

**Smoothing the
Traffic Flow**

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Research conducted by Synovate

1. Introduction

1.1 Background

The Mayor has said in his document outlining the direction of travel policy, 'Way to Go' that he wants to smooth traffic flow in the city. He says that smoothing traffic flow *"means delivering more reliable journey times, and more free-flowing travel conditions than at present. I believe there are a number of interventions to achieve this, ranging from more efficient use of road space, to looking at parking and loading arrangements, traffic signals, and road works. This approach also includes smoother journeys for pedestrians, by removing obstacles on the pavement."*

A number of issues have been suggested by the Mayor as hindering the smooth flow of traffic including congestion, traffic light phasing, parked freight vehicles and the presence of 'bendy buses'. As a result, potential solutions have been identified that may smooth traffic flow. These solutions do not attempt to encourage car travel or to increase vehicle speeds on London's roads. Rather, they are aimed at smoothing flow to limit 'stop-start driving' and unpredictability.

In addition, TfL have identified a potential lack of information available to road users. For example, there is limited information available about potential disruptions to journeys or planned road works. Specifically, it is possible to identify gaps in information provision when compared to what is available to users of other modes of transport.

1.2 Objectives

Research was required to help TfL understand how road users perceive the road network and what their needs are in terms of operational factors and information. The research also explored how the road network is experienced by pedestrians. The specific objectives of the research were to explore:

- Current perceptions of the road network
- What are users' needs? What is needed to improve journeys?
- Users' understanding of the concept of traffic flow, and how this compares with the definition set out by the mayor
- How important smooth traffic flow is to users
- The role of operational issues

- The role, or not, of advice and information
- Perceptions of any current information
- To explore the relative impact of location [inner vs. outer London) and journey type (i.e. time criticality)

1.3 Methodology

A qualitative methodology was employed to gain an in-depth response to the current conditions, issues and gaps in service. All participants in the research walk in London (i.e. do not totally reject walking any significant distance) and some also use buses. This enabled people to discuss issues from a pedestrian's / bus passenger's viewpoint and compare them with travelling by car.

A total of 14 focus groups were conducted amongst a range of road users. The groups lasted 2 hours and consisted of approximately 6 people.

Care needs to be taken in the interpretation of qualitative research. It is not designed to be statistically robust or to provide information on the weight of views held. The results are a good indication of views held only by those surveyed and should not be extrapolated or generalised to the wider population.

1.4 Recruitment criteria

The audience for the research was people living in London who frequently travel by car and other modes of non-public transport on the London road network.

The focus was on two samples of road network users:

- Those making private journeys by car
- Other road users including:
 - Cyclists
 - Powered two-wheelers (P2Ws)
 - Freight drivers (a spread of LGVs and HGVs)
 - Other commercial drivers (to include taxi drivers and other individuals for whom travelling by car is integral to their work)

The overall sample was weighted in favour of private journey car users to reflect their higher presence on the road network, with the sample being split by location as TfL reports differing levels of satisfaction between those using the road network in inner and outer London. We excluded those driving in the Congestion Charging Zone as this is a particularly special case with other issues attached.

The sample was also split by journey time criticality. Given the impact of traffic flow on time taken to complete journeys, time criticality affects perceptions and needs of the network and traffic flow. Indeed certain journeys may have particular issues attached that are important to explore, for example school runs.

The sample was also split by gender to avoid any potential negative dynamics and differing views that may arise on this subject. Additionally, we applied an age split as age and length of time driving can affect perceptions and needs to some extent. Finally we split the sample by socio-economic group (SEG) as much as possible.

For the second sample of 'other' road users, the sample was also split by vehicle type in order to fully understand specific perceptions and needs. This sample allowed us to get a full picture of all road users as well as those that use the network as part of their work.

The sample profile was as follows:

Private car drivers

Group	Live and drive in	Journey type	Gender	Age	SEG
1	Inner London	Time critical	M	20-35	BC1
2			F	36+	C2D
3		Non time critical	M	36+	C2D
4			F	20-35	BC1
5	Outer London	Time critical	M	36+	BC1
6			F	20-35	C2D
7		Non time critical	M	20-35	C2D
8			F	36+	BC1

Other road users

Group	Type	Gender	Other details
1	Cyclists	M	Mix of time critical / non critical
2	Cyclists	F	Mix of time critical / non critical
3	Other commercial drivers	M	Including taxi drivers, reps
4	Other commercial drivers	F	Including taxi drivers, reps
5	Freight drivers	M	Mix of LGV/HGV
6	Powered two-wheelers	M/F	n/a

2. Summary of key issues

A number of key issues or themes emerged from across the research:

1. **Road users' understanding of traffic flow is broadly in line with that set out by the Mayor** – road users tend to agree that traffic which flows well is consistent and predictable. People agree that traffic flow is not about encouraging more people to use their cars or speeding up the traffic on London's roads. They think that a consistent flow of traffic means being able to drive at a constant speed, with 'stop-start driving' being kept to a minimum.

