would be reduced. In Holland, they wanted to reduce the very high costs of owning a car. In the UK, RP has been discussed in terms of providing offsetting reductions in fuel duty.

4.8 Of course, the potential of road pricing programmes to generate net revenues has significantly increased their attractiveness to operating authorities. Nevertheless promotion and acceptance of an explicit 'taxation' objective would be a significant deviation from current practice in most parts of the world and would clearly present a major challenge to those charged with presenting the argument to the general public.

4.9 In Halcrow's view, road pricing would bring significant benefits to the management of roads and traffic. Though we are aware of public hostility to the concept of road pricing, our view is that its benefits have not been persuasively explained to the general public. Road pricing at least has the merit of conferring wider economic benefits on the transport system due to reduced journey times, while additional revenue can be spent on improving infrastructure.

4.10 There are also environmental benefits. In London, for example, the congestion charging scheme was initially designed to improve the flow of traffic in the capital and thereby generate a net economic return. Subsequent changes to the scheme were made in order to additionally further environmental goals by persuading more people to use less polluting modes of transport.

4.11 Halcrow has conducted high level analysis and estimated the potential revenues and benefits which would flow from road pricing. Based on a system of charging usage on motorways, 'A' roads and minor urban roads it is calculated that 431 billion vehicle km could currently be charged, rising by 28 per cent to 555 billion vehicle km in 2025. This could generate net revenues of £18.8 billion per year, rising to £26.5 billion in 2025. These figures take into account a proportion of the total revenue being reinvested into the road network (£4 billion p.a.) at around 400 lane km p.a., and the cost of establishing and operating the system (£4.5 billion p.a.).

4.12 Using such a system, vehicle trips are likely to reduce in number by 7 per cent, while total journey times would reduce by 12 per cent and congestion would reduce by 75 per cent.

4.13 The cost to motorists is envisaged at 5 pence per vehicle km for cars, and 10 pence per vehicle km for vans and goods vehicles. For an average family this would mean an increase in the annual cost of motoring of around £800 per year, representing a rise of some 10-15%. However, these costs would be outweighed by the economic benefits of increasing government revenue and improving the infrastructure network. Similarly, business road users such as hauliers would benefit from the improved network, as well improved national economic health.

4.14 In the medium to longer term there would be scope to reconfigure the public finances by substituting road pricing revenues for those raised through other forms of taxation. This would be 'economically generative' in that the burden of tax would shift from wealth creating activities (e.g.: employment taxes) to congestion and pollution causing activities. There would be scope to reduce income tax by 4p for most bands, leaving society at large in a financially neutral position (i.e.: the sums raised through road pricing would be deducted from other forms of general taxation). Alternatively, council tax could be replaced by the projected revenues from road pricing. In line with

the coalition's localism agenda, local authorities could be given an element of discretion to develop and implement their own local road pricing schemes, accompanied by a reduction in central funding or council tax rates.

4.15 A large number of issues remain to be addressed in detail including technology (though following the successful Stockholm experience, we believe that this is less of an issue than hitherto), and implementation. The major challenge relates to managing public and political attitudes. These challenges are not to be under-estimated; however, it is important to emphasise that the current macro-economic context represents the largest single difference between this and most previous work. Raising additional revenues in the short-term through road pricing may not be popular, but the alternatives, including deeper cuts in public spending and reduced government services, may be even less palatable.

Annex

5.1 Since June 2004 Halcrow has been one of the Highways Agency's three term consultants appointed under the Northern Development Control Consultancy Commission for the North, providing advice on proposal that influences travel at the Strategic Road Network. This encompasses advice on all levels of the planning system from (revoked and reinstated) Regional Spatial Strategies, Local Development Frameworks to individual planning applications. Halcrow was a key contributor to the Agency's representations to the North East and Yorkshire and Humber RSS, including supporting the Agency at the NE RSS's Examination in Public.

5.2 In addition to this, and with reference to Halcrow's suite of National and Local Authority and private sector clients, we have a vast amount of experience of dealing with the challenges faced by those both tasked with managing transport networks and those promoting new development in terms of dealing with the matter of congestion, including identifying, assessing, and evaluating the means to overcome such through various intervention measures.

5.3 Halcrow has been the Department for Transport's (DfT) single supplier of technical advice and support in respect to NRSWA and the Traffic Management Act for the last 4 years. We are recognised as one of the leading consultants in the field of street works and network management and have advised DfT, the industry's representative bodies and local authorities across the country on issues covering street works policy development and network management issues. We have also played a significant part in the development of new codes of practice for safety at street works and road works and the reinstatement of openings in the highway and we were instrumental in the development of the HAUC (UK) Advice Note on a Performance Management Process for Works in the Highway.

5.4 Halcrow also has extensive British and world wide public transport planning experience, including bus priority, bus operations, legislation, regulation and procurement. This note demonstrates that, in times of restrained budgets, the bus has the ability to contribute to wider transport strategies in a cost effective manner and, importantly, schemes can be implemented in a "budget friendly" incremental manner.

February 2011

Written evidence from Chris Leithead (ETM 45)

In 1990 when I was the senior officer In the Headquarters Traffic Branch of the Metropolitan Police I was directly responsible for the introduction of decriminalised parking enforcement. This was not originally part of the Road Traffic Bill and was very hastily introduced during the Committee Stage in the House of Commons.

Let me say from the outset that I think it is basically a good system, local authorities are best placed to determine their traffic management problems, the appropriate regulations to deal with those problems in the level of enforcement necessary to achieve compliance. The replacement of Fixed Penalty Notices with Penalty Charge Notices has improved the collection of penalties and In addition to this the system provides for individual motorists to contest the legality of the penalty.

What it does not do is have any method for overseeing the operation of each local authority. The speed with which decriminalised parking enforcement had to be introduced into the Road Traffic Bill did not allow for this, and in fairness, such a need was not apparent at the time. However, experience has demonstrated there is a need for such oversight.

In addition to my work with the London Boroughs in introducing decriminalised parking enforcement I have worked with local authorities throughout the United Kingdom. I doubt if there is anyone in the country that can match my overall experience.

I was employed by Bath and North East Somerset Council (BANES) to place their Traffic Regulation Orders (TROs) on a digital map base. While undertaking this work it became apparent that they had failed to carry out the assurances they had given the Secretary of State in order to obtain a designation order and as a consequence all their TROs were incapable of lawfully enforcement. I sent my findings to the Chief Adjudicator who wrote to BANES to say that she thought I, "had a point". I wrote to the senior officers of the Council suggesting that under the circumstances they should cease enforcement until they could undertake it lawfully. They refused.

As motorists were being unlawfully penalised I asked the Avon and Somerset Police to investigate but they informed me it was not in the public interest so to do.

Because they had failed to carry out the assurances they had given the Secretary of State I contacted the relevant official in the DfT. I believed that because the Secretary of State had given a designation order on receipt of certain assurances that the failure to carry out those assurances should result in the revocation of a designation order. I was told that was not possible. I pointed out that because of the failure a large number of motorists were being unlawfully penalised. I was told that was purely a matter between the individual motorists and the adjudicators. I pointed out that this is beyond the scope of individual motorists and that if every motorist affected wrote to the adjudicators the volume of correspondence would bring the system to a halt. I was told this was not a matter of concern to the Secretary of State and that there are no circumstances under which he would intervene. I said, "Are you telling me the Secretary of State would prefer there to be unlawful enforcement than no enforcement?" She replied, "yes". While I have no doubt that is the general policy of the Secretary of State that all local authorities enforce lawful TROs, the failure to intervene when informed of a problem means that in particular cases the Secretary of State accepts that it is preferable motorists be unlawfully penalised than there be no enforcement.

This was the policy under the previous government and has been confirmed by the current Secretary of State, that notwithstanding the failure to meet the Secretary of State's requirements it was now purely a matter for locally elected Councillors and the local media.

I am far from certain that locally elected Councillors have the necessary technical expertise to oversee the operation of their Council. I also believe that it places too onerous burden on them to carry out this work efficiently. Nor am I convinced that airing a local authority's failings through the local media is in anyone's best interests or even effective.

When the London Evening Standard reported that a motorist who successfully challenged the lawfulness of a Penalty Charge Notice the London Councils made it clear they would not refund other motorists who has similarly received unlawful Penalty Charge Notices. The Secretary of State did not intervene on behalf of the other motorists.

Although I have highlighted two separate instances I am aware that these and similar problems exist elsewhere throughout the United Kingdom.

It is clear that the Secretary of State does not see it as necessary to ensure that a local authority is lawfully making and enforcing parking regulations and sees that is purely a function of local authority elected members and beyond the technical expertise of his staff. He gives no indication how elected members would gain the necessary technical expertise. All my experience indicates that there is a need for a Parking Inspectorate. Such a body would fulfil a very useful function, firstly, it would contain the necessary technical knowledge to provide a centre of excellence to which local authorities could refer for assistance to ensure they were operating lawfully and efficiently and, secondly, in providing reassurance to the public that the local authority was operating lawfully and efficiently.

Both this and the previous Secretaries of State have rejected such an approach which more than anything else would be an important step in preventing what is perceived to be the "war on motorists". I do not believe that any local authority deliberately sets out to make unlawful TROs nevertheless they do so. As elected representatives are you prepared to allow your constituents to be penalised unlawfully? It is possible for any motorist to contest the penalty on the grounds that the TRO is unlawful but how many motorists have sight of the TRO let alone the necessary knowledge?

The Parking Inspectorate would in no way compete with the current arrangements for adjudication but would complement them. Funding would come by way of a levy each local authority's parking account proportionate to the size of each authority.

I believe that it is intrinsically wrong for a Secretary of State to make a requirement and then if that requirement is not met effectively say it does not matter. This is more egregious of the requirement is to ensure motorists are lawfully penalised and the consequence is that they are unlawfully penalised.

I am writing to all MPs in the hope that action be taken to ensure that motorists can be satisfied that what is basically an excellent system is being operated lawfully to achieve sensible traffic management objectives and is not being used simply to generate revenue.

Please do not hesitate to contact me should I be able to assist you further.

January 2011

Written evidence from Sustrans (ETM 46)

1. Introduction

1.1 Sustrans is the charity that's enabling people to travel by foot, bike or public transport for more of the journeys we make every day. Our work makes it possible for people to choose healthier, cleaner and cheaper journeys, with better places and spaces to move through and live in.

1.2 We welcome the opportunity to respond to this Transport Committee Inquiry into Effective Road and Traffic Management. Our response will focus on the potential of modal shift as an effective intervention within a wider package of measures which can improve road and traffic management and result in the alleviation of congestion and its associated by-products. Although the potential for change is perhaps most evident within the urban context around short trips, there is a growing move towards trip substitution on longer journeys and it is widely accepted that the medium length journey should be reconsidered within the contexts of modal shift and the end to end

1.3 Financial costs to our wider economy of excess delays are widely agreed to be significant, while the cost-effectiveness of increasing people's travel choices and implementing alternatives to car travel are known to be high with a number of additional resulting benefits.

1.4 Research undertaken by Sustrans in the three Sustainable Travel Towns (STTs) showed the significant potential that exists for changing travel behaviour – from car travel to travel by foot, by bike or by public transport. One of the most important overall findings was that on average nearly half of all car trips within the towns could be replaced by these modes using existing facilities.

1.5 Additionally, the great majority of traffic on motorways has an origin or a destination (and usually both) in the cities and other urban areas at each end, and en route. A significant proportion of the traffic, especially in the sections close to the urban areas, is not inter-urban: it is using the motorway as a section of the urban or suburban road network. There is also the impact of increased strategic traffic flow on the local roads which feed into the national network.

1.6 As the road network sees an increase in demand alongside a growth in the number and length of trips, a wider range of interventions and a focus on less traditional approaches through land-use planning and smarter choices will need to become mainstream policy approaches.

2. Congestion reduction benefits.

2.1 The Cabinet Office values excess delays to journeys caused by congestion at £10.9 billion per year in English urban areas alone.

2.2 Congestion is one of the main ways in which transport imposes wider costs to our economy through the delays to journeys. This additional delay can be significant, particularly in dense urban areas where heavy traffic and congestion are common occurrences.

2.3 In the Cycling Demonstration Towns, decongestion benefits were estimated by assuming that a proportion of new cycling journeys would have been made by car and applying a unit decongestion rate taken from WebTAG. The decongestion benefit

of the programme over a ten year period was estimated at £7 million (2007 prices and values).[1]

2.4 Reducing congestion would have the following broad benefits:

- Financial savings to the wider economy
- Improvements to people's qualify of life.
- Decrease in pollution from motor vehicles.
- Improving the opportunity for public transport to travel without delay.
- Benefits to tourism as travel is made easier and destinations become more attractive.

3. Road Building

3.1 Sustrans believes that new road building and enlarging existing roads does not in general solve traffic problems and usually promotes car dependency. So long as more road space is made available for cars, then it is inevitable that more car trips will be made. Sustrans considers that re-allocation of road space away from the car, combined with improvements to public transport provision, active travel infrastructure, and information about how to change travel behaviour and the benefits this brings, is a more forward-thinking direction to take than building more roads.

3.2 Road building of any sort, including bypasses, should only be considered as a last resort, once a full range of other measures to solve traffic problems have been fully examined.

3.3 These measures include:

- Traffic restraint and demand management
- Measures to improve public transport
- 'Smarter Choices', such as Personalised Travel Plans, Workplace Travel Plans and Safe Routes to School
- Better land use planning
- Expansion of the National Cycle Network

3.4 When new bypass schemes do progress, investment in traffic calming, walking and cycling in the town centre should be planned, costed and endorsed before building starts. Without such planning and delivery for travel behaviour change, the bypassed streets will simple fill with traffic again over time. Planning for the provision of traffic-free walking and cycling routes near the alignment of any new roads, but not directly alongside them, should always be included as part of the overall plan.

3.5 Where local road-building is needed for new industrial sites and housing developments, the design should consider opportunities for prioritising non-car modes, and set speed limits of 20mph or less.[1]

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[1] For more information, see 'Beyond Transport Infrastructure – lessons for the future from recent road projects'

(CPRE, Countryside Agency, July 2006)

www.countryside.gov.uk/LAR/Landscape/PP/planning/Recent_Transport_Research_C.asp

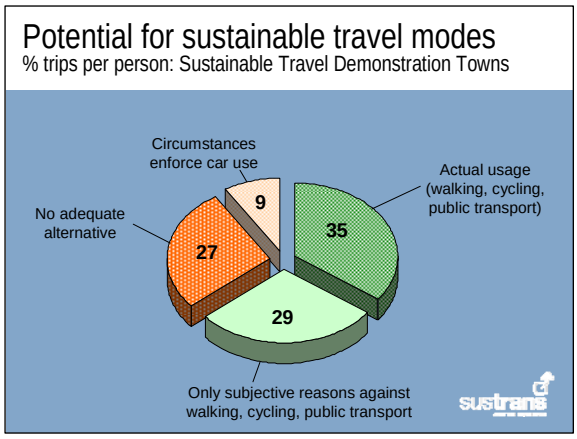
4. Potential for Change: Short Trips

4.1 Our city centres have been transformed in recent years with waves of public and private sector investment that have made them far more attractive places to live, work and visit. That economic vibrancy needs to be maintained and enhanced and transport has a key role to play in providing the high quality commuter networks our cities need to thrive. At the same time there are other urban centres within our conurbations that are still in the process of redefinition and change – and which need good transport links to support these changes.