It is important to understand that people do see some other components to traffic flow, and they suggest other issues which they feel also hinder smooth traffic flow such as other inconsiderate road users and traffic calming measures (e.g. speed bumps).

2. **People agree that traffic flow in London can and should be improved** – road users are able to describe measures which are intended to smooth traffic flow but are generally sceptical about the degree to which a smooth traffic flow is being achieved. People find it easier to identify factors which they perceive to impede traffic flow, i.e. those which hinder consistency and predictability.
3. **Inner London Vs Outer London** – views on what measures could be taken to improve road travel in London are largely consistent. Road users in outer London experience less dissatisfaction than people travelling in inner London. People in outer London often find predictability less of an issue because they have a better knowledge of local routes and are able to react in the event of unforeseen circumstances. People living in outer London will often try to avoid travelling in inner London by road, opting to take public transport instead.
4. **Commercial Vs private drivers** – the purpose for which people use the road network does appear to have some bearing on their priorities and perspectives in relation to traffic flow. Commercial drivers are generally more likely to consider the tangible impact of poor traffic flow in terms of time and money. Private drivers are more likely to place importance on the emotional impact of poor traffic flow, such as increased stress and frustration. However, it is important to note that commercial drivers also feel the emotional impact of missing deadlines or losing money.

5. **The consequences of bad traffic flow** – poor traffic flow can have both a rational and emotional impact. For the majority of private motorists the biggest impact of bad traffic flow is the practical impacts of inconvenience and wasted time. The emotional impact is also significant with a lack of consistency and predictability resulting in stressful and uncomfortable journeys.
6. **Time criticality** – the majority of road users agree that they find being stuck in traffic most frustrating when it starts eating into their own personal time. Both time critical and non time critical journeys are impacted by this effect. Freight and commercial drivers experience the same emotional impact of personal time being eaten into, but have to contend with commercial implications as well e.g. often being delayed and arriving late at their destinations.
7. **Information requirements** – people usually plan journeys when travelling to an area they are not familiar with. People feel that improved predictability gives them a greater feeling of control and results in them feeling less stressed. There are currently some gaps in the information which if addressed could give people a greater feeling of being in control e.g. being able to choose which route they take, knowing how long it will take, and what hazards might be on the route. People also have a need for information which enables them to react more effectively to unforeseen events during a journey e.g. road works or accidents.
8. **Perceptions of proposed interventions** – responses to the proposed interventions aimed at improving the flow of traffic were relatively consistent. Coordination of road works and re-phasing of traffic lights were considered to be the most potentially impactful. Measures designed to give priority to buses and cyclists were also thought to have some potential to improve traffic flow. Improving road surfaces was considered quite important by most people and particularly important by cyclists and P2W riders.

3. Main findings

3.1 Current perceptions of the road network in London

People think that travelling in London is difficult. They find it frustrating and many feel that travel conditions on the roads have become worse in recent years.

“When I moved here 20 years ago it was great. You could drive anywhere, stop anywhere. Not you’ve got to plan everything. If you are going out everything has to be planned a lot more than it used to be.” [Private motorist, female, 36+, inner London, time critical]

Attendees cited the following main frustrations or concerns associated with driving in London:

- Constant stopping at traffic lights
- Traffic lights not remaining green for long enough time
- Inconsiderate drivers
- Incidents on route which cause traffic to slow because they need to divert, such as cars/buses parked on side of road, road works
- Too many speed humps

Many feel that conditions on the road network vary greatly depending on the time of day. School runs are often mentioned as contributing greatly to the amount of traffic on the roads.

“The week before last I was working on the other side of Lewisham station and outside rush hour that would take me from where I live about half an hour to drive. If I needed to be there during the rush hour I had to allow at least one and a half hours to do the same journey. It’s frustrating.” [Private motorist, male, 36+, outer London, time critical]

“I used to work in West London and in school holidays it would take me 30 minutes to drive there and it would take me 50 minutes when it wasn’t, and it was purely because of the school runs.” [Private motorist, female, 36+, inner London, time critical]

Differences in perceptions are evident depending on location. People who mostly drive in central London¹ described many frustrations and usually felt that driving was rarely a pleasurable experience. Conversely, people travelling in outer London are more positive about their experiences of using the roads. People in outer London tended to know their local area better and therefore feel more in control and less stressed when driving. Often people living in outer London would avoid driving into central London wherever possible.