4.2 All this needs to be achieved within the context of ensuring that transport systems continue to make their contribution to carbon reduction, air quality improvements and to reducing social exclusion.[2]

4.3 Despite national trends towards increasing distances travelled, the majority of people's day-to-day trips are local in nature. There is substantial potential to change travel behaviour for journeys under five miles, which comprise over two thirds of all journeys. In Britain more than half (55%) of all such journeys are made by car, compared with around a third (34%) on foot, seven per cent by bus and just two per cent by bike.[3] A quarter of journeys made by car are of less than two miles. Previous Sustrans work in partnership with GMPTE demonstrated similar trends: in Greater Manchester over half of car trips were under 3km in 2007.[4]

4.4 Research undertaken by Sustrans in the three Sustainable Travel Towns (STTs) showed the significant potential that exists for changing travel behaviour by addressing the subjective barriers that currently prevent people from making more trips on foot, by bike or by public transport. One of the most important overall findings was that on average nearly half of all car trips within the towns could be replaced by these modes using existing facilities. The research showed that people are swayed in their travel choice by severe misperceptions about the alternatives to the car (especially relating to relative travel times) and a lack of information.[5]



4.5 Overall, the research showed that while 35% of all people's trips were already made by sustainable means, there was potential for a further 29% of trips to be shifted from car to walking, cycling or public transport without any infrastructure changes or restrictions on car use. As a result of the programme, car use fell substantially. Bus

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www.roadblock.org.uk/press_releases/2006-07-03.htm

[2] http://www.pteg.net/NR/rdonlyres/47DC8A23-43B8-4D57-A35A-21B92C3432FE/0/ptegbrochurewebversion.pdf

[3] **Department for Transport 2008** National Travel Survey

[4] **Sustrans / Socialdata 2007** Greater Manchester Travel Behaviour Change Strategy

[5] **Sustrans/Socialdata 2009** Travel behaviour research in the Sustainable Travel Towns

trips per person grew by 10% (to 22%) and the number of walking trips grew substantially, by 10%-13%, compared to a national decline in similar towns of 17%. The number of cycle trips grew substantially in all three towns, by 26%-30%. Despite this growth, the potential for change actually increased during the course of the programme, with the proportion of people who felt there were alternatives to car use rising from 47% to 54% from 2004 to 2008.

4.6 Research also showed that the greatest potential for changing travel behaviour lay in increasing cycling, providing a viable alternative to nearly one in three local car journeys. In the STTs in 2008, of those 54% of journeys for which cars were used solely for subjective reasons and for which alternatives were available, people said 41% were in principle replaceable by cycling, 21% by public transport use, and 15% by walking. Through effective measures to change travel behaviour, use of sustainable modes could be easily doubled in the short term without substantial capital investment. In the longer-term targeted investment in infrastructure – such as 20mph zones, cycling infrastructure and integration with public transport - could increase this further to nine out of ten journeys on foot, by bike or using public transport.

4.7 Although levels of cycling are low at around 2% of journeys in the UK (compared to over 27% in the Netherlands), the potential to change this is substantial. The last few years have seen a growing awareness among national and local policy makers of the need for a step change in cycling levels, and of the need for cycling to play a much bigger role in local transport. The last government's Active Travel Strategy aimed for 'cycling to be the preferred mode of local transport in England in the 21st Century',[6] while the Chief Medical Officer's last annual report called for 'national targets … to increase travel by bicycle eightfold'.[7]

4.8 The potential for increasing cycling is greatest in the city regions. Attempts have been made to calculate the specific cycling potential of particular cities, based on factors such as the terrain, demographics and travel patterns.[8] Although this approach is overly simplistic (as it ignores variations in cycling between similar cities, and assumes that existing levels are innate), it nevertheless highlights the substantial underlying and unfulfilled potential which exists to increase cycling in the UK as a whole, and particularly in the city regions. Sustrans has called for a doubling of the number of journeys under five miles made by foot, bike and public transport to four out of five by 2020, a level of change which we believe is necessary and possible to achieve by 2020.[9]

5. Potential for Change: Medium Length Trips

5.1 Data from the Department for Transport (DfT) shows that the average distance travelled per trip is increasing.

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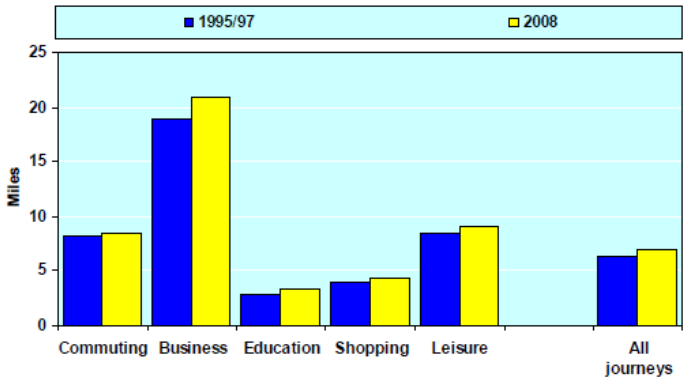
[6] **Department of Health / Department for Transport 2010** Active Travel Strategy

[7] **Department of Health 2009** Annual report of the Chief Medical Officer

[8] See for example **Steer Davies Gleave 2010** Cycling Potential Index

[9] **Sustrans 2010** More Haste Less Speed

Trend 4.9b – Average trip length by purpose: 1995/97 and 2008, Great Britain



Source: Department for Transport

5.2 Average trip length increased by 9 per cent from 6.4 miles in 1995/97 to 7.0 miles in 2008. Over the same period, the average time taken to make a trip increased by 11 per cent (from 20 to 23 minutes).

5.3 Between 1995/97 and 2008, the average length of a trip to work increased from 8.2 to 8.6 miles, and the average time taken increased from 24 to 28 minutes. The length of business trips increased from 19.0 to 20.8 miles on average, while the average time taken increased from 36 to 41 minutes. The average trip made for education purposes went up from 2.9 to 3.3 miles, and average time taken increased from 18 to 22 minutes.

5.4 Over the same period, the average shopping trip increased from 3.9 to 4.4 miles, although the average time taken increased only by 1.2 minutes, reflecting the increased use of cars instead of walking. The average trip length for leisure trips went up from 8.4 to 9.1 miles, and average time taken increased by 2 minutes.[10]

5.5 As the number and length of trips continues to grow and congestion increasingly dictates transport and wider policy direction[11], a wider range of interventions will need to become the 'norm'. Interventions focusing on smarter choices and land use planning will need to move from test-beds to mainstream transport policy.

6. Potential for Change: Long Distance Trips

6.1 The most recent comparison of delays caused by congestion showed that Britain has the worst congestion in Europe [12].Almost a quarter of the most well used links in the UK suffered delays lasting an hour or more whilst such delays were suffered on less than one in ten links in Germany and France. Several countries had no links at all with delays of an hour or more.That study concluded that the UK's poor performance was a result of persistent under-investment

6.2 Although not a perfect measure, it is possible to assess congestion by comparing distance travelled with road length. Even after allowing for the impact of differential levels of GDP, Britain's roads are among the most heavily used in Europe. Measured

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[10] http://www.dft.gov.uk/adobepdf/162469/221412/190425/220778/trends2009.pdf

[11] http://cfit.independent.gov.uk/pubs/2010/mltp/report/03.htm

[12] ECIS, The State of European Infrastructure, Rotterdam 1996

in terms of vehicle kilometres per kilometre of road, Britain has the second most intensely used roads in the EU, after Spain.

6.3 It is unsurprising, therefore, that British workers spend more time commuting each day than their European counterparts. This is despite having relatively high population densities, which ought to reduce distance to work and hence commuting time[. The average British worker spends 46 minutes each day commuting - 10 minutes more each day than their French counterpart, and double the time spent commuting by Italian workers.

6.4 A central cause of these high congestion levels is that British people make more use of cars than any other European country, despite having below average car ownership. Almost nine out of ten motorised journeys (car, bus, motorbike) in the UK are by car, compared with an EU average of just over eight out of ten

6.5 The creation of an Integrated Transport System (ITS) - linking modes and enabling each mode to use its strengths to deliver the most sustainable journey is key in achieving modal shift.

6.6 In order to achieve this, the transport industry needs to work cross-modally alongside with transport and local authorities to improve the quality of the 'whole journey' in response to customer needs. This requires both a continuing focus on cutomer experience, and also greater understanding of sustainable and acceptable ways of completing all legs of the journey.

6.7 Whilst integrated thinking for the physical journey is the prime consideration, the provision of information for planning a journey and signage and service information throughout a journey is of great importance. As well as improved inter-modal information, this is likely to require a greater range of partnerships or collaborations on issues.

6.8 'Hard' issues such as better station and depot facilities and access need to be combined with 'soft' issues such as good journey information about interconnection, integrated timetables and through ticketing, to improve the overall travel experience. The industry needs to gain a better understanding of the experience of 'the last mile' after the station or depot. These issues are beginning to be addressed through initiatives such as Station Travel Plans and smart cards. Beyond that, it is likely to require partnership and collaboration with complementary providers (whether these relate to walking facilities, buses, metros, trams, bikes and bike schemes or 'pay as you go' car services).

7. Wider Benefits of Effective Traffic Management through Modal Shift

7.1 Effective implementation of traffic management has been proven to enable journeys to shift from car to more sustainable forms of travel with a number of resulting benefits:

- Employer benefits: Transport for London (TfL) has estimated that removing one car parking space could save up to £2,000 per year in high-density urban areas such as Central London.[13] Employers involved in the Bikes for Business scheme

[13] TfL 2006 Workplace Cycle Parking

estimated the average savings to the organisation at £25-80 per month per bike.[14] There are also significant benefits to employers from promoting active travel, including reduced absenteeism, lower turnover rates, improved productivity and employee morale, and lower health care costs.[15] A 1% increase in regular commuting by bicycle would translate into savings of approximately 27 million Euro (£24m) per annum for employers. [16]

- Tourism benefits: The economic value of cycle tourism in the UK is 1.43 billion Euros.[17] Sustrans routes in South Wales generated an annual £75m expenditure and £9.9m pa net income to Wales, generating or securing 1399 jobs, 183 in tourism.[18] Users contributed £9.6 million in direct expenditure to the North East economy in 2006 and £13.4 million to the wider regional economy, supporting over 300 jobs.[19]

- Retail benefits: Evidence demonstrates that cyclists and walkers contribute more to retail vitality than motorists, although retailers consistently overestimate the importance of car users and parking to their businesses. A survey for TfL in Kingston found that those who arrived on foot or by bike spent more per week than those who arrived by car.[20]

- Climate benefits**:** In 2009, the potential carbon saving from the 407 million journeys on the National Cycle Network alone was worth £32 million (SPC = £52 per tonne CO_2 equivalent).[21]

8. Making it Work: Case Study Examples

8.1 Leading on existing best practice and expertise is essential: A wide range of practical interventions exist with a proven potential to increase levels of cycling quickly and cost-effectively, and there is a substantial body of evidence on the most effective approaches.[22] Sustrans own approach is based on this evidence, and has shown that it is possible to overcome many of the barriers to active travel, for example through targeted environmental improvements and promoting these options to specific audiences such as school children, older people, employees and families at home. In order to optimise the benefits of individual measures, both hard and soft interventions are implemented as part of an integrated package, for example, promoting new

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[14] TfL 2008 Pool Bikes for Business

[15] For a summary of the evidence see Sustrans 2008 Active travel and healthy workplaces

[16] Bristol City Council 2009 Essential Evidence on a page. No.13

[17] European Commission 2009 The European Cycle Route Network Eurovelo

[18] Sustrans/UCLAN 2008 The Economic Impact of Cycling and Walking on the Celtic and Taff Trails

[19] Sustrans/UCLAN 2007 The Economic Impact of Cycle Tourism in North East England

[20] Sustrans 2006 Shoppers and how they travel

[21] Sustrans 2010 Moving Forward

[22] See for example Pucher, Dill and Handy 2009 Infrastructure, programs, and policies to increase bicycling, Adrian Davis 2010 What works in terms of increasing the number of people cycling?

infrastructure and locking in behaviour change through traffic and speed restraint by reallocating road space from private motorised transport to walking and cycling.[23]

8.2 Packages of behavioural and environmental measures are highly effective: Demonstration programmes have shown the effectiveness of integrated low cost travel behaviour change programmes, including both behavioural measures and environmental improvements, in increasing cycling. In the STTs, car driver trips per resident fell by 9% between 2004 and 2008, whilst cycle trips increased by 26-30% and walking by 10-13%. In the CDTs, cycling levels increased by 27% from 2005 to 2009. In Darlington, where the two approaches were combined, cycling levels increased by 117%, albeit from a very low base.

8.3 The evidence shows that measures to promote walking and cycling are also more effective when they are integrated as part of a wider programme to change travel behaviour, particularly for journeys of under five miles, and with public transport use for longer journeys. It appears likely that, once targeted behaviour change programmes have encouraged people to consider alternatives to the car, people are then more likely to use the most appropriate alternative mode for their journey. Environmental measures such as traffic restraint are also useful in locking in travel behaviour change.

8.4 Focusing on key destinations and trip generators delivers high levels of change: Facilities such as schools, workplaces and public transport interchanges are key to both individual journeys and wider travel habits, and the evidence suggests that focusing on journeys to and from such destinations is the most effective and efficient approach to changing travel behaviour and increasing levels of cycling. Sustrans' own projects in schools and workplaces demonstrate the impact of this approach: for instance the Bike It project has typically doubled levels of regular cycling in over 800 schools. The benefits of this change for children's levels of physical activity and lifelong travel habits are also clear.[24]

8.5 High profile projects can act as catalysts for change**:** Several cycle hire schemes are now in operation in the UK. The London cycle hire scheme is by far the largest, with 6,000 bikes available from 400 docking stations across London. Northern Rail's provision of new cycling facilities at over 100 rail stations on all the routes into Leeds will be completed in full by June 2011. While evidence from UK programmes is still limited, findings from elsewhere in Europe suggest that high profile schemes (such as Velib in Paris) may play an important role in raising the profile of and changing attitudes to cycling, but their ability to deliver modal shift is limited to small areas, and may impact more on public transport than car use.

8.6 Sustrans' high profile projects, including Connect 2 and the National Cycle Network, act as catalysts for communities and individuals to start cycling again and enable people to make local journeys to local facilities using alternatives to the car. A number of the schemes focus on improving traffic-free access to public transport links.

8.7 Including cycling provision in public transport investment benefits both modes: The evidence suggests that intermodality is a key factor in the attractiveness of public transport. In the Netherlands, all main train stations (67) have guarded facilities for storing bikes, and offer additional services like maintenance and repair. At smaller stations, lockers are provided for safe storage. 35% of all train clients use the bike to

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[23] Sustrans 2009 An integrated approach to promoting active travel

[24] Sustrans 2010 Bike It review 2009

get to the station in the Netherlands, compared with 25% in Denmark, 9% in Sweden, but 35% in the south Swedish region of Malmö.[25]

8.8 In the West Midlands, only 2.5% of journeys to work are by cycling. To improve this, cycle and ride is being promoted for the local rail and metro network, and 30 suburban rail stations will get covered cycle parking, including lockers. To date, cycle parking is provided at all stops on the Midland Metro system and at some bus stations. Experience so far suggests that improving cycle access and parking facilities does increase cycle and ride.

9. Conclusion

9.1 The Cabinet Office values excess delays to journeys caused by congestion at £10.9 billion per year in English urban areas alone. In the CDT work, decongestion benefits were estimated by assuming that a proportion of new cycling journeys would have been made by car and applying a unit decongestion rate taken from WebTAG. The decongestion benefit of the programme over a ten year period was estimated at £7 million (2007 prices and values).[26]

9.2 Sustrans believes that new road building and enlarging existing roads does not in general solve traffic problems and usually promotes car dependency. So long as more road space is made available for cars, then it is inevitable that more car trips will be made. Sustrans considers that re-allocation of road space away from the car, combined with improvements to public transport provision, active travel infrastructure, and information about how to change travel behaviour and the benefits this brings, is a more forward-thinking direction to take than building more roads.