“Central London is so busy. You’re not aware of road works. It’s always stop start and you just don’t get anywhere.” [Private motorist, female, 20-35, outer London, time critical]

“The nearer the centre of London you get the worse that is and I think that adds to it as well because there’s no courtesy by the time you get to your destination you’re so wound up you want to kill someone. You’ve got all the stresses and strains of the traffic, it makes it very difficult and I just think people aren’t the friendliest in London are they? It’s not easy driving in London. It’s a fight.” [Private motorist, male, 36+, outer London, time critical]

Cyclists and P2W riders are the least affected by traffic issues and many don’t see traffic flow as being a problem. They say that traffic flow only becomes an issue where something prevents them from moving through the traffic.

“You just have to be careful that’s all. I don’t have any issues with the traffic at all. Obviously the danger is other drivers who don’t see you or just ignore you, but I think if you are aware of that you shouldn’t have any major problems.”
[P2W]

“If there is traffic then it’s not so bad because you’re able to go in between it. Sometimes there will be something that stops you getting through, like when there are two buses and you can’t get through, or a taxi which has pulled across all the lanes.” [P2W]

¹ Respondents self-selected whether they lived and travelled in inner or outer London. People driving frequently in the Congestion Charging Zone were excluded

3.2 The definition of traffic flow

3.2.1 Understanding of traffic flow

Spontaneous understanding

In describing their perfect journeys people generally identify **consistency** and **predictability** as the two key measurable parameters of traffic flow. People describe consistency as a constant flow of traffic – being consistently on the move – rather than ‘stop-start’. They describe predictability as feeling confident about how long a journey is going to take before setting off.

Consistency

Attendees do not generally perceive consistency to be about overall speed or journey time. Rather they agree that consistent flow is characterised by rarely being at a complete standstill and making steady progress towards their destinations. They say that these characteristics are most important to them if they are going to experience a journey that is ‘smooth’.

“Well you’re just going at a constant speed. It’s not a time element and it’s not a speed element where you’re rushing. You can more or less set off knowing that you’ll get there probably around about the right time. There are no bottlenecks and only a few sets of traffic lights.” [Private motorist, female, 20-35, outer London, non-time critical]

“Consistency is most important – it’s where you see it’s not moving that you think about trying another route. That’s when you get stressed out because you don’t know the area. It’s better if it’s always moving otherwise you get stressed out that you’re not going to make it. You need to be moving all the time.” [Private motorist, female, 20-35, outer London, time critical]

“Five miles per hour constantly would be reasonable. 15 miles per hour but stopping and starting all the time would be a bad journey.” [Private motorist, male, 36+, inner London, non-time critical]

The psychological aspect of always being on the move is extremely important for people. Many say that overall distance travelled is quite often less important, and

they will often take a route which is a longer distance if the result is that they will be constantly moving.

“There’s a journey that I regularly do over towards Dartford way and actually if its rush hour time believe it or not despite the fact its probably about 3 times the distance its much quicker.” [Private motorist, male, 36+, outer London, time critical]

Cyclists and P2W riders say that they are not usually held up by the issues of poor flow of traffic. However, the lack of consistency is still a source of frustration for them. Cyclists find the ‘stop-start’ nature of traffic annoying because it prevents them from being able to build up momentum. Pulling away from a standstill takes a lot of effort and uses up a lot of energy. Indeed anything that makes them slower really defeats the object of being on a bicycle in the first place i.e. getting there faster than it would otherwise take in car.

“It can just be quite frustrating some days when some routes are completely free one day and the next day it’s solid. Although you can get by them on your scooter it makes it ‘stop-start’, ‘stop-start’. You just want to cruise along and you can’t because everyone is doing their own thing; pulling in and pulling out and just trying to push in.” [P2W]

“If you have to wait like everyone else it kind of defeats the object of a bike being slightly quicker if you are in traffic and things like that” [cyclists]

Predictability

Drivers say that it is important to know when you set out how long a journey is going to take. Again, they say that the specific time that a journey takes is not a major consideration (within reason), as long as they can be confident of an arrival time, and therefore make plans. An inability to be confident about the time taken to complete a regular journey is a source of frustration for many, in particular commercial drivers and people making other time-critical journeys. Those travelling in central London were more likely to mention the importance of predictability.