9.3 A wide range of practical interventions exist with a proven potential to increase levels of cycling quickly and cost-effectively, and there is a substantial body of evidence on the most effective approaches.[27] Sustrans own approach is based on this evidence, and has shown that it is possible to overcome many of the barriers to active travel, for example through targeted environmental improvements and promoting these options to specific audiences such as school children, older people, employees and families at home. In order to optimise the benefits of individual measures, both hard and soft interventions are implemented as part of an integrated package, for example, promoting new infrastructure and locking in behaviour change through traffic and speed restraint by reallocating road space from private motorised transport to walking and cycling.[28]

9.4 British workers spend more time commuting each day than their European counterparts. This is despite having relatively high population densities, which ought to reduce distance to work and hence commuting time[. The average British worker spends 46 minutes each day commuting - 10 minutes more each day than their French counterpart, and double the time spent commuting by Italian workers.

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[25] Ruud Hegger 2007 Public transport and cycling

[26] **Cabinet Office 2009** The wider costs of transport in English urban areas in 2009

[27] See for example Pucher, Dill and Handy 2009 Infrastructure, programs, and policies to increase bicycling, Adrian Davis 2010 What works in terms of increasing the number of people cycling?

[28] Sustrans 2009 An integrated approach to promoting active travel

9.5 A central cause of these high congestion levels is that British people make more use of cars than any other European country, despite having below average car ownership. Almost nine out of ten motorised journeys (car, bus, motorbike) in the UK are by car, compared with an EU average of just over eight out of ten

9.6 The creation of an Integrated Transport System (ITS) - linking modes and enabling each mode to use its strengths to deliver the most sustainable journey is key in achieving modal shift.

9.7 In order to achieve this, the transport industry needs to work cross-modally alongside with transport and local authorities to improve the quality of the 'whole journey' in response to customer needs. This requires both a continuing focus on cutomer experience, and also greater understanding of sustainable and acceptable ways of completing all legs of the journey.

9.8 Whilst integrated thinking for the physical journey is the prime consideration, the provision of information for planning a journey and signage and service information throughout a journey is of great importance. As well as improved inter-modal information, this is likely to require a greater range of partnerships or collaborations on issues.

9.9 'Hard' issues such as better station and depot facilities and access need to be combined with 'soft' issues such as good journey information about interconnection, integrated timetables and through ticketing, to improve the overall travel experience.

9.10 As the road network sees an increase in demand alongside a growth in the number and length of trips, a wider range of interventions and a focus on less traditional approaches through land-use planning and smarter choices will need to become mainstream policy approaches.

March 2011

Written evidence from the Freight Transport Association (FTA) (ETM 47)

The Freight Transport Association is one of Britain's largest trade associations, and uniquely provides a voice for the entirety of the UK's logistics sector. Its role, on behalf of over 14,000 members, is to enhance the safety, efficiency and sustainability of freight movement across the supply chain, regardless of transport mode. FTA members operate over 200,000 goods vehicles - almost half the UK fleet - and some 1,000,000 liveried vans. In addition, they consign over 90 per cent of the freight moved by rail and over 70 per cent of sea and air freight. FTA works with its members to influence transport policy and decisions taken at local, national and European level to ensure they recognise the needs of industry's supply chains.

Background

The freight industry is heavily reliant on the transport infrastructure that it uses performing to a consistently high standard. Distribution networks, delivery routes and schedules have been designed to achieve availability of sufficient goods at the point of consumption by business or consumers without the need for extensive and expensive stock holding. Operators build resilience into their operational planning to accommodate regularly encountered journey time unreliability in network performance.

In response to the Transport Select Committees inquiry into effective road and traffic management, the Freight Transport Association would like to offer the following evidence.

1. ***The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so.***

Freight transport operators as road users; expect reliable journeys in return for the duties paid in taxation and other charges that are made for use of the UK's road space. The UK road freight industry estimates it pays £8 billion taxation per annum in the form of vehicle excise duty and fuel duty. It is only right and proper that having paid such massive amounts they are provided with a road infrastructure which is reliable and that provision must be from government, their agencies and local highway authorities. Without reliable journeys industry cannot count on getting their goods to the market place and inevitably this does have an effect on UK efficiency and the cost of goods to the customers. Delays in journeys are a significant cost to the freight industry and it is estimated that the cost of delay in fuel alone is over £2 per hour per vehicle. In addition to fuel costs, whole vehicle costs have to be taken into account which dependent on the size of the vehicle can range from £200 - £400 per vehicle per day.

FTA members expect Government to play its role in delivering a high quality network of roads and implementing measures that reduce congestion and thereby improve reliability. Road safety is also linked with reliability and therefore road provision must ensure that it is safe to travel on by design and operation. It is with this in mind that we argue that it is government and local authorities that are the ones that can influence journey reliability with the provision of reliable, safe and sustainable roads.

Once we have the right infrastructure there is a need to ensure that the road users are kept informed of the conditions of the network so that they can make informed decisions on how and when to travel. The Highways Agency has for some years now been providing the travelling public with information about the performance of its network in making information freely available at the point of use. The value of the information must not be underestimated and in the freight industry there is now awareness that informed journey planning does make a difference to efficiency of road freight fleets and therefore has a direct effect on the UK economy.

There are however gaps in the provision of reliable and verified information of the Highways Agency Network in England and a particular lack of freely available information around local authority roads in the city region areas where congestion can be in the main predictable, however when it happens outside of the peaks travel hours, it can create significant problems for the traveller.

FTA believes that organisations such as Integrate Transport Authorities and local traffic managers would find benefit in establishing information flows on significant travel delays in their areas of responsibility. It would not only help the travelling public but would also help the management of incidents, in persuading road users to stay away from significant road delays. To an extent this is currently provided in road messages transmitted by local radio stations but the freight industry has a need to have information on a wider basis than just a local radio station transmissions.

The European Directive on the deployment of Intelligent Transport Systems encourage this type of information exchange but to make it worthwhile it must be deployed on a consistent way across the whole of the network. Most road users are not concerned about who manages which part of the network and in most cases don't understand the differing responsibilities of the Highways Agency and local highway authorities; neither would they recognise that there are differing sources of traffic information.

2. ***The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code***

Road users themselves can only look to see if a road journey is likely to be reliable (usually at the start of the journey) they cannot ensure that road conditions continue to be reliable as they travel.

Road users can prepare for journeys and there are some roads users who fail to do so. It is in this area that we believe there is room to change road user's behaviour to improve traffic management. The freight industry generally looks to see that it prepares the driver and vehicle, ensures that there is an understanding of vehicle equipment and controls that the road conditions are understood both by the driver and their companies and that driver's are prepared for incidents and severe conditions. FTA member's road freight operators generally look to identify the areas where improvements would be most effective in the control of driving risk, reduction of stress and fatigue. We believe that adopting better public attitudes towards safe driving will bring about a lasting improvement to road safety and also by default help to improve journey reliability.

The Association believes that in certain areas there is a lack of appreciation of and compliance with the rules of the road, which leads us to believe that the Highway Code in road user's minds has no relevance once they have passed their driving test. Many of the industries driver trainers have made the assumption that most road users have forgotten the majority of the rules of the road and the industry generally recognises the need for defensive driver training.

The issue of post test driver training is an area which is largely ignored by many motorists and we appreciate the difficulty of taking the issue forward but a fundamental point is that we need to remind the public about the reasoning behind the Highway Code and ensure through bookshops and other outlets what the latest version is and the rules that it contains.

We also believe that there is a need for better information on how to share the road safely with other road users including larger vehicles. There is provision of some

information within the current version of the Highway Code but this is fragmented and we have argued for some years that there would be advantage in a dedicated section with the Highway Code on how to share the road safely particularly with larger vehicles.

3. ***Intelligent traffic management schemes , such as the M42, and their impact on congestion and journey times***

While the initial view about the M42 pilot was suspicion about the real value that such a management system would produce, the freight industry now feels that it has proved to be an important milestone in driver control and behaviour thus providing benefits in journey reliability and safety.

The benefits of speed control and information while in the controlled areas that include hard shoulder running, encourage drivers to comply with instructions and in doing so they benefit in known journey times.

The initial safety concerns, expressed by many of our members, seem to be less so now with drivers and vehicle operators more aware of the significant control measures that are used by the regional control centres to identify incidents with the managed scheme areas and importantly deal with those incidents so that the motorists remain safe. There seems to be support on the control speed issue in other areas, where our members have reported improved journey reliability through major roadworks.

Traffic management schemes seem to improve journey times reliability and this is a fundamental benefit to freight operators. We do believe that other areas of motorway similar to the M42 pilot area will benefit from this type of infrastructure improvement. However we remain to be convinced that it is the solution for other parts of the network that do not have the same road characteristics and we believe there is still a case for full widening in areas that suffer from congestion but are on more strategy parts of the network such as the M6 north of Birmingham.

Clearing Incidents

One additional area of concern to our members is the length of time it takes to clear incidents particularly on the Strategic Road Network where delays of several hours are experienced when an incident occurs. It seems to us that even with high levels of traffic management when an incident does occur and involves casualties or other criminality where the police have to step in and deal with the incident we still get these very length delays which trap motorist in there vehicles for hours on end. While we sympathise that the police have a very difficult job to do and have to ensure that they have gathered all of the evidence that they need from the scene we believe that there needs to be a fundamental review of procedures used at such incidents to see how the incidents can be cleared quickly to get the road reopened and get the road users on there way.

March 2011

Written evidence from Living Streets (ETM 48)

Summary

- Living Streets considers that effective road and traffic management has an important role to play in creating safe, attractive and enjoyable streets where people want to walk.
- Effective governmental intervention is crucial in alleviating congestion and the key long-term solutions are modal shift towards active transport (and public transport) by making active modes more attractive, and the effective integration of transport planning with spatial planning to set a norm of compact, mixed-use and walking-friendly neighbourhoods.
- Living Streets believes that 20 mph speed limits where people live, work and play have a role to play in improving traffic flow and road safety, as well as in delivering to achieve wider sociability and environmental benefits. Governments and local authorities have a clear role to play in making lower speed limits easier to implement.
- Living Streets considers that pedestrians are part of the traffic, not separate to the traffic, and that this understanding should be adopted when considering any traffic management measures in order to give a more realistic view of the potential effects on all road users.
- The highway code is a crucial document; however, certain aspects of antisocial behaviour which undermine effective traffic management, including pavement parking and pavement cycling should be addressed.
- The issue of liability for collisions should be prominently addressed at the national level.
- While intelligent traffic management systems have a role to play, they should also cater to the needs of pedestrians, particularly the more vulnerable.
- Roads and streets should be designed holistically with the people who use them in mind, rather than solely as vehicular traffic corridors, and integrated with other modes of transport and longer term behavioural change and mode shift endeavours. Innovative design approaches such as shared space have a part to play in improving the ways in which road users perceive and interact with the street environment and with other road users.

1. About Living Streets

1.1 Living Streets is the national charity that stands up for pedestrians. With our supporters we work to create safe, attractive and enjoyable streets, where people want to walk. We work with professionals and politicians to make sure every community can enjoy vibrant streets and public spaces.

1.2 The history of Living Streets demonstrates the strength of our agenda. We were formed in 1929, as the Pedestrians Association, and have grown to include a network of 100 branches and affiliated groups, 28 local authority members and a growing number of corporate supporters. As well as working to influence policy on a national and local level, we also carry out a range of practical work to train professionals in good street design, and enable local communities to improve their own neighbourhoods. We run high profile national campaigns such as Walk to School and Walk to Work Week, to encourage people to increase their walking levels and realise a vision of vibrant, living streets across the UK.

2. Impacts of traffic management on quality of life and social outcomes

2.1 The quality of our streets plays a significant role in how people use their streets and local areas, and heavily trafficked and congested streets have a markedly negative effect on a community's quality of life. Aside from the disincentive to physical activity, people living in streets with high car traffic where walking was not the norm were found, in a recent study, to have 75% fewer local friends than those in streets with low car traffic[1]. Additional car journeys and increased congestion also leads to the generation of more air pollution[2] – already a major issue for urban health and quality of life according to half of Manchester residents and 77% of Londoners.[3] There is a clear role for Government and local authorities to intervene in this area.

2.2 Living Streets considers that effective road and traffic management has an important role to play in creating safe, attractive and enjoyable streets where people want to walk. For example, the setting of lower speed limits can be part of a congestion management solution, with speed limit reductions to speeds as low as 40mph being used as part of variable speed controlled motorway schemes. Similar principles are being applied successfully in more built-up areas. Living Streets campaigns, alongside many others, for a default speed limit of 20 miles per hour where people live, work and play. Well-implemented 20mph speed limits can improve road traffic flow, using road space more efficiently by reducing the safe stopping distance that vehicles require and allowing more pedestrians to cross the road informally, reducing delays from signalized crossings. Walworth Road in the London Borough of Southwark, one of the Department for Transport's Mixed Priority Route pilots, has been a widely-praised example of a scheme which improved the urban environment for all users and reduced the number of road casualties with no detrimental effect on traffic flow, whilst Transport for London and the London Borough of Camden's have trialled a pilot 'green wave' system, which coordinates signalized junction timings with 20mph limits. 72 per cent of British drivers would support 20mph limits on residential streets.[4]

2.3 The key benefit of 20mph speed limits is in road safety: a recent longitudinal study found that 20mph areas experienced a reduction in casualties of over 40 per cent, as well as a reduction in the severity of those casualties[5]. Stronger national guidance making it easier for local authorities to implement area-wide 20mph speed limits (rather than just the more expensive 20mph 'zones') on their full range of roads would be helpful in empowering communities to improve local road safety. With the average road traffic collision carrying an estimated cost of £75,000 – and a fatal incident costed by the Department for Transport at nearly £2m[6] – the direct economic value of pragmatic, high-quality people-focused design, combined with the potential to safeguard human life and improve quality of life and perceptions of safety, is undeniable.

2.4 20mph speed limits can also contribute to broader social, environmental and health-related goals[7]. Traffic management should not be viewed in a silo, but with explicit reference to this broader picture. Active travel – walking and cycling, now and in the longer term will have an important role to play in reducing congestion with the inevitable decline of natural resources and the people's receptiveness to walking more (TfL research[8] found that walking is easily the most appealing transport mode. 2008 TfL research[9] also found that over two thirds of Londoners are receptive to walking more over the next year (as opposed to one in four who were receptive to cycling more) and a third would definitely consider walking more).

2.5 However getting the quality of the built environment right is crucial to making streets and places where people want to both walk and spend time. "The design and management of the built environment can create barriers to physical activity – or they can create opportunities for activity that make an active lifestyle an attractive and compelling choice"[10]. TfL research[11] also showed that the top three potential motivators for walking more included new and improved public spaces with new seating, new and improved crossing facilities at junctions alongside new and improved

walks for pleasure. Involving the community and auditing the quality of streets is the first step to getting the quality of the built environment right.

3. Reintegrating pedestrians into traffic management frameworks

3.1 Living Streets recognises that walking, whilst a hugely significant part of the everyday transport mix for people in the UK, cannot be the sole solution to the transport challenges that the UK faces. To that end we would advocate a wider framework of transport investment which also supports, promotes and expands cycling and public transport as alternatives to the car.

3.2 This integrated approach requires the use of definitions and design principles that relate more realistically to human behaviour. Typical interpretations of the terms 'traffic', 'traffic flow' and 'congestion' are generally limited to *vehicular* congestion and traffic alone. This represents a missed opportunity to design streets, places and traffic management solutions that benefit all road users. A glance at a typical high street, with heavy pedestrian traffic and congested footways, is a simple demonstration that pedestrians should be considered within traffic flow. A more holistic understanding of 'people-flow' would enable a more realistic understanding of transport constraints across modes. Though less applicable to motorway schemes, Living Streets would reiterate the point that pedestrians need to be recognised as traffic in themselves, rather than an obstacle or impediment for traffic, and traffic management systems should be built with regard to this principle.

3.3 Allied to this broader understanding of the role of traffic management, there is a growing recognition of the need to strike a balance between streets as *places* and streets as corridors for movement. Over time there has been a tendency for policy to focus on movement functions over place functions. Recent guidance, such as the two Manual for Streets publications, does more to recognise and strike this balance, but needs to be better promoted and endorsed and disseminated by national Government.

3.4 Some aspects of road user culture impact negatively on pedestrians and specific national and local government action to tackle anti social pavement behaviour would be particularly useful in re-striking the balance between movement and place.

3.5 Pavement parking is a major problem, particularly outside London, as it not only restricts accessibility for pedestrians, particularly those with mobility difficulties, but also damages pavements, placing already inadequate maintenance budgets under greater pressure, and could also cost lives if, for example, it prevented emergency services vehicles from gaining access to an area. Living Streets would like to see a national framework that assumes a general prohibition of pavement parking, with powers for Local Authorities to designate exemption areas if necessary and desirable, and supports the decriminalisation of enforcement. Whilst we welcome the recent encouragement to councils to use their existing powers to prevent pavement parking from Local Transport Minister Norman Baker, we are concerned that an approach based on designating areas in which pavement parking is prohibited does not go far enough to address the issue and may lead to an increase in street clutter.

3.6 Walking and cycling are healthy, environmentally friendly, and inexpensive modes of transport and a solution to many of our urban transport problems. Living Streets wants to see more people cycling; however, there is a need to ensure that the needs of more vulnerable pedestrians are adequately prioritised. Living Streets advocates awareness-raising campaigns and improved enforcement to address anti-social pavement cycling behaviour, which can cause anxiety, restrict mobility and deter people from using public space.

3.7 The **civil liability** framework in the UK is currently such that it discriminates against vulnerable road users and must be reformed. As it stands, motor vehicle drivers are presumed not liable for damages in the event of a collision with a pedestrian or cyclist. This is in contrast to most of the countries in the rest of the EU, where the burden of proof falls upon the driver to demonstrate that they were *not* at fault in such collisions. In this way, by establishing an element of fairness in civil liability, we can move towards a culture wherein motor vehicle drivers take their responsibilities more seriously than at present.

4. Design principles and approaches

4.1 We would draw attention to the importance of adequate pedestrian infrastructure, particularly easily navigable, safe and attractive interchanges, as a major influence on mode choices.

4.2 Currently there is a culture of separating pedestrians from the street environment unnecessarily. We need to reach a situation whereby drivers *expect* to encounter pedestrians more regularly on our streets, and so can adapt their behaviour to the situation – rather than continuing to promote an outdated approach which implicitly places car drivers at the top of the local street hierarchy. This means, among other things, greater enforcement of Highway Code rule 170 (stating that drivers must give way to pedestrians; removing hard 'infrastructure' barriers to walking from gyratories and labyrinthine subways to excessive street clutter and minimizing the use of roundabouts to create a more pedestrian-friendly environment.

4.3 The application of 'naked streets' design principles such as decluttering and widening of pavements, which encourage more cooperative and responsible road user behaviour through design rather than regulation, can also have benefits far outstripping their costs if they are well-implemented. A prominent example is Kensington High Street, which saw overall road casualties drop by nearly half after a naked streets redesign.[12] The Government's Mixed Priority Routes schemes also showed that taking into account the needs of all road users can have wider reaching benefits, for example one of the results of this scheme was increased bus usage and reliability[13]

4.4 Street Management and maintenance is also crucial, it is imperative that at local authority level ensure that they set a joined up vision incorporating asset management, public space and maintenance programmes to ensure effective street maintenance that reduces clutter, maintains the quality of a street and uses public space more effectively, too often inadequate visions and incoherent programmes lead to the degradation of the urban streetscape.

March 2011

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2 See, e.g. Levy, J., et al. 2010. Evaluation of the public health impacts of traffic congestion: a health risk assessment. *Environmental Health* 9 (65) Available at: < www.ehjournal.net/content/9/1/65>

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[13] http://www.dft.gov.uk/pgr/roadsafety/dpp/mpr/practitionersguide.pdf

Written evidence from the Motorcycle Action Group (UK) (ETM 49)

The Motorcycle Action Group welcomes this opportunity to submit evidence to the Committee.

Formed in 1973, MAG is a volunteer-led organisation of 50,000 riders, clubs and businesses. As the representative voice of motorcyclists we campaign across a wide-range of issues that affect the riders' interests and rights.

BACKGROUND

Motorcycles use less road space compared to cars (whether travelling or parked), do not add to traffic congestion to the same extent and have higher vehicle occupancy rates. They enjoy shorter journey times than any other mode of road transport and with some relatively straightforward shifts in highways practice can show even greater advantages.

The Department for Transport's National Travel Survey shows 60% of motorcycle trips are for commuting, business or education, compared to 27% for cars (2009 figures).

There has been a significant increase in the number of licensed motorcycles and total distance travelled by motorcycles over last twenty years. The combined effects of general traffic growth and rising fuel costs means the upward trend in motorcycling can be expected to continue as motorcycles are well suited to many individual urban and inter-urban journeys.

It also appears that where a motorcycle is bought primarily for leisure purposes, the rider is highly likely to be a car driver who could be readily persuaded to switch modes for at least some commuting and other non-leisure trips.
However, transport policy and practice continues to neglect motorcycle use, which in turn is preventing it from contributing fully to local and national transport objectives.
The need to raise awareness of motorcycles as a legitimate transport mode is based on the principle that motorcycle use has increased without local or central government advocacy or encouragement. There is a need to make provision for motorcyclists; ignoring any vulnerable mode is unacceptable, especially where use of the mode is growing naturally.

GOVERNMENT AND LOCAL AUTHORITIES' ROLE

Road congestion adversely affects large numbers of communities and travellers on a regular basis. It is right that government at all levels should take an interest in reducing congestion, especially in urban areas.
The Eddington Transport Study, published by DfT in 2006, found that:

- 55% of commuter journeys are to large urban areas
- 69% of business trips are less than 15 miles in length
- 89% of delay caused by congestion is in urban areas

The cost of traffic congestion to the UK economy is very high, although different sources use a variety of measurements so the range of estimates appears to be in the order of £10-20bn per annum.
The Road Traffic Acts place both general and specific duties on national and local highways authorities, so that local and strategic road networks should be safe and efficient for all classes of road user.
However, the potential impacts of highway policy and practice on motorcycle users are rarely considered; consequently the road network is not as safe or efficient for riders as they are entitled to expect.

The principal aim of the Government Motorcycle Strategy (2005-10) was to 'mainstream' motorcycling,

"…so that all the organisations involved in the development and implementation of transport policy recognise motorcycling as a legitimate and
increasingly popular mode of transport."
www.dft.gov.uk/pgr/roads/vehicles/motorcycling

The Committee has already conducted an enquiry in to the effectiveness of this Strategy and, whilst there were some very positive outcomes it is clear that there is still a very long way to go before the vision expressed above is realised.

The effect is that the potential benefits of motorcycle use, including the reduction of congestion, are suppressed through institutional blindness to this group of road users.

One example of this is the inertia, sometimes deliberate resistance, shown by local and national travel policy and planning practitioners to help commuters, employers, etc. to realise the available advantages of motorcycle use.

Mass transit by bus or rail is not a door-to-door service for most people; where public transport can form a sensible element in business, social or commuter journeys there remains the need for independent travel by road at either end. The idea of combining private and public transport through 'trip-chaining' is well-established yet there is little evidence of efforts to integrate motorcycle users' with public transport for any part of their journey.

The Institute of Highways Engineers summed-up the problem a decade ago in "Guidelines for Motorcycling: improving safety through engineering and integration"

"2.7.1 Motorcycles can reduce congestion, reduce parking space requirements and improve accessibility, especially at places and times when public transport is limited. Motorcycles also provide a cost-effective mode of transport for those with limited resources. In view of their vulnerability, the specific safety needs of motorcyclists need to be carefully considered by road designers and traffic engineers in the design, implementation and maintenance of any works on public roads. However, it is unlikely that professionals on the operational side of road infrastructure provision will make a step change in their approach to catering for motorcyclists if the lead has not been set by policymakers at local, regional and national level."

www.motorcycleguidelines.org.uk/mg_02_7.htm

Motorcycling is often reported to account for 1% of distance travelled by all traffic, but around 20% of all casualties (NB: the number of rider casualties continues to reduce, but not as quickly as for other groups of road user). While there is genuine concern at local and national level about this disparity, that concern has yet to result in 1% of total roads expenditure and 20% of all safety-specific spending being allocated to measures that directly benefit motorcycles users. Conversely, other road user groups have been allocated very large amounts of public resource to improve facilities or safety.

This shift in policy and practice will require a higher level of resource than is currently allocated to motorcycling, but this could be achieved if a more proportionate share of the existing budgets was targeted on some of the most critical aspects of road design, management and maintenance that affect motorcycle users. Principally the two major factors associated with rider casualties;

- collisions with larger vehicles; typically at or near a junction while the rider has 'right of way'
- rider loss of control; typically when grip is lost during a change of direction, or while braking

TRAFFIC MANAGEMENT, ROAD USER CULTURE AND BEHAVIOUR

Travel by car largely defines the culture, behaviour and management of our roads. Cars account for the highest proportions of vehicles on the road, distance travelled and number of journeys. The needs of other modes tend to be marginalised, a fact recognised (but not yet adequately addressed) by the DfT:

The National Travel Survey (2009) shows that 69% of commuting or business trips are made by car, but that 85% of commuter car trips are single occupancy.

www.dft.gov.uk/pgr/statistics/datatablespublications/nts/latest/nts2009-09.pdf

Overall, the average number of people carried per car trip is only 1.6 persons, a figure that has remained constant for many years. Typically, cars have seating capacity of around 4-5 people including the driver, the dimensions of these vehicles are reflected in the amount of road space taken in traffic and when parked.

The Government's Motorcycle Strategy comments on research commissioned by the DfT to assess the impact on traffic congestion where people choose to travel by motorcycle. The conclusion was that, although this is a complex issue, a switch from single occupant car journeys to motorcycle would clearly bring congestion benefits.

The introduction of the London congestion charging scheme saw an immediate increase in the use of motorcycles as a result of their exemption from the charge and a reduction in collisions involving motorcycles within the charging zone.

To maximise the environmental benefits of a switch from cars to motorcycles there also needs to be a commensurate increase in convenient and secure parking provision. This is an important policy consideration; given the relative ease with which motorcycles can be stolen, the absence of secure parking near to the riders' destination can be a severe barrier to motorcycle use or lead to inappropriate or illegal parking. Because motorcycles make far more efficient use of parking space, the unit cost of providing motorcycle parking is low. Indeed, making no charge for motorcycle parking is a simple way to reduce demand for car parking space.

LEGISLATIVE PROVISIONS FOR ROAD MANAGEMENT

For motorcycle users the main concerns are to do with the urgency, frequency and reliability of the finished state of road openings and repairs, ie; the end result is often more important than the disruption from the works themselves.

To quote once more from the IHE guidelines:
"… the specific safety needs of motorcycles with their reliance on an adequate and consistent friction between their tyres and the road surface, have sometimes been overlooked by policy makers, planners, road designers and maintenance engineers. Raising awareness among these professionals will help redress the balance in providing for motorcycles."

MAG notes the publication in April 2010 of the DfT's Code of Practice "Specification for the Reinstatement of Openings in Highways". It is hoped this will reduce the frequency of road repairs as it provides for a wider range of approved materials and working methods to undertakers carrying out works.

www.dft.gov.uk/pgr/roads/network/local/streetworks/cop/sroh/

Beyond that, there is a need to take the opportunity to ensure consistent levels of grip for motorcycles across the whole of the carriageway, addressing the many faults and features that result in a sudden change of available grip to the tyres of single-track vehicles in particular.

The launch of the 'Get A Grip' campaign at a Parliamentary reception in November 2010, and at the largest UK motorcycle consumer show 'Motorcycle Live' soon after, has resulted in a number of local highways authorities starting to take more notice of these issues. The campaign is led by MAG with support from the IHE, Asphalt Industry Association and manufacturers of innovative alternatives to traditional low-grip features on the road – in the first instance replacing traditional metal surfaced inspection covers in high-risk locations (especially around bends and junctions) with modern alternatives that offer good grip-levels similar to the surrounding carriageway throughout their service life.

BUS LANES AND OTHER ASPECTS OF ROAD LAYOUT

Bus Lanes: Introducing a bus lane can result in other traffic lanes being 'squeezed' and less road space for motorcycles to percolate through congested traffic. This adds to vehicle congestion and the avoidable hazards faced by motorcycle users.

Government guidance on permitted vehicles in bus lanes has moved from a presumption against to a neutral stance. Local authorities are told to decide for themselves but there remains inertia against change at local level.

As part of its continuing analysis of permitted use of bus lanes by motorcycles (including mopeds and scooters, referred to collectively as 'Powered Two Wheelers'), Transport for London commissioned research to assess the scale of any time savings and consequent emission reductions from PTWs compared to cars. *www.tfl.gov.uk/assets/downloads/pt-emissions-study.pdf*

After comparing the performance of small, medium and large engine capacity motorcycles, against small, medium and large cars travelling identical commuter journeys in London, TfL found that PTW journey times were 29.3% lower than comparable car journeys, or 36.6% quicker when PTWs can use bus lanes.

Other benefits include lower fuel consumption, reductions in emissions of Carbon Dioxide, Oxides of Nitrogen, Carbon Monoxide, Total Hydrocarbons and Benzene. Compared to comparable small, medium and large PTWs using Bus Lanes, Petrol cars emit an average of between 2 and 6 times more CO2, between 1.5 and 6.5 times more Oxides of Nitrogen than PTWs using bus lanes and consume an average of between 2 and 6 times more fuel than PTWs using bus lanes.

NB: The reduction in PTW journey times and emissions from using bus lanes is itself significant, but does not account for the scale of these reductions. PTW use of bus lanes cuts their CO2 emissions by between 0.4% to 9.0%, cuts Oxides of Nitrogen by 0.4% to 10.1% and cuts fuel consumption by 0.4% to 9.0%.

Advanced Stop Lines: Advanced Stop Lines at traffic signals have been shown to provide a relatively safe area for two-wheelers to set-off and make safer turning manoeuvres after filtering to the head of stationary traffic. To date their use has almost entirely been for the benefit of pedal-cycle users, DfT's attempts to examine the benefits to motorcycle users have been resisted by local authorities with the result that riders of both human-powered and motorised two-wheelers may be unnecessarily disadvantaged.

Traffic Calming devices: Traffic calming aims to reduce traffic speed and discourage traffic seeking to avoid congestion hot spots. However, the design of common traffic calming devices can create unnecessary hazards for motorcycle users where the geometry or materials used create grip problems (an example of what may become an increasingly common practice was reported in Motor Cycle News www.motorcyclenews.com/MCN/News/newsresults/General-news/2010/February/feb2610-road-with-200-manhole-covers-per-mile/_/R-EPI-122430) or where the design appears to rely on creating potential conflict between opposing vehicles (an example of the potential outcome was reported by a local paper recently www.yorkshireeveningpost.co.uk/news/latest-news/wakefield_driver_is_cleared_of_causing_biker_deaths_1_3086397).