“You can’t predict it, there’s no way you can predict, I travel quite a lot as I say and I can do the same journey 3 days on the trot and be there either an

hour early or half an hour late or extremes of that as well and its just ridiculous" [Private motorist, male, 36+, outer London, time critical]

Those predominantly travelling in outer London generally reported fewer problems with predicting the duration of their journeys. They say that they are able to find alternative routes, especially when driving in their local area where they are familiar with the road layout.

Some people say that predictability is not only about journey time. They say that London's roads can be unpredictable in other ways; for example changes to the road layout or permanent / temporary road closures. Being unsure of what lies ahead can impede the 'flow' of a person's journey as they may need to find an alternative (possibly longer) route, or run the risk of losing their way.

"It's all quite unpredictable. It depends what you come across. If you come across an accident you can be sat there for hours." [Private motorist, male, 36+, outer London, time critical]

"The worst thing is that London changes every day. Everywhere I turn is a one way street and I just keep going the wrong way. It's not so much the traffic that's the problem. My TomTom couldn't cope with it and I just ended up going round in circles." [Private motorist, female, 20-35, outer London, time critical]

Comparisons with the mayor's definition

Group attendees were shown the following definition of improving traffic flow and asked how it compared with their own understanding.

“Delivering more reliable journey times, and more free-flowing travel conditions than at present. I believe there are a number of interventions to achieve this, ranging from more efficient use of road space, to looking at parking and loading arrangements, traffic signals, and road works. This approach also includes smoother journeys for pedestrians, by removing obstacles on the pavement.”

Most people's understanding of traffic flow and the factors contributing to it is consistent with the Mayor's definition. Private motorists tend not to mention loading arrangements spontaneously, but recognise them as an element of traffic flow once prompted.

“I go through Westerham and that's a narrow [road] and they've got shops and there is no convenient place for them to park so they just park on the road and straight away you've got traffic...you only need two lorries [parked close to one another] to block things completely.” [Private motorist, male, 36+, outer London, time critical]

People usually relate 'more efficient use of road space' to cars being allowed to use bus lanes, especially out of peak times. However, this part of the statement evokes more radical ideas among some.

“I was driving in Birmingham a few weeks ago. They've got six lane motorways, three going this way and three going that way, and above it they've got a green light and a red X. If it goes green you're allowed in the lane, so you could end up with 5 lanes going one way and one going the other way. It's brilliant!” [Freight drivers, male]

Most people felt that the definition was a comprehensive description of the relevant issues. However, most also agreed that speed bumps are detrimental to smooth traffic flow. They feel that the removal of speed bumps is something that has been omitted from the Mayor's definition.

3.2.2 What makes the traffic flow smooth?

As indicated above, anything which facilitates consistency and predictability would result in smoother traffic flow. While people are able to describe measures which are intended to smooth traffic flow (outlined below), they are generally somewhat sceptical about the degree to which a smooth traffic flow is being achieved.

“There just isn’t a free flow at the moment in many areas. In this country I find everything so erratic and you can never just have a constant flow. You get the feeling that it’s always against you. You never get the feeling that it’s there to help you. Instead it’s all just a hindrance.” [Commercial drivers, male]

Attendees identified the following measures on the road network designed to help with traffic flow:

Bus & cycle lanes

Drivers do appreciate bus lanes because they separate cars and buses and prevent buses from ‘blocking’ their route by stopping at bus stops etc. A minority also feel that bus lanes improve traffic flow by encouraging people to use public transport - making it easier for buses to move through traffic - thereby reducing the number of cars on the road. In addition, drivers generally think that letting motorbikes into bus lanes is a good idea because they do not like them weaving in and out of cars. Attendees also appreciate cyclists being given their own space away from other modes of traffic.

“I like the fact that bikes can go down the red routes now and the bus lanes. There’s no chance of knocking one over now as they are trying to weave in and out. Also there’s less chance of them knocking into your wing mirrors which irritates the hell out of me. It’s safer for them and safer for us.” [Freight drivers, male]

“I tend to let them go because they’re so vulnerable. Putting them in a bus lane takes them out of our way.” [Private motorist, female, 20-35, outer London, non-time critical]

Most P2W riders value the fact that they are allowed in bus lanes as it sometimes allows them to move through traffic more easily. However, many tend not to use the

bus lanes unless traffic conditions make it absolutely necessary. They often prefer to remain on the main carriageway for the following reasons:

- Many have experienced confusion as to when and where they are allowed in
- They feel a greater degree of vulnerability sharing road space with buses – the smallest and biggest vehicles sharing the same road space
- People dislike having to navigate around buses when they stop or pull out

Cyclists see the concept of cycle lanes as the best way to improve the traffic flow for themselves. They say that cycle lanes should guarantee fast and predictable journey times. However, most say that the cycle lane network is not widespread enough. Many also feel that where cycle lanes do exist, they are not always as clearly delineated as they could be.

“Yes, if you’ve got cycle lanes that are good enough to be cycle lanes you know you would have that freedom of it being a quicker journey, safer, easier and all the stuff that a bike should be.” [Cyclists, male]

“Well it’s irrelevant a bike lane, its one of those ones that doesn’t really do anything so no one ever uses it anyway, one that literally starts here and then finishes there, its just pointless.” [Cyclists, female]

Road layout

Some attendees think that when the layout of the road is thought through particularly well traffic flow can be improved. They say that a well thought through road layout should take account of the local amenities and likely driver behaviour as much as possible.

“They did something really good around the corner from me on Summers Lane. It’s a really busy road and you could wait in a queue of cars because the lights were changing very quickly. They made a slip road onto the next main road and it’s just cut the traffic down completely.” [Private motorist, female, 36+, inner London, time critical]

Traffic light phasing

Many people recognise that traffic light phasing can have a significant impact on traffic flow. They therefore expect the responsible public body² to be looking regularly at the phasing of traffic lights. A few believe that traffic lights can be used to improve traffic flow by reacting to changing traffic conditions.

“They’re supposed to have cameras that recognise where the congestion is and maybe make the lights quicker to make the traffic flow a bit more.”

[Freight drivers, male]

“I was working at Chiswick at the beginning of the summer last year, driving from Hackney to Chiswick every day. At first it was a nightmare because if there was a red light at the beginning then you hit red lights all the way to the end. A month later they had been reprogrammed and I can’t tell you what a difference it made, it knocked about 25 minutes off the journey each way”

[Private motorist, female, 36+, inner London, time critical]

3.2.3 What hinders the traffic flow?

People find it easier to identify factors which they perceive to impede traffic flow, i.e. those which hinder consistency and predictability.

Congestion and weight of traffic

People’s perfect journey usually involves no other cars being on the roads. While they accept this is not a reality, many feel that something should be done to reduce the number of cars on the road and encourage people not to make unnecessary journeys:

- Cheaper and more reliable public transport to enable people to not use their cars
- Car sharing schemes whereby people are encouraged to carry other passengers could reduce the number of cars on the road. Many attendees feel that cars are often an inefficient use of space, especially where they are only carrying one person i.e. the driver
- School buses to reduce the amount of school-run traffic. Many people feel that traffic flows more freely during the school holidays, and that a system of

² Attendees tended not to specify exactly which public body they felt was responsible (local authorities, TfL etc).

school buses similar to that used in the USA for example could improve traffic flow outside of these times.

“It’s amazing to see the difference in the amount of cars on the road in the school holidays. Suddenly, afterwards there is back to back traffic.”

[Commercial drivers, female]

For cyclists, it is the other vehicles on the road that impede their flow more than anything else (more so than road works for example, which they can just cycle around) and as such reducing the volume of traffic would probably help them more than anyone.

Road layout

While people agree that the road layout can facilitate traffic flow when well thought through, they also feel that it can create congestion when it is not well designed. Drivers often find road layouts confusing. One particular area of frustration is lane selection at roundabouts. Attendees also feel that changing road layouts (particularly those which involve one way systems) make it difficult for them to navigate their way around.

“On the Sevenoaks Way there’s a right filter there which allows about 3 cars to go into the reservation to turn right, the central lane for people who want to go straight on, and a bus lane. This means that traffic that wants to turn right is blocking up the whole road. What they should do there is probably remove the bus lane just at that bit so that cars can circumnavigate the queue. That’s a really good example of a detail that would actually increase traffic flow. You ought to have a feedback system so that people can phone up and say ‘look there’s something wrong with the system here.’” [Private motorist, male, 36+, outer London, time critical]

“If I’m driving to Hammersmith Broadway I cringe when I’m trying to get on the roundabout. You’ve got cars coming from every direction. There’s no signage about what lane you should be in or what exit you need.” [Private motorist, female, 20-35, outer London, time critical]

“They just seem to change. You might have gone down there and then you go back a few days later and it’s one way again. You are trying to work your way around the big roads, and you can’t because it’s all one way. Instead you go round in circles then you hit another traffic jam. One way systems just appear out of nowhere.” [Private motorist, female, 36+, inner London, time critical]

Traffic lights

People identify traffic lights as being a major cause of ‘stop-start’ driving. Many often find themselves sitting at a red light and thinking the timings could work better.