Roundabouts: Roundabouts can assist traffic-flow at junctions, but again there are issues with design aspects that appear to be unnecessarily hazardous for riders. These include features that are likely to causes loss of grip (eg; demarcating HGV overrun areas with low kerb-stones and conversion of 'T' junctions in to mini-roundabouts without levelling the road surface), or reduce the ability of other vehicle drivers to see motorcycles on the roundabout (eg; modified sight-lines and visual barriers that restrict drivers' view of circulating traffic), etc.

CONCLUSION

There is no doubt that the potential for motorcycling to contribute positively to local and national transport objectives, not least tackling traffic congestion, is yet to be fully realised. The principle causes have remained largely unchanged over recent decades. The challenge expressed by previous Ministers remains as valid today as it was when the motorcycle community first sat down with Government to help draw up its Motorcycling Strategy nearly a decade ago:

"We want to see an end to old stigmas and stereotyping – motorcycling can be a modern, practical way of getting around, and we all need to recognise it as such." *www.dft.gov.uk/pgr/roads/vehicles/motorcycling/*

March 2011

Written evidence from Cadence Driver Development (ETM 50)

1.1 The team of advanced driving coaches from Cadence Driver Development welcomes the invitation from the Transport Select Committee to submit further evidence to its members for their consideration and it thanks them for the opportunity of engaging in this Inquiry.

1.2 Cadence Driver Development is represented at this Inquiry by its principal coaching consultant, Hugh Noblett[1], who is an ardent believer in and advocate of the benefits of lifelong learning. In the context of this Inquiry, he offers his expertise in his capacity as founder of Cadence Evolution, the non-commercial division of the organisation, dealing with both road safety and economic perspectives.

1.3 The request for our submission is specifically related to input on Topic 2 (road user culture and behaviour and the relevance of the Highway Code to today's road users), being our area of specific interest and expertise. However, we have included brief comments on the other topics for both completeness and continuity.

2. Overview

2.1 A certain amount of Government and/or Local Authority intervention is necessary for Society to function successfully. Traffic movement is no exception. However, during periods of austerity, funds for initiatives perceived as 'non-essential' will necessarily be either refused or severely restricted. One of the key factors of congestion is the human influence and an unwillingness to take personal responsibility, to make individual, rational, or sensible decisions. On the whole, Society has negligible self-motivation. In many respects, Society now expects Government to provide solutions to many of life's changing issues, which only factors in additional costs. The new Government and Local Authorities now have an ideal opportunity to encourage people to develop a culture of involvement at both local and national levels, thus reducing the State's financial burden.

2.2 Successive Governments have allocated substantial funds for financing electronic solutions to what is essentially a human problem. Although some intervention is necessary for traffic flow at strategic locations, a nationwide 'roll-out' of such systems will place considerable strain on the country's finite resources and will require additional, constant upgrades and maintenance. An alternative approach is to invest in Society, which given time, good leadership and local encouragement, will perpetuate its own solutions.

2.3 The worst traffic congestion occurs at peak hours. If road travel is unavoidable, the majority of drivers expect to allow extra time for their journeys. However, there is evidence that actual journey times are falling slightly and that density is also decreasing, some of which is due to the current economic climate. Drivers feel more concerned when *unexpected* delays occur, typically outside commuter periods. Delays are often the result of minor incidents, heavy vehicle spillages or bridge strikes that affect both local road and rail traffic. Most are avoidable and many are exacerbated by Health and Safety legislation being applied to the letter, without providing adequate information.

Response

3. Topic 1

"The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so"

3.1 Consider improving traffic light phasing to ease flow rather than obstructing it

3.2 Consider the feasibility and benefits of adopting the European 'merge in turn' system, at roundabouts

3.3 Coordinate major road-works to avoid concurrent capacity reductions on alternative primary routes

3.4 Consider enforcement on road construction and maintenance companies to adopt a Continental ('rolling repair') approach to major road-works schemes. Instead of five or more miles of narrow lanes, with the workforce only in attendance and working at one location, consider building or repairing a stretch of shorter distance. Once completed, prioritise cones removal, return the stretch to normal and move manpower, cones and equipment to the next phase. The present policy creates frustration and leads to carelessness as drivers pay reducing attention, when driving at low speeds over longer distances

3.5 Prior to entering road-works with lane closures, consider implementing an 800m advisory merge-in-turn (or zipper) system. It is already European law

3.6 Consider offering incentives to haulage companies to move freight between the hours of 20.00 and 05.00 with exemptions for 'essential' and fast moving consumer goods (FMCG)

3.7 Consider further evaluation of ongoing trials restricting LGVs on two-lane dual carriageways to the nearside lane during peak times (and also consider implementing the French rule of zero heavy freight movements on Sundays)

3.8 Prioritise roll-out of high speed Broadband for the whole country to encourage home- and tele-working

4 and 5. Topic 2

"The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code"

For clarity, we have treated Topic 2 as two separate issues (4 and 5 below):

4. Road user culture and behaviour

4.1 Encouraging personal responsibility is a key factor in re-enabling and motivating people to engage with a greater society. Driving is no exception. Driving is a highly complex task that goes far beyond the mechanical skills of propelling a motor vehicle from A to B. We need to alert drivers to their responsibilities, not only to themselves but also to all other road users. Current road user culture and undesirable attitudes and behaviour, singly or in combination, often have a dramatic effect on traffic flow and road user safety. There are over 34 million drivers, possessing different personalities and predispositions, developed during childhood and often influenced negatively by a fragmented family life or exposure to undesirable peer behaviour.

4.2 Particularly noteworthy traits are:

i. **Inattention** – drivers must be encouraged to appreciate that driving requires total concentration in order to remain safe and crash-free

ii. **Poor decision-making** – drivers are not taught to have 'a plan of action' and often lack the skills to reach consistent and rational decisions

iii. **Poor lane discipline** – not returning to the nearside lane of a motorway after overtaking wastes valuable road space. (It also encourages deliberate 'undertaking', which breaks the law, Highway Code Rule 268)

iv. **Distraction** – allowing the mind to be diverted from the driving task compromises safety for all and compounds already erratic and unpredictable behaviour

v. **Tailgating** – drivers need to be made far more aware of the *time* it takes to react to constantly changing situations. Tailgating is a major cause of traffic delays, lane closures and rear-end shunts, requiring the attendance of Highways Agency Traffic Officers – and in the event of more serious incidents involving death or serious injury, the presence of Police and Accident Investigation Officers, and recovery crews, often requiring a substantial period of road closure. Additionally, the opposing carriageway flow repeatedly suffers through a nationwide obsession with 'rubber-necking', often leading to a 'domino effect' of additional incidents as a result of following too closely, compounded by inattention. Subsequent delays increase fuel consumption and pollution levels, while creating further frustration

vi. **Lack of spatial awareness** – drivers have become cocooned in their comfortable, 'safe' and soundproofed vehicles. They must be advised of the need to make constant reviews of the situation ahead, to the sides and to the rears of their vehicles

vii. **Lack of restraint, courtesy and consideration** – leads to unnecessary altercations with other road users. A culture of mutual cooperation should be encouraged

viii. **Over-reliance on a vehicle's active and passive safety systems** – no vehicle can stop 'on a sixpence'. It takes time. Electronic aids were devised to mitigate for driver error and they manage many situations extremely successfully but even they cannot defy the laws of physics. The careful, competent driver embraces the technology but rarely activates it

ix. **The belief that a licence is a 'right', or an expectation,** rather than a privilege that must be earned through hard work and commitment to knowledge and understanding of how to form robust risk strategies

x. The anomaly of more than 50% of the driving population believing itself to be better than average

4.3 To rectify these traits requires guidance – a positively encouraging hand from Government – and not a reliance on enforcement, with its resulting antipathy towards authority. To achieve greater awareness, there will be a financial cost – through advertising campaigns, media programmes and promotional exercises. This may involve nursing the public's obsession with high profile celebrities and encouraging them to act as 'road culture ambassadors', with whom the target audience(s) feels that it can identify. The cost of such ongoing campaigns is minimal, when compared with the investment required to build wider roads or erect nationwide 'intelligent' and potentially unreliable transport systems. Encouraging the population to become more responsible starts in childhood and lasts a lifetime. Future generations will benefit from today's foresight.

4.4 All messages need to be simple, memorable and make sense to the target audience. Drivers must open their eyes to the problems they can cause, starting with a more comprehensive and regular eyesight testing regime. (Recommendation from the Eye Health Alliance, 2010)

4.5 In addition to a number of suggestions listed in our previous submission to this Committee (1 November 2010)[2], our experience leads us to conclude that wherever possible, simplification of the driving environment will assist the driver in focusing on the task in hand, which will inevitably result in fewer traffic incidents – the major cause of traffic congestion. By focusing on improving driver behaviour and skills, there will without doubt, be fewer incidents, road closures and delays and their economic impact will be minimised.

4.6 Confusion arising from excess signage and superfluous street furniture is a further issue – the increasing proliferation of unnecessary and often over-complicated road signage leads to hesitation and indecision, not just for British nationals. Poor placement often results in reduced or even blocked views for drivers. They have a detrimental impact on the environment, are costly and lack consistency across counties. The brain, already involved in highly complex tasks, becomes overloaded. The result is unnecessary distraction, misunderstanding and misinterpretation, often leading to non-compliance, inappropriate decision-making and incidents.

4.7 With fewer signs, there would be less 'clutter' and a more pleasant environment for all. Placing fewer signs also results in cost savings for the Local Authority. Removal of unnecessary signs reduces maintenance costs. Clarification and simplification of statutory rules on where to position necessary signs and guidance on uniformity will help authorities, which have tended to 'over sign' for fear of prosecution. Careful, competent drivers will welcome a clear, consistent and a more minimalist approach.

5. The relevance of the Highway Code to today's road users

5.1 The Highway Code (HC) is a particularly good example of the effects of long-term revision rather than recognizing a time for replacement. In 1954 the HC was 6½ "x 4" and contained 32 pages of advice, information on law – and 71 Rules, of which 15 were specifically for pedestrians; 6 were for cyclists; 5 were directed at pedestrians accompanying animals, with the remaining 45 for motorcyclists and drivers. The cost was one Penny.

5.2 Today we have a 145-page book containing 307 Rules, explanations of road signs, road markings and an annexe containing 10 pages of additional information, including some extra Rules (highlighted in red) that could be missed easily. One page is even dedicated to helping the reader to identify the difference between a Highways Agency Traffic Officer (HATO) and a Vehicle and Operator Services Agency (VOSA) Officer, with additional information on how to identify the different ways a Schools Crossing Patrol operator uses the 'lollipop'.

5.3 The decision must have been made in the early-1970s that to include the increasing number of signs in the HC would render the book unwieldy. Since 1975 there has been an additional publication 'Know your Traffic Signs' that runs to 143 pages, costs £4.99 and is largely unknown to the majority of road users. It is unsurprising that many people make inappropriate decisions, when there is so much to interpret.

5.4 It is unlikely that the majority of people could possibly learn and retain all 307 Rules in the current HC.

5.5 Anecdotal evidence suggests that the newly qualified driver often takes great delight in throwing away the HC along with the 'L' plates, never to be referred to again.

5.6 The style of writing and content is aimed at new drivers. More experienced drivers see no reason to own a copy, let alone to refer to it for guidance or memory refreshment.

5.7 The HC should be greatly simplified. Much of what is written could be extracted to form additional modules, thereby enhancing the novice driver curriculum and could be used extensively during the two-year restricted licence phase of learning[3]. A concise extrapolation of the remainder could be used to form a simplified, user-friendly and pocket-sized legal guide, with the emphasis on 'legal' as this would assist drivers in knowing their responsibilities. It would be cost-effective to send copies directly to schools, colleges, libraries and local government offices. The general public could receive their copies at the same time as their applications for a Driving Licence or at the time of annual VED renewal. Production and publication costs could be covered by a nominal one-off increase in vehicle tax, or by commercial sponsorship arising from a PPP, with perhaps a print-house or a major motoring organisation.

5.8 A new HC could start with common sense guidance[4] outlining the principles of safe, responsible road use…for example:

ALWAYS

Walk, ride or drive **responsibly**
Take care
Concentrate
Look before you act – don't be blind to your **'blind spots'**
Communicate clearly
Allow **time** to think first
Create **space** around you
Read the road ahead and **use speed intelligently**, adjusting it to your surroundings
Drive to the road and weather **conditions** – not the speed denoted on a sign
Anticipate what might happen – **"What if?"**
Be **decisive**, not hesitant
Be **calm** – don't rush

Be **courteous** and **considerate**

Cooperate with others

Share road space – share **information**

5.9 The remaining elements, the traffic rules; the 'Musts' and 'Must Nots'; the significance of sign shapes and colour; traffic law and concise motoring advice would follow. A section should be included briefly outlining the need to improve driving skills on a cyclical basis, with inclusion of the benefits of 'advanced thinking', safety, improved fuel consumption, more efficient use of time and highlighting the personal satisfaction arising from a sense of greater achievement. At the end of the booklet there would be general references on how the new two-tier licensing system[3] would work and the need for already experienced drivers to help and cooperate with 'R' plate drivers.

5.10 Simple elements of road and vehicle awareness, linked with the development of a safety culture would be introduced to children of nursery school age, with more complex elements being incorporated as part of a continual process throughout the formative years. The new, simplified and memorable Highway Code would form the backbone of all subsequent learning.

5.11 We highly recommend commitment to a continuation of the excellent awareness presentations to schools, carried out by the police, fire and ambulance services. Fostering a much-needed and positive relationship with the police in particular, from an early age, will do much to refocus ingrained perceptions and enlighten an increasingly unreceptive and uncooperative public to their broader rôle.

5.12 In the 1930's, The Earl of Cottenham became advisor to the Metropolitan Commissioner of Police and was a major contributor to the development of a safe, systematic and repeatable method of driving ('*Roadcraft*'), subsequently adopted by police and other services around the world. With great prescience he wrote,

> "Drive with concentration and deliberation and these words will be just as true in fifty years hence..."
>
> "Road sense is the visualising of possible difficulties and dangers before they are apparent and the consequent mental formation of strategy to avoid them..."

Those statements are even more relevant to today's congested roads, poor attitudes and behaviour, and the increasingly hostile driving environment.

6. Topic 3

"Intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times"

6.1 Successful initiatives in one location (e.g. M42 Active Traffic Management) will not necessarily have the same effect elsewhere. Feasibility studies and research may provide more suitable and cheaper alternatives to costly blanket implementation.

6.2 Variable message signs may ease congestion on a strategic road (Motorways) only to cause a problem for the local authority route chosen as an alternative. On motorways, there are no vulnerable road users. By alerting traffic to problems ahead (variable matrix signs), the already frustrated driver does not necessarily adapt to the more complex driving environment experienced on narrow local roads and higher 'catch-up' speeds may result. The greatest congestion often occurs at peak traffic times, which brings diverted traffic into unnecessary conflict with local movements, particularly school age children. Convenience for one set of road users should not have a detrimental effect on others. A balance is necessary.

6.3 While there may be an increasing reliance on satellite navigation and 'intelligent' transport systems, the infrastructure is expensive to install and maintain; recent perceptions suggest unexpected unreliability and far cheaper alternatives can be implemented.

7. Topic 4

"the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004"

The content of this legislation is outside our area of expertise and we have no comment other than to applaud any efforts to implement a cohesive and concurrent plan for street disruptions and collaboration between the Highways Agency and Local Authorities.