“The lights are doing my head in. There’s never enough time to get through. It’s slow and building up traffic. It’s not smooth...it’s a stop-start journey”
[Private motorist, male, 36+, inner London, non-time critical]

“Once you get stuck at one red light you get stuck at all of them. Lights stay green for about 3 cars to go through and you have to sit there waiting for ages. It delays you. It gets you stressed – stress is driven by impatience. You start working out how many cars are in front of you and how long it will be until you can get through.” [Private motorist, female, 20-35, outer London, time critical]

Some attendees identify systems in other countries which they feel would reduce the need to stop at traffic lights unnecessarily. They say that in the USA drivers are allowed to turn left on a red light. They also describe how at quieter times of the day in Germany flashing amber lights are used to indicate a need to give way rather than stop entirely. Attendees see these systems as offering the benefit of not having to wait at red lights when there is no oncoming traffic. Some also suggest that traffic flow could be improved by having traffic lights that operate at peak hours only, and are not when traffic levels are lower.

Allowing cyclists to turn left on red signals as well as allowing some sort of advanced signal are often spontaneously mentioned as ways of improving traffic flow for cyclists. Although some talk of walking the bike around a corner as a solution to the issue, the majority find traffic lights a significant hindrance to their momentum and a means of placing them back into the dangerous (and faster) flow of traffic when trying to get away from the lights.

Bus lanes

While most people acknowledge at least some benefits of bus lanes, many also see them as an inefficient use of road space. Many say that they find it particularly frustrating when they are stuck in traffic next to an empty bus lane which they are not allowed to use.

“Those bus lanes frustrate me especially going down Sevenoaks Way. You’ve got a single lane with loads of traffic in it queued up and you’ve got an empty bus lane. I know the idea is that the buses can go down and they get the benefit, but I don’t think it really encourages people onto buses and all it actually does is end up snarling everything else up.” [Private motorist, male, 36+, outer London, time critical]

Some people find it hard to understand why there is a lack of consistency regarding cars being allowed inside bus lanes. This also leads them to believe that the available road space isn’t being utilised as effectively as it could be.

“I understand why the buses need to be free but each bus lane has a different time; none of them are the same. You can go in it at a certain time and you can’t go in it at others, others you can’t go in all day and some you can’t go in all through the night.” [Private motorist, female, 36+, inner London, time critical]

Attendees often agree that more effort should be made to move buses out of the way of traffic. They suggest that bus stops should be designed to allow buses to pull in off the main carriageway. Some also feel that where a bay does exist bus drivers will sometimes deliberately avoid pulling into it.

“Bus stops used to have pull-ins. Now they build them so the bus has to stay out in the middle of the road so you can’t overtake it. They don’t want you to get in front of that bus and would prefer to keep the traffic behind it”
[Commercial drivers, male]

Many drivers think there should be higher levels of enforcement to ensure that other road users do not drive and park in bus lanes. Most feel that if they are obeying the rules then others should be doing the same.

Cyclists have particular issues with bus lanes and buses in general as they share the same area of the road. They experience frequent battles to get past stopped buses and often subsequently find themselves being unnecessarily overtaken by the very same bus.

Road works

Attendees think that road works hinder both consistency and predictability of their journey. They cause congestion because often people are not made aware of upcoming works and have no opportunity to plan an alternative route. Many have experienced roads being closed unexpectedly because work is being undertaken. Attendees also perceive temporary traffic lights to have bad timings.

Some attendees feel that often roads works are undertaken unnecessarily, and have experienced different companies digging up the same roads within a short space of time. They also believe that road works could be carried out at times which cause less inconvenience e.g. at night or during school holidays.

“Why can’t all service industries communicate with each other and do all the work in one go? They did it in Richmond and I don’t know why they didn’t wait until the school holidays. Surely it’s just a matter of planning in the council. They know what’s coming up so should say let’s do it all in one go.” [Private motorist, male, 36+, inner London, non-time critical]

People also complain that there is a lack of planning in the coordination of road works in a given area. They think that if one main route is affected by road works there should be some kind of planning to ensure that work isn’t going on at the same time on another potential alternative main route.

P2W riders and cyclists are not so hindered by road works as they can frequently thread their way through the traffic or simply mount the kerb to get past the works (bicycles only). However, there is undoubtedly a knock on effect that does have consequences for them. Vehicle getting caught in traffic caused by road works tend

to block 'cycle paths' through the traffic in an attempt to move into a faster lane or generally carry out 'stupid' manoeuvres which can endanger cyclists or powered two-wheelers. In general, congestion caused by road works squeezes the space for cyclists and P2W riders which inevitably inhibits the flow of their journeys.

Road surfaces

People feel that poor road surfaces hinder consistency by make it difficult for them to maintain a constant speed when driving. Pot holes are a particular issue for cyclists and P2W riders because they have a direct impact on their safety. Riding over an uneven road service can easily result in an accident. However, this is not seen as a particular hindrance to their general speed and flow.

"If you are going over a bumpy surface you're going to have to change your speed all the time. If you are going on a continuous surface you can go at one speed. The road condition affects your speed and that's when you get people piling up behind you because not everyone is going at the same speed."

[Private motorist, female, 36+, inner London, time critical]

Almost all attendees feel that speed bumps have a negative impact on traffic flow. As well as forcing people to constantly adjust their speed, they contribute to increased levels of discomfort and stress as people feel there is often as risk of damaging their car when driving over them. Some people agree that there is a need to reduce traffic speeds in the interest of road safety. However, they say that speed bumps are not the best way to achieve this.

Sign posting

People driving in central London feel particularly strongly that existing signage is inadequate and does not help them to navigate. This has a detrimental impact on consistency because people who are having difficulty finding their way will often be travelling more slowly. People feel that poor signage also hampers predictability as often people will make last minute manoeuvres to get in the right lane.

"In London it's the worst anywhere. They tell you what road to get on just as you get close and you're in the wrong lane. You can't have a map open and we don't all have TomToms." [Private motorist, female, 20-35, outer London, time critical]

Speed cameras

Speed cameras are also perceived as preventing people from driving at a constant speed. Many people say they have narrowly avoided an accident with cars braking suddenly seconds before they get to a speed camera.

Drivers and riders also say that variable speed limits prevent people from driving at a constant speed as people often don't know what the speed limit is. As well as people braking suddenly when they come across a camera, the lack of awareness can result in people driving under the speed limit which causes traffic behind to 'bunch'. It can also cause accidents where people get frustrated at the slow-moving traffic and try to overtake.

Accidents and road closures

Some attendees feel that roads are sometimes closed unnecessarily in the result of an accident. They have experienced situations where someone has had a minor accident and nobody has been injured, but the road has been closed and a diversion put in place.

"They come out with their tape measures and their cameras and they photograph everything and they close the roads off. On the continent they just drag them to the side of the road." [Private motorist, male, 36+, outer London, time critical]

Parking and loading arrangements

Many motorists and cyclist see taxi drivers as a hindrance to the smooth flow of traffic. They say that they stop to pick up and drop off passengers wherever they please and without warning.

Parking and loading/unloading arrangements are a particular issue for freight drivers. Attendees feel that parking and loading issues have not been a priority for decision-makers in recent times, although they concede that the issue is not an easy one to solve.

“Many years ago I was driving in the West End and there was always somewhere where you could offload. I think the people who have designed, the urban planners, don’t think about how you are going to get your stock into your store. They would rather have a pretty shop for the pedestrians.” [Freight drivers, male]

“A lot of roads just aren’t big enough for loading bays. London wasn’t built for vehicles like the ones we drive, especially this middle bit of London. It was all horse and carts and a lot of them are still cobble stones so when you drive down there in our vans, you’re bound to get into trouble.” [Freight drivers, male]

Most freight drivers feel there should be more places for them to park, but note that even where there are designated loading bays other people will often park in them. Many say that often their only option is to double park.

“The problem is you’ve got a double red route and you need to go into that shop. There are no loading bays so you’re forced to do it.” [Freight drivers, male]

Freight drivers tend to underestimate the scale of the problems they can cause for other road users and the impact they can have on overall traffic flow. They often feel that other road users exaggerate the problem. Taxis drivers say that dropping off and picking up is an integral part of their job. While they do appreciate that doing so may cause some inconvenience for other road users, they stress that they only every stop

for short periods of time. They also say that they always try to find a place to stop which will not cause any disruption.

“It’s part and parcel of driving in London now. It’s like being behind a bus at a bus stop and having to go round. You probably upset people for a couple of seconds until they pass your van and they carry on.” [Freight drivers, male]

Other road users see loading/unloading arrangements as having a detrimental impact on traffic flow. However, many people are sympathetic to the problem faced by drivers who need to load/unload.

“It causes hassle for everybody because whoever is on that side of the road has to stop and let that flow of traffic through that’s coming towards them. You’re concerned about the obstacle that’s in front of you.” [Private motorist, female, 36+, inner London, time critical]

“They need to have more loading areas because there just isn’t enough. You said about the heavy goods vehicles being out in the road, but where else can they stop? They have to pull up where they can.” [Commercial drivers, female]

“They have to unload somehow. If they go to an area like Hackney for example they have a busy road and high street. What are they supposed to do, do their deliveries at midnight?” [Private motorist, female, 20-35, outer London, non-time critical]

Attendees suggest the following methods of allowing freight drivers to load/unload without having a negative impact on traffic flow:

- Designated loading bays which are monitored more closely to stop other road users parking in them. However, some commercial drivers (especially taxi drivers) say that if there is space available it would be better used providing an additional lane to drive in
- Designated times for delivery vehicles to stop e.g. set times within the day when delivery vehicles could stay for 15 minutes or allow lorries to stop in the early hours of the morning

- Fixed stopping times e.g. delivery vehicles allowed to stop at any time for a fixed period of time

Other road users

Many people agree that the attitudes of other drivers can have a negative impact on traffic flow. They think that people should be made aware of how they can be more courteous on the roads, and see the possibility of a driver education campaign similar to that on public transport where people were encouraged not to listen to loud music or not to eat smelly food, as something advantageous. Attendees described particular frustrations with particular types of road users:

- **Commercial and freight** – private motorists feel that the stereotype of the ‘white van man’ is accurate. Most have experienced instances where they have shown a lack of consideration for other road users. Many people feel that freight traffic in London contributes to a lack of comfort and increased stress.
- **Buses** – Many motorists, particularly those driving in central London, feel that buses make driving more difficult. Bendy buses are a particular hazard for cyclists and P2W riders who often feel that because of their size, drivers fail to notice them. Motorists say that the bendy buses present additional hazards to normal buses because they are too big for the city roads, and can often block junctions.

“The only things I hate are the buses. The number 25 bendy bus; they are the ones that are a pain in the backside for me. It’s the size of them and the way they move is totally unpredictable. A double decker just goes around a corner whereas the bendy buses just kind of cut off. Then can be going around a corner and you can just get taken out.” [P2W]

- **Cyclists** – The majority of motorists find the attitudes of cyclists frustrating. Freight drivers find cyclists particularly difficult to spot and feel heightened levels of anxiety as a result.

“If I was to hit that cyclist I’ve got to deal with that for the rest of my life, I’ve got to deal with his parents and family, whatever the age of that person is, and yet they feel they can use the road and not obey the traffic signs or traffic

lights. I think cyclists should be licensed, if you use a carriage way you should have to pay a licence.” [Commercial drivers, male]

- **Pedestrians** – The attitude of some pedestrians are a common frustration for all road users. Often people feel that pedestrians simply are not always aware of traffic.

“I find it annoying when there are no cars behind you and people cross without thinking ‘oh I’ll let that car pass then I’ll go’. They just stroll along talking on the phone.” [Private motorist, female, 36+, inner London, time critical]

3.3 The impact of impeded traffic flow

3.3.1 Private motorists

For the majority of private motorists the biggest impact of bad traffic flow is inconvenience and wasted time. The lack of predictability means that drivers cannot accurately compensate for the additional time a journey might take.

“Just at the minute it’s an inconvenience because by the sounds of it none of our livelihoods depend on us driving like cabbies or bus drivers or van drivers and stuff so at the moment it’s getting to and from work and meetings and it’s a huge inconvenience” [Private motorist, male, 36+, outer London, time critical]

Private motorists are therefore more likely to place importance on the emotional impact of the lack of consistency and predictability. They tend to place most emphasis on comfort and stress-free driving. However, most people also say that their priorities change depending on whether they’re making a journey that is time critical or non-time critical.

“When I’m driving I want to feel comfortable and safe. That’s connected to not feeling stressed because you get irritated by things that make you worried.” [Private motorist, male, 36+, inner London, non-time critical]

“I can be in a rush and I’m right behind someone and I’m going ‘come on put your foot down’ and then 2 days later there’s someone behind me and I’m

thinking I'm going to slow down, so it does depend on where and why you're going somewhere." [Private motorist, male, 36+, outer London, time critical]

Most people have experienced differing degrees of anger and frustration caused by bad traffic flow. People say that the biggest contributor to stress is not feeling in control. The majority agree that they find being stuck in traffic most frustrating when it starts eating into their own personal time. The emotional implications are therefore very similar for people making time critical and non-time critical journeys.

"Stop-start is very irritating. The lights are red and there's not a car around. It makes you angry!" [Private motorist, male, 36+, inner London, non-time critical]

"I think you get more frustrated of an evening getting home because if I'm going to be late for work alright I'm late for work but when you've been working all day and you just want to get home you turn the corner and its just...that's what stresses me out more because its cutting into my personal time" [Private motorist, male, 36+, outer London, time critical]

"Time is of the essence all the time, so that stresses you out. But it's even worse when it's the last job of the day. You just want to go home and chill out and have your dinner. By the time you get home you're stressed