8. Topic 5

"the impact of bus lanes and other aspects of road layout"

8.1 With our limited experience of bus lanes, it would appear they have achieved their objectives in some situations but where the road layout precludes a continuation, it is often counterproductive, especially when the backlog of prohibited traffic prevents the bus from continuing into the section further ahead.

8.2 Some bus lanes, on stretches longer than one mile, have had a positive impact on reducing journey times and local awareness campaigns may encourage drivers to change their mode of commuter transport.
8.3 A number of serious injuries to cyclists have resulted from shared use of bus lanes. Extra vigilance is required from both bus drivers and cyclists alike (awareness campaigns). To permit additional classes of vehicle into bus lanes is likely to increase casualty figures and add to the frustrations of prohibited drivers.
8.4 Yet, all of the above-noted points only have relevance when the bus lanes are restricted to bus travel alone. With recent changes to usage, plus the self-interest of other user groups, we run the risk of creating a lane for every type of vehicle, bar the private car.

9. Summary

9.1 It is not roads that make people safe or dangerous. It is the ways in which people use them; from the unaccompanied child walking to school, the teenager listening to his or her personal music system, to the cyclist, motorcyclist, car, van or truck driver. Encouragement must be given from an early age to embrace a culture change that promotes a desire to share our road space safely and with mutual cooperation.

9.2 Through motivation and incentives to embrace a lifelong desire for personal improvement, our lives will be enhanced and Society will refocus on reducing materialism and self-interest.

9.3 Encouraging people to take responsibility for their actions will improve driving standards (which are at an all-time low). By adopting a greater involvement in the driving task, road crash numbers will continue to reduce. The benefit to society is manifold but, in particular, its effect on the finite resources of hospitals and emergency services will have both social and economic ramifications.

9.4 In order to re-build a cohesive, cooperative and inclusive society, we should endeavour to simplify, engage, educate and encourage people to take an active rôle in becoming an integral element of a more thoughtful, less self-centred and more self-reliant nation. The tendency to continue relying upon on a policy that uses punishment, as its major weapon to rectify the symptoms, fails to address or recognise the causal factors. By addressing the causes, we have the opportunity to develop a low cost, enduring solution for a long term future.

9.5 Without doubt, no Member of Parliament would wish to see avoidable harm befall a fellow countryman, particularly when we have the means at our disposal to prevent unnecessary death

or injury and improve the quality of life for all road users. Now is the time to begin the process of awareness, before our driving society becomes too deeply entrenched in its susceptibility to demonstrations of recurrent, unacceptable and damaging attitudes and behaviours.

9.6 We are confident that MPs will appreciate the benefits to society that can be achieved by encouraging 'ownership' of the problem, a shift towards an understanding of how mutually cooperative values and behaviours can benefit not just the individual but also broader society. With a strong belief in the need to address this issue and by establishing a nationwide desire for cultural inclusion and mutual cooperation, we can motivate, influence and, in time, reap the rewards of a committed investment in the welfare of the nation.

9.7 This issue is not party-political and previous incomplete measures and random quick fixes have regularly failed. Few policies have extended beyond the period of office of the elected Government of the day. With foresight, courage and cross-party collaboration in championing a national culture revolution, based on social responsibility and an expectation of lifelong learning, to which there is no left, right or centrist bias, we have the opportunity of creating a better society for the benefit of all.

9.8 We are optimistic that this committee will be sensitive to the findings in our submission. We have the opportunity of creating an initiative that will have far-reaching effects on the state of the country, in particular:

i. massive savings in healthcare, emergency services, traffic management schemes, repairs and insurance costs
ii. Vastly improved air quality
iii. Greater savings in fuel usage
iv. A more complete and contented society
v. A positive benefit in reduction of the human aspects following injury or death collisions
vi. An enduring legacy for future generations

References (referenced documents not reprinted here):
[1] Hugh Noblett – Personal information
[2] Cadence Driver Development Submission to TSC (1 November 2010)
[3] Recommendation for implementation of two-tier licensing (1 November 2010)
[4] CDD Common Sense Guide to safe, responsible road use™
Research papers (CDD) 'Cradle to Grave' educational programmes; road safety (please refer to CDD)
Further references as per CDD evidence papers, (1 November 2010)

March 2011

Written evidence from the Motor Cycle Industry Association (MCI) (ETM 51)

Introduction

The MCI

The Motor Cycle Industry Association (MCI) is pleased to submit written evidence to the Transport Select Committee Inquiry on Effective Road & Traffic Management in light of the Governments decision not to introduce road pricing on existing roads.

The MCI is the UK trade association that represents the supply side of the motorcycle industry, including manufacturers and importers of mopeds, motorcycle and scooters; the suppliers and distributors of associated goods and services. With approximately 120 members, MCI represents approaching 90% of the UK industry.

The Motorcycle industry in the UK today employs around 62,000 people in 6,300 businesses. The UK industry has been valued at over £7billion per annum.

The MCI has played an active role in the development of sustainable policies for motorcycling over many years and has worked closely with the Government, police and other delivery bodies to implement strategies and to encourage a holistic approach towards motorcycling. A number of landmark initiatives have been taken to raise awareness of traffic integration, road safety issues and compliance with the law among riders, most particularly, the production, promotion and distribution of specialist literature, DVDs, temporary funding of the successful 'Bikesafe' initiative, actions to support the 'Think!' campaign and work with Government departments and agencies.

The MCI does not request a specific opportunity to present oral evidence, though if called by the Committee to give evidence, will be happy to do so.

Summary of Position

The Challenge

Creating a less congested, a safer and more sustainable environment in transport policy terms is as much about introducing choice as it is about encouraging alternatives. There has been an emphasis on reducing the amount of journeys that are made by private car, But policies to reduce car use have been far from creative and have failed to recognise the need for 'on demand' personal mobility in a modern and dynamic society.

As a result, the car driving public has been offered only the personally constraining choices of walking, cycling and public transport offered as alternatives to their cars – 1950s solutions in a modern era where 1950s travel options for buses and trains, are no longer available, aside from within major conurbations.

This has been coupled with 'demand management' policies which have been primarily aimed at making life difficult for car users, who for various and often good personal reasons, stick to their chosen mode of transport. The result has been more congestion, more transport inefficiency and more Co2 from road transport.

Is it any wonder that only limited successes have been achieved against a backdrop of the 21st century need for individual and personal transport flexibility and choice.

Motorcycling offers exactly the kind of choice and flexibility that individuals require, but in 'command' policy terms, very little has been done or said to recognise this.

The MCI is concerned that the absence of a full consideration of the valuable role that motorcycling can play in achieving overall UK transport policy goals has been and is continuing to be, a major deficiency. Successive administrations have failed to fully integrate motorcycling into mainstream

policies and MCI feels that Government and Local Authorities should recognise the mode and support commuter motorcycle use in particular, with policies similar to those developed for other vulnerable modes.

The industry looks to the Coalition Government to correct this fundamental oversight.

Motorcycling Offers:

Less Infrastructure Damage

- Motorcycles cause little damage to roads compared to other motorised transport modes and are responsible for only a very small percentage of maintenance costs. Motorcycles take up a fraction of the space that a car needs, so increased motorcycle use would have little impact on the current roads infrastructure.

Tackling Congestion.

- Motorcycles occupy far less space on the road and do not contribute to traffic congestion.
- Five motorcycles can be parked in a single car parking space, allowing for more efficient land use. A Vienna City Council investigation in 1985 found that cars were being driven 1.5 million km per day just to find parking places. In 1992, 180,000 litres of fuel per day were used in this way in Vienna. (FEMA – European motorcycle riders organisation)
- Motorcycles are not forced to remain stationary in traffic with an idling engine. A gridlocked car – even when carrying four passengers – returns zero miles to the gallon.
- Motorcycles play a role as practical and flexible personal transportation for those who cannot afford a car, allowing PTWs a role in reducing social exclusion. Motorcycles can also be used as low cost transport by young job seekers in remote areas which are not well served by public transport.

Time Saving

- A motorcycle can take approximately 16 - 46% less time to cover the same trip through congested traffic as a car. A motorcycle can also offer significant time savings for commuters on medium to long distance trips. (London journey times surveys)
- Key parts of many urban motorway networks and main routes are fast approaching (or have reached) gridlock during peak periods. Increased motorcycle use can help to slow traffic growth. A mid-range motorcycle is capable of maintaining normal traffic speeds on ‘A’ roads and motorways and is less affected by traffic congestion at peak times.
- Motorcycles can, in most cases, avoid or extricate themselves from congestion.

Reduced Co2

- The motorcycle fleet is emits on average 30% less Co2 than the current car fleet. Most machines used for commuter purposes emit less than 100g/km of Co2.
- Motorcycle use should therefore feature as a default component of any strategy to reduce transport Co2. The Select Committee is requested to carefully examine why this has not been the case – particularly as its is accepted that safety concerns can be significantly addressed by properly integrating motorcycling into transport policies. Motorcycle casualty rates have fallen by around 30% since the year 2000.

Sustainability

- In addition to being a low Co2 mode, Motorcycles require far fewer resources, fewer raw materials and less energy during manufacture. Once a motorcycle has reached the end of its useful life over 75% of components can be reused on other machines, the remaining 25% can be recycled. (ACEM).

Ignoring or rejecting motorcycles in transport policy has had the unfortunate effect of sustaining motorcycle safety problems and has also left a significant gap in strategies to reduce traffic congestion and Co2. The OECD has recognised this and has concluded that fully integrating

motorcycling into mainstream transport policies should be a default policy for any Government wishing to address safety issues.

All transport modes, including motorcycles, should be regarded as tools within the transport policy toolbox. All modes offer key components to the structure of a properly managed and integrated transport policy, but if some are left out of the toolbox, key aims cannot be successfully realised.

The Government's Motorcycle Strategy of 2005 was widely welcomed by the motorcycle community and road safety experts. The then Government announced that motorcycles would be 'Mainstreamed' in transport policy, unfortunately, progress on implementation has been sporadic.

Ministers in the Coalition Government have committed to think more positively and have gone as far as to say that motorcycling should be a natural part of sustainable transport policies (meeting with motorcycle groups, June 2010). However, this welcome commitment has yet to be backed proper by engagement and action from officials. DfT documents still largely overlook the existence of motorcycles, let alone recognise their proper place in transport policy. In short, nothing which would offer positive effect with regard to motorcycling, has changed since the General Election.

A sensible, sober and ideology-free discussion offers the chance for a new and more rational approach to policy development. So far, all attempts to reduce car road traffic have failed as evidenced by the statistical data available, forcing narrow concepts, such as "demand restraint" upon citizens should now be considered as policy choices that, in the narrow ideological fashion that have so far been applied, have been proven wrong and have actually led to a rise in Co2 outputs from urban road traffic in particular.

Therefore, MCI believes that the focus should be on policy measures fully compatible with the real demand-oriented needs of UK citizens and businesses. Action is needed to re-orient transport policy within the framework of a more systematic approach, without favouring arbitrarily one or the other transport mode, whilst at the same time applying realistic and economically viable principles, such as:

- Fair and equal competition between and within transport modes;
- Freedom of choice by users/business and accordingly the respect of rights and choice of users to select the most appropriate transport mode for their mobility needs;
- Transport efficiency encouraging the most suitable and effective mode of transport according to the circumstances.
- Integration, in particular in urban areas, of motorcycles in transport policy.

The Government's Motorcycle Strategy

The industry was pleased to hear from Coalition Government Ministers, soon after the General Election, that they supported an updated motorcycle strategy for Government (meeting with motorcycle groups June 2010).

However, nothing has been done to realise this goal thus far and there has been almost no engagement within DfT on issues related to the motorcycle strategy. In fairness, DfT has been heavily engaged with the ongoing review of the motorcycle test, but this should not be an excuse for total stagnation after Ministers have expressed a wish for work to be done in this area.

Key to the success of any new strategy will be for the DfT to take proper ownership and provide real leadership in order for a strategy to realise its objectives.

It is fair to say that motorcycling organisations have become extremely tired of being constantly 'stone-walled' when sensible proposals are made to reduce rider vulnerability and allowing the realisation of the potential of this low cost, low Co2 form of transport in traffic management policy. The seemingly 'ideological untouchability' of PTWs in policy is an extremely unhelpful position to take by a Governmental 'machine' which often expresses concerns about motorcycle safety.

Real safety improvements for cycling have been achieved by integrating cycling into transport policy and traffic management as a ‘favoured’ mode and through the encouragement of local action to support the mode.
This has not been the case with motorcycling, which is currently boxed into a narrow ‘silo’ at the DfT, mostly regarded as a road safety problem and not an opportunity for overall transport policy. The result is no real leadership of overall policy direction, very limited coordination of policy actions away from the Road Safety Division and a limited mandate for the Road Safety Division. MCI feels that this approach has led directly to sustained vulnerability for PTW users and a lost opportunity for traffic management policy.

As mentioned at the start of this section, the industry requires clarity regarding the general direction of the Coalition Government on motorcycling. Currently, Ministers state that the Government wishes to encourage safe and sustainable motorcycle use through inclusion in transport policies. However, aside from positive remarks on ‘Wheels to Work’, policy actions do not seem to support these welcome words.

Specific Points Raised by the Committee.

The comments below, do not necessarily address the ‘big issues’ in relation to the points raised, but instead outline how motorcycling can help mitigate negative impacts of the issues under examination.

The prevalence and impact of traffic congestion and likely future trends;

- In terms of mitigating some of the impacts of traffic congestion, a fully integrated motorcycle policy could offer the travelling public an additional means of transport, thereby encouraging car users to switch to motorcycles for journeys where public transport, walking and cycling is impractical.
- In the case of transfers of users from public transport to motorcycles, the creation of much needed capacity on public transport in this case would create additional space for those car users who wish to switch to buses and trains.
- Motorcycling should be included in green initiatives, which encourage a switch to lower Co2 forms of transport. Motorcycle Co2 is on average one third lower than the average for cars. Many commuter motorcycles produce under 100g/km of Co2
- Incentives for electric cars should also apply to electric motorcycle purchases (Plug in Car Grant)
- The Plugged in Places programme, should recognise the infrastructure needs of electric motorcycles.

the extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so;

- Government and local authorities should take a management based approach to moving people and goods, not an ideological one. In other words, instead of talking in terms of what is ‘correct’ transport (walking, cycling and public transport), concepts which are either not practical for many and indeed are often resented, there needs to be an emphasis on utilising different modes according to the type of journey that is desired and managing road space accordingly. This would help tackle the real issue of traffic congestion in urban areas which have been created by badly thought-through ‘demand management’ policies (road space reallocation, lane narrowing, traffic light phasing etc). Demand Management has tended to create traffic congestion in urban areas and consequently, increased Co2.
- Local Authorities should have guidance on the implementation & management of motorcycling strategies & policies, in order to inform choices and policies, reduce vulnerability and realise

the opportunities that motorcycling offers. The IHIE Motorcycle Guidelines are a good example of this.

the extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code;

- Interventions need to be aimed at riders and drivers, with these targeted at addressing Skills deficits, Attitudes, Defensive motoring/riding and Enforcement.
- Some issues are 'generational' where it takes some years to create effective change. Road user education in schools is a valuable tool though.
- Poor traffic management, or demand management measures which seem to be poorly justified, or not well understood by road users, or seem mainly aimed towards being 'anti car', help to sustain a negative culture towards traffic management.
- Breaking the 'us and them' mentality among roads users and their attitudes to traffic management intervention, is an important issue. Breaking the ideology of 'some modes good, some modes bad' in favour of a more practical approach to moving people and goods, using all modes according to there abilities and versatility, will be of great help.

intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times;

- Motorcycles should be considered in such traffic management schemes at every stage in order to ensure the safety and inclusion of motorcycle users.
- However, the impact of the M42 scheme has generally been positive and industry supports the 'roll out' of the initiative to congestion hot spots such as sections of the M25
- Motorcycling needs to be more actively considered as part of research and developments in the area of ITS.

the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004;

- Motorcycling is often overlooked by Highways Planners and Managers. Engineering standards should take account of PTWs and standards should be set according to those laid down in the IHIE Motorcycle Guidelines.

the impact of bus lanes and other aspects of road layout.

- Bus lanes, advanced stop lines and other priority measures should be engineered to take account of motorcyclists as well as other vulnerable road users, thereby improving their visibility and reducing vulnerability.
- A broader issue, where the public question seemingly empty bus lanes in certain places, while the general traffic lane is blocked solid at peak times, needs to be addressed. This brings traffic management into disrepute and bus lanes should be restricted to areas of high bus flows, rather than placed 'wily-nilly' as a way of constraining road space – a technique that creates additional traffic congestion and Co2. Bus lanes are a valuable tool, the placing of which should not be abused.

March 2011

Written evidence from the Greater London Authority (ETM 52)

1. Introduction

1.1 The Greater London Authority (GLA) welcomes the opportunity to contribute to the Committee's inquiry into effective road and traffic management in the light of the Government's decision not to introduce road pricing on existing roads (except in relation to Heavy Goods Vehicles).

1.2 The GLA encompasses a range of 'Functional Bodies', including Transport for London (TfL), which acts as the Mayor's Strategic Transport Authority. TfL is responsible for most of the capital's transport system including the Transport for London Road Network (TLRN). The TLRN consists of the busiest 5 per cent (approximately 580km) roads in London, carrying over 30 per cent of all traffic. Because of the greater proportion of commercial freight and business related traffic (eg, commuting), the TLRN is estimated to account for up to 40 per cent of the gross economic value of traffic related movement across the city.

1.3 Through the Traffic Management Act 2004, TfL also has a strategic responsibility, and specific powers, to coordinate works and ensure the free flow of traffic on the wider Strategic Road Network (SRN). It is also responsible for the maintenance, management and operation of all of London's 6,000 traffic signals, and for the real time operational control of the road network through the London Streets Traffic Control Centre (LSTCC) and the London Streets Tunnels Operations Centre (LSTOC), whose role is to reduce the likelihood and levels of disruption and delays by responding quickly to manage traffic around any incident or event on the network.

2. The Mayor's Transport Strategy

2.1 Much has been achieved in London over the last decade to reduce or manage the demand for road-based travel (including an unprecedented 7 per cent increase in walking, cycling and public transport mode share). However, because of forecast economic and population growth (with a further 1.25m people and 750,000 extra jobs likely to be created by 2031), even with future planned transport investment (eg, Crossrail, Tube upgrades and National Rail investment including Thameslink), congestion in London is still forecast to grow.

2.2 The Mayor's Transport Strategy (MTS) sets out the wider transport planning context and spatial framework for the management of roads in London. The MTS aims to achieve six high level goals:

- supporting economic development and population growth
- enhancing the quality of life for all Londoners
- improving the safety and security of all Londoners
- improving transport opportunities for all Londoners
- reducing transport's contribution to climate change, and improving its resilience
- supporting delivery of the London 2012 Olympic and Paralympic Games and its legacy.

2.3 London's road network is the most congested of any area of the UK. Congestion costs an estimated £2 billion in lost economic productivity, adversely affects Londoners' quality of life, causes frustration to road users, contributes to a deterioration of air quality and leads to higher CO2 emissions.[1] The road network therefore has a contribution to make to achieving each of these goals, and plans are being developed accordingly.

2.4 Under the general heading of managing the road network and smoothing traffic flow, the MTS sets out a series of policy proposals under six key themes, as follows:

- maximising the efficient and reliable operation of the road network
- minimising the impact of planned interventions on the road network with the potential to disrupt traffic flows
- minimising disruption from unplanned events (accidents, emergencies, etc) in 'real-time' as they occur and return the network quickly and efficiently to its planned steady state operation as soon as possible
- managing demand and achieving modal shift away from car based traffic movements towards more sustainable modes to reduce traffic growth pressures on the network
- where feasible, and where there is an overall congestion reduction and local economic benefit, developing the road network
- maintaining road network assets in a good state of repair.

3. The Network Operating Strategy

3.1 The efficient management and operation of London's strategic road network is of significant economic importance, not only to London itself, but also to the wider UK economy as a whole. TfL is developing a Network Operating Strategy which aims to bring together the best practice in road network management and provide a strategic framework for the operational management of London's road network. It will set out specific advice and guidance for those involved in day to day decision-making in TfL, the London boroughs and other organisations charged with the delivery of the road management related aspects of the MTS. It is also intended to assist in the implementation of the developing Sub-regional Strategies and borough Local Implementation Plans (LIPs), as well as providing a framework through which to prioritise both capital investment and 'business as usual' operational expenditure decision-making across the road network. The main outputs of the Strategy are set out below.

3.2 Responding to the development of the new MTS, TfL has undertaken customer research and has identified a set of key performance measures that collectively quantify the performance of the road network in terms that road users understand. These are as follows:

- journey time reliability (the strategic MTS outcome measure)
- journey time/traffic speed
- volume of demand
- volume of delay and disruption due to planned and unplanned events

[1] *MTS, page 21, paragraph E19*

- numbers of road works and other events or incidents recorded (ie, impacting on the availability of the network)
- customer satisfaction with road network performance.

Maximising the efficient and reliable operation of the network

3.3 TfL has identified 23 London-wide TLRN corridors for which it is undertaking work to develop a better understanding of performance, particularly in terms of journey time reliability. This work includes the development of detailed corridor simulation models that will allow for the testing of potential measures to improve journey time reliability. The following points set out some of the key actions TfL is currently implementing to deliver performance improvements:

- Reviewing the timings of 1,000 sets of traffic signals each year.
- Installing SCOOT (Split Cycle Offset Optimisation Technique) at an additional 1,000 sets of traffic signals across London. SCOOT is an automated, intelligent traffic signal control system which can dynamically change signal timings to best suit prevailing traffic conditions. The SCOOT system provides on average a 12 per cent reduction in delay and an 8 per cent reduction in stops for traffic where installed. London has approximately 6,000 traffic signals, a third of which currently operate under SCOOT control. TfL plans to upgrade 1000 more signals to SCOOT control by 2012/13.
- In conjunction with the Department for Transport (DfT), trialling Pedestrian Countdown, an initiative which delivers benefits to pedestrians by providing information about how long pedestrians have to cross the road at traffic signals at eight junctions in London.
- Exploring the benefits of removing traffic signals at certain locations and, where safe and appropriate, replacing them with alternative measures that make it easier for motorists, pedestrians and cyclists to get about. A number of boroughs have also implemented pilot initiatives across London.

Minimising the impact of planned interventions

3.4 TfL's overall approach, as reflected in the MTS, to reducing the impact of planned events on the road network is two-fold:

(i) to improve cooperation and coordination between highway authorities, utilities and other organisations, to ensure works and other events are well planned, and that all opportunities are taken to mitigate disruption; and

(ii) to develop real incentives for works promoters to apply best practice and reduce the amount of time they spend digging up roads and/or disrupting traffic.

To support this approach, TfL has implemented a number of initiatives including:

- The Mayor's Code of Conduct for road works. The Code, launched in April 2009, brought together TfL and the main utility companies working in London to work in partnership to reduce the impact of road works on London's roads. The signatories agreed to work to ten key principles including: the provision of information boards at works sites; carrying out more work outside peak hours; reducing occasions when works over-run their agreed durations; cooperating with joint working and 'workathons'; and considering 'plating' over holes in the road and footway, wherever possible.

- The London Permit Scheme (LoPS). A further commitment in the original Code of Conduct was the introduction of a new permitting scheme for road works in London. On 11 January 2010, TfL and 16 participating boroughs became the first highway authorities in the country to implement a road works permit scheme, replacing the previous New Road and Street Works Act 1991'noticing' arrangements. A further two boroughs joined the scheme on 1 April 2010.

TfL is using powers provided by the permit scheme to control the number of permits issued and, through this, the volume of activity taking place on the TLRN at any one time. Working closely with the utility companies, TfL is aiming to achieve a 5 per cent reduction in the overall numbers of road works, although much higher reductions (up to 20 per cent) are being targeted in levels of peak activity

- Lane Rental

However, improving coordination and control of roadworks can only go so far. The Mayor and TfL strongly believe that there is a need for real incentives on the utility industry to find new ways of working that avoid, or severely reduce, the need to dig up our busiest roads at the busiest times of day. For this reason, TfL is very keen for the DfT to provide it with the powers to introduce a targeted lane rental scheme for utility works on the busiest parts of the TLRN and would very much welcome the Transport Committee's support for this approach.

TfL believes lane rental would incentivise the streetworks industry to deliver real behavioural change and encourage it to change working practices, develop innovative working methods (eg, more joint working and shared contractors) and new technology (eg, 'no dig' technologies; more sophisticated bridging and plating systems; application of new materials for trench reinstatement that do not need 24 hours to 'cure') to reduce the footprint and duration of works.

By introducing a targeted lane rental scheme (with charges applicable only at the busiest sections of the TLRN, at the busiest times of day) there will be opportunities for companies to reduce or avoid the charges, for example by undertaking works at less traffic-sensitive times or by using plating to reopen carriageway to traffic at the busiest times. This will further incentivise innovation.

<u>Minimising disruption from unplanned events</u>

3.5 There will always be unplanned events and incidents on the road network – emergencies, road traffic accidents, breakdowns, road defects and burst water mains – which cannot be planned for in advance
Minimising the amount of this disruption can therefore have a direct effect on the overall performance of the network. TfL's approach identifies three specific strands of activity to achieve this:

a) Identifying and eliminating potential causes of unplanned disruption to minimise their occurrence in the first place. A range of initiatives and actions are being implemented aimed at minimising the occurrence of unplanned events at these locations. Examples include:

- Reducing disruption from traffic signals failures at junctions in the Congestion Management Areas.
- Reducing disruption from vehicle breakdowns and over-height vehicle stoppages on the Blackwall Tunnel corridor. In the nine months to February

2011, for example, the Tunnel has been closed 1,604 times. Seventy per cent of these incidents have been due to drivers ignoring the height restriction warning signs throughout the northbound tunnel, which has a 4.0m (13' 0") height limit. Vehicle breakdowns were responsible for 287 closures, a third of which were due to vehicles simply running out of fuel.

- Reducing disruption from road traffic accidents.

b) Minimising response and clear up times for when incidents do occur. Some examples are:
   - London Streets Traffic Control Centre, which is TfL's primary means through which to achieve optimum incident response and clear up times across the network. This is a 24 hours a day, 7 days a week, 365 days a year control centre dedicated to real-time monitoring and management of London's road network and to responding to incidents to minimising disruption and ensuring the free flow of traffic.
   - Improving incident detection.
   - Responding to incidents by optimising the location and availability of key response teams.
   - Improving Incident clear-up times through joint working between the various resources on site is also key to minimising disruption for motorists and other traffic.

c) Effectively managing traffic around such incidents to minimise the disruption they cause, through:
   - The general management of traffic congestion on the network in the vicinity of an incident through traffic signals control and other measures.
   - The provision and dissemination of good quality traffic information to all road users in order to allow them to make informed choices about when, where, how or if, they should make their journeys on the network.

<u>Managing demand and achieving modal shift</u>

3.6 The MTS highlights a range of activities being undertaken by TfL to promote better transport user information, modal shift towards more sustainable modes and/or reducing the need to travel. These include:

- A range of proposals to support walking, including public realm initiatives that could improve the layout and design of streets to improve accessibility and information improvements such as 'Legible London'.
- A number of schemes to promote cycling, including Barclays Cycle Super Highways, and Barclays Cycle Hire in central London.
- Continuing to improve the bus network and invest in the Tube upgrades, Crossrail and other National Rail improvements.
- Promoting smarter travel, including through reducing the need to travel, and better information to highlight the best mode for the trip.
- Freight related modal shift initiatives.
- Better public transport information.

All these things, along with the continued operation of the Central London Congestion Charging zone, contribute towards TfL's overall approach to managing the demand for road-based travel.

Developing the road network

3.7 Where feasible, and where there is an overall congestion reduction and local economic benefit, the MTS also allows for appropriate road network development. The most significant is in east London, where, as the economy changes, development will place increasing demand for travel across the river. Therefore, the Mayor is supportive of additional road-based river crossings as part of a package with public transport, walking/cycling river crossings in east London.

Maintaining the road network assets in a good state of repair

3.8 Maintaining London's roads, pavements, bridges, tunnels and traffic control systems is vital for the safe and efficient operation of the network as well as to achieve a good quality of life and economic productivity. TfL, working with the London boroughs and other stakeholders will work in collaboration to maintain cost-effectively London's road network assets in a state of good repair in order to maximise their operational safety and effectiveness.

4. The following comments address specific issues raised in the terms of reference for this inquiry and which have not been referred to above.

The use of technology and Intelligent Transport Systems (ITS) in managing the road network

- The vision for London's transport system, according to the MTS, is that 'London's transport system should excel among those of global cities, providing access to opportunities for all its people and enterprises, achieving the highest environmental standards and leading the world in its approach to tackling urban transport challenges of the 21st century'.

- Intelligent traffic management schemes have an important part to play in managing traffic flow. TfL believes it important to maintain investment in introducing already-developed schemes as well as undertaking research into new technology which might provide further benefits.

- TfL will utilise advances in ITS technology to better manage the road network, improve real time traffic management capability, lay the foundations for communication with in-vehicle systems and develop state-of-the-art traffic signal control systems.

- A key component in the future management of the road network is to increase the knowledge of how the network operates through intelligent 'situational awareness' systems and to employ the most effective solutions and technological developments to ensure its efficient operation.

- To do this, TfL will continue to develop its state-of-the-art real time multi-modal dynamic traffic control system. This will bring together real time operational data, historic analysis and predictive modelling to more effectively respond to planned and unplanned disruption, and to proactively optimise and manage the available road capacity in real time. Consideration will be given to the increased use of real time

communications from vehicle to vehicle, and between vehicles and on-street infrastructure and the central traffic management control system.

- The aim is to create a state-of-the art traffic control system for the 21st century which is capable of maximising the efficient use of road capacity in London.

- Provision of information to motorists is also important in allowing the public to divert around areas of congestion, rather than adding to it. TfL is working with manufacturers of Sat Nav systems, as an example, to determine whether this technology can be adapted to guide motorists away from traffic congestion hot spots. We would commend the Government to explore options to improve the provision of information to drivers also.

<u>The impact of bus lanes and other aspects of road layout</u>

- Bus lanes have the potential to provide great journey time savings to bus passengers, heightening the attractiveness of the bus to the public and encouraging modal shift from private transport. However, inappropriately designed bus lanes can reduce overall capacity on the network by taking away a lane that could otherwise be used by traffic.

- The implementation of a bus lane and the loss of capacity can, on occasion, lead to queues of traffic developing that extend beyond the entry point of the bus lane. This prevents buses entering the bus lane and consequently defeats the purpose of the bus lane.

- Poor signage and variable operational hours can also mean that bus lanes are under-utilised by general traffic when not operational. Poor lane alignment when bus lanes terminate prior to traffic signals usually results in a near-side flare that is under-utilised. This should be changed to direct traffic into the nearside lane, with the flare in the off-side lane.

- Similarly, loading bays reduce capacity when in use. Inset, at-grade bays or innovative use of technology (eg, Cooperative Vehicle Infrastructure Systems) should be encouraged.

5. Conclusion

The GLA and TfL would welcome the opportunity to give more detailed evidence on its general management and operation of the road network in London, what it is doing to reduce congestion and improve traffic flow, what more it feels central government could do to support it in achieving these objectives.

March 2011

Written evidence from the Association of Chief Police Officers (ACPO) (ETM 53)

1 Introduction

1.1 The Association of Chief Police Officers (ACPO) is an independent, professionally led strategic body. In the public interest and, in equal and active partnership with Government and the Association of Police Authorities, ACPO leads and co-ordinates the direction and development of the police service in England, Wales and Northern Ireland. In times of national need ACPO, on behalf of all chief officers, coordinates the strategic policing response.

1.2 ACPO's 341 members are police officers of Assistant Chief Constable rank (Commanders in the Metropolitan Police and City of London Police) and above and senior police staff managers, in the 44 forces in England, Wales and Northern Ireland, and other forces such as British Transport Police and States of Jersey Police.

2 We have been asked to provide a response on:

- The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so;
- the extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code;
- intelligent traffic management schemes, such as the scheme which has operated on the M42, and their impact on congestion and journey times;
- the effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004; and
- the impact of bus lanes and other aspects of road layout.

2.1 The extent to which the Government and local authorities should intervene to alleviate congestion and the best means of doing so.

2.1.1 Despite a reduction in the level of traffic using our roads over the last two years, congestion continues to be a problem. The economic impact of congestion, particularly on the strategic road network has been well reported and we accept that it is key driver for tackling congestion. Other aspects worthy of consideration are the frustration caused to drivers caught up in the congestion and the potential for subsequent driving misbehaviour brought about by that frustration.

2.1.2 Whilst we are not in a position to suggest engineering measures to alleviate congestion, we consider that Government and local authorities have an obligation to concentrate on collision reduction. The financial cost of collisions is estimated at up to £30 billion annually, representing 2.3% of GDP. A fatal collision may now cost £2 million to manage. Added to that is the inestimable emotional cost of the death and serious injury to thousands of people every year.

2.1.3 A significant amount of congestion is obviously caused by collisions, particularly on motorways where traffic may become trapped for long periods. Last year there were 18,269 closure incidents on our motorways, although not

all of these were caused by collisions. We have been working with Government to look at ways of reducing post-collision congestion and the outcome of that work was announced on 19 May and will be available to the committee. That work will continue at a national level with key partners in the Department for Transport and Highways Agency.

2.1.4 At a local level, local authorities need to work in partnership with police forces to analyse collision data and jointly identify engineering and enforcement activity that will lead to collision prevention. The cuts last year to the road safety grant given to local authorities has led to the withdrawal of council funding to Road Safety Partnerships in some areas and significant reductions in other areas, which may lead to an increase in collisions in those areas.

2.1.5 Average Time Distance Cameras have demonstrated that when they are deployed they achieve very high speed limit compliance rates from motorists. This leads to reduced congestion, improved traffic flow, less accidents and casualties. The compliance rate with speed limits are significantly higher when Average Time Distance Cameras are utilised instead of standard speed cameras. ACPO also recognise the advantages for drivers who might pass an Average Time Distance Camera whilst exceeding the speed limit. They have an opportunity to modify their speed between the first and second camera. If they do so and comply with the speed limit over the set distance they will avoid prosecution. This is beneficial for the driver, the roads become safer, the traffic flow is better and the driver is educated regarding speed limit compliance.

2.2 The extent to which road user culture and behaviour undermines effective traffic management, including the relevance to today's road users of the Highway Code.

2.2.1 While it is difficult to present any quantifiable evidence, there is a perception that driver behaviour has deteriorated in recent years. However, there is clear evidence that Road Safety Partnerships, through the appropriate placement of speed cameras are saving lives by having a positive effect on driver compliance. This is supported by Professor Richard Allsop's report showing how the removal of speed cameras would result in 800 more people per year being killed or seriously injured on our roads.

2.2.2 Figures clearly show that speeds on our roads have reduced and the number of speeding offences captured by technology is falling. The perception is that other, equally harmful offending behaviours such as dangerous and inconsiderate anti-social driving has increased due to a less visible police presence on the roads, particularly motorways. These behaviours include undertaking, tailgating, speeding in areas not monitored by cameras and driving without insurance.

2.2.3 This wilful offending will obviously undermine any traffic management system and is likely to lead to collisions with the inevitable consequential congestion. We are addressing this by diverting low-level offenders into education through a simplified process. Evaluation of education courses currently offered to road traffic offenders has shown they are more effective in changing driver attitude and behaviour than enforcement by fixed penalty or prosecution.

2.2.4 The lack of bureaucracy involved in diverting offenders into education will enable us to concentrate on wilful or high-harm offenders thereby improving overall compliance.

2.2.5 It is important that there is a high level of intelligence-led enforcement against these wilful offenders. Automatic number plate recognition (ANPR) has a positive role to play in providing such intelligence, causing level 1,2 and 3 criminals to be denied the use of the roads by targeted enforcement. This is line with the ACPO Roads Policing Strategy, which is:

- Denying criminals use of the road by enforcing the law;
- Reducing road casualties;
- Tackling the threat of terrorism;
- Reducing anti-social use of vehicles;
- Enhancing public confidence and reassurance by patrolling the roads.

2.2.6 Many of the persons arrested at the roadside will not have licences, insurance and often will not be driving the vehicle in a safe manner. The Central Motorway Police Group (CMPG) manage a very effective network of ANPR cameras that in the last year alone resulted in the arrest of some 490 cross-border criminals. Seizures amounted to £2.1 million in drugs and under the Proceeds of Crime Act (POCA), some £3 million in cash and assets.

2.2.7 ANPR has also had a significant role to play in counter-terrorism, providing invaluable evidence in cases such as the Glasgow Airport attack and attempted car bombings in Central London.

2.2.8 The relevance of the Highway Code is an interesting issue in as much as it remains highly relevant to road users but we believe that once a person has passed their driving test the majority will never look at it again. Most police officers can give personal examples of people they have stopped who have no knowledge as to the meaning of the road signs that they have just passed or even of the speed limits applicable to types of carriageway that they are driving along.

2.3 Intelligent traffic management schemes, such as the scheme which has operated on the M42 and their impact on congestion and journey times.

2.3.1 We fully support the use of intelligent traffic management schemes utilising variable mandatory speed limits (VMSL) and hard shoulder running in appropriate circumstances. We are aware that evidence shows a reduction in collisions, improved journey times and a reduction in pollution. We do, however have some concerns relating to the system.

2.3.2 The system deployed on the M42 works extremely well and officers who cover that area report no problems with it. What we would contend is that the layout of the M42 at that point is urban in nature with access and egress slip-roads very close together. This means that when an incident does occur, disruption is minimised as traffic may still leave the motorway quite promptly and emergency services access the scene. Having said that, since the implementation of the scheme there has not been a fatal incident to fully test its resilience.

2.3.3 The proposed areas for extension, such as the M1 in West Yorkshire are totally different in nature. In the majority of cases there are many miles

between junctions, so the potential for traffic to clear the scene of a collision is severely limited. If hard shoulder running is in operation at the time of the incident, congestion will build extremely quickly and there may be four lanes of standing traffic going back a mile in just a matter of minutes, as hard shoulder running will be implemented during peak traffic flow times.

2.3.4 This clearly provides the emergency services with a significant problem in reaching the scene of the incident due to having to negotiate the standing traffic with no hard shoulder to utilise. Delays in reaching the scene may result in serious injuries becoming fatalities. Highways Agency resources and recovery services will also face a similar problem, which may well increase scene clearance times.

2.3.5 The other practical issue facing the police is how to safely stop an offending vehicle on a managed motorway when hard shoulder running is in operation without causing danger to officers, offenders and other road users alike?

2.3.6 We also believe that it is vital that speed limits set in VMSL areas are appropriate to the prevailing traffic conditions. We have received complaints relating to the speed limits set at times on managed motorways, such as a 40mph limit for congestion, when all four lanes are running normally, with no sign of congestion.

2.3.7 This has two effects. It brings the speed limits into disrepute, potentially causing motorists to ignore them at a time when they are valid. It also criminalises motorists who are driving at a reasonable and safe speed for the prevailing road and traffic conditions but in excess of the set limit.

2.4 The effectiveness of legislative provisions for road management under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.

2.4.1 The Traffic Management Act moved the responsibility for traffic management away from the police as we had historically carried this role. We believe that responsibility is not always grasped and the police are still often expected to take responsibility for producing traffic management plans for major events or iconic venues.

2.4.2 The situation is improving and a major success has been the introduction of the Highways Agency Traffic Officers in England and the Welsh Assembly Governments Traffic Officer service in Wales. There has been significant savings in police officer time, better management of incidents/congestion and subsequently Police officers released to concentrate on denying criminals the use of the roads.

2.5 The impact of bus lanes and other aspects of road layout.

2.5.1 We have no comment to make on the impact of bus lanes.

2.5.2 Road layout goes without question, well designed junctions and roads can significantly aid traffic flow. We can cite examples including some significant redesign of junctions on the M6 which resulted in safer passage for traffic entering and leaving the motorway.

Written evidence from London Councils (ETM 54)

London Councils welcomes the opportunity to contribute to the Committee's inquiry into Effective Road and Traffic Management. Issues relating to traffic congestion, noise and air pollution, road works and road safety are of paramount interest to our members. We are pleased to see that the Committee is taking an interest, and look forward to working with them to develop solutions that will be of benefit to the whole country, including Londoners.

London Councils would make the following points:

1. Repeated digging of the road damages the road surface. While the undertaker will reinstate the road after each dig to a certain standard, over time this will weaken the surface of the road, causing potholes and dangerous surfaces. The local highway authority, which is responsible for the safety of the road surface, cannot charge works promoters for the ongoing repair and resurfacing that will eventually be needed after all the works. We would advocate the development of a mechanism which will help highway authorities to recoup the total cost of highway works from utilities.

   The New Roads and Street Works Act 1991 gives highway authorities the power (in theory) to require utility companies to contribute to the cost of resurfacing their highways to mitigate the long-term impact of repeated roadworks. Unfortunately, while the relevant section (78) is technically in force, regulations must be made to bring them into effect, and no such regulations have yet been made. At a time when local authority budgets are being squeezed ever harder, this would be an area where the Government could make a real difference at no expense to the taxpayer.

2. We are supportive of a lane rental scheme, and featured outline plans for such a scheme in our *Manifesto for Londoners*. We understand the need to target such a scheme on the most traffic sensitive roads, and accept that it would make sense to run a pilot on the Transport for London Road Network. However, in due course, we would want schemes to be available to all highway authorities, as long as certain (as yet undefined) criteria could be met.

3. We remain firmly supportive of the London Permit Scheme for Roadworks and Streetworks. At the start of 2010, 18 boroughs, plus TfL, had implemented the scheme. A further seven are awaiting approval to start, with a further two in the process of applying. In the first year of operation, there have been a number of successes, including:

   - An increase in the number of recorded days of disruption saved through joint working and collaboration
   - An increased discipline amongst highway authorities in recording their own works, providing more opportunity for collaborative working and enhanced public information
   - A reduction in the total number of works undertaken by utilities of 17%
   - Better quality of information available to make considered coordination decisions
   - Demonstrable benefits for average journey time and journey time reliability

   However, it should be noted that the scheme does not always allow councils to better coordinate works, because the notice periods involved are so short. It simply allows them to ask for some works to take place at a later date, and keeps them better informed of what is happening on their patch. While this is clearly an improvement on previous ways of working, it cannot be seen as a magic bullet – it must be part of a suite of measures used by local authorities to better manage disruption on their network. The scheme may

need to be revised in due course, to see if it is possible to improve the amount of coordination that is achievable.

4. Local authorities need to find better ways of working with utility companies. The London Permit Scheme has already gone some way towards improving relations between various stakeholders by asking them to communicate better with each other. We believe this trend will continue, as promoters get used to the scheme, and further boroughs join. While we continue to advocate use of the scheme, and of introducing lane rental, we note that ever more punitive regimes may increase the division between stakeholders. It is therefore important to introduce new plans with caution, and to give all parties the opportunity to comment on and influence schemes as they develop.

5. We understand work is underway to map the underground asset base. We would suggest investing more in this area; a better record of the location of underground assets could be a relatively quick and inexpensive way of reducing the impact of roadworks. This is because utilities would have to dig fewer trenches to locate their own assets. Moreover, there is likely to be a reduction in emergency works caused by one utility inadvertently damaging the assets of another.

6. London Councils is a signatory, on behalf of our members, to the Road Management Concordat (which can be found here: http://www.londoncouncils.gov.uk/London%20Councils/Item9.RoadManagementConcordat141010.doc). This includes ten principles, including lane rental and use of the permit scheme, to which London's boroughs have agreed to work in order to improve conditions for all road users. Other principles include membership of the Mayor's Code of Conduct on Roadworks, use of LondonWorks to better coordinate works, a review of working hours restrictions, and better monitoring of highway assets.

We would be very happy to elaborate on any of the points raised above if that would be useful.

June 2011

Written evidence from Cycle Sheffield (ETM 55)

Hundreds of pedestrians and scores of cyclists get injured or killed by car drivers every year. The 2008 road casualty figures show that 332 pedestrians were killed in car/pedestrian collisions, and in car/ cyclist collisions 52 cyclists were killed. In all 390 cases not one car driver was killed. Amongst pedestrians, cyclists and car drivers, it is clear that the car driver is most likely party to inflict injury or death upon the others.

Similarly, when pedestrians and cyclists are involved in collisions, which is rare, it makes sense to conclude that the cyclist would be seen as the stronger party. This does not mean that either party is automatically to blame.

It goes against natural justice that the burden of proof would be on the more vulnerable road user and not the one who is actually more likely to cause harm: inflicting pain and suffering through causing injury, or devastating families by causing death.

If you think so too, it would be much appreciated if you could highlight to the Minister for Transport, the Minister for Road Safety and your party colleagues on the Transport Select Committee that we should subscribe to a more civilised system that favours the vulnerable. Could I also please ask you to sign any Early Day Motions that relate to this.

Liability should be considered on a fair and proportionate basis to provide legal protection to the vulnerable road user. This could be achieved by establishing a hierarchy of care (as the Scottish Government is considering) where the burden of proof would always be on the user of the heavier vehicle (the party more likely to cause injury or death). This would show the commitment of this Government to its agenda of societal and social fairness. It does not assume guilt on the part of the driver of the heavier vehicle.

This principle of proportionality described above is in place in all but four European countries, the UK being one of them. The other three are Ireland, Cyprus and Malta. It should be noted that stricter liability has not resulted in higher insurance premiums for motorists in the countries that have adopted it.

June 2011

Written evidence from Nottinghamshire County Council (ETM 56)

A review of Highway Maintenance was carried out by the County Council's Scrutiny Committee in July 2010. This has identified that excavation and reinstatement of the highway by utility companies causes long term damage to the structure of the highway which leads to premature maintenance needs, resulting in an increase in disruption to the road user and the cost of maintenance falling to the highway authority.

This was identified in evidence to the Transport Select Committee in 2002 by the National Street Works Highways Group. Subsequent research by the CSS has been presented to the relevant government departments and to HAUC(UK). This contributed to the creation of primary legislation to address this matter, through the addition provisions within the NRSWA 1991 (by virtue of TMA 2004, s55, 56, 57).

Despite the clear acknowledgement of the long term damage caused by this type of activity the relevant sections of the primary legislation have not been brought into force or associated regulations developed. We believe that clear proposals should be established for bringing these provisions into force.

It is imperative to recognise that the development of this legislation under which utilities companies must pay for the cost of reducing the lifespan of the highway by trenching work must operate as an extension to the current two or three year guarantee scheme.

June 2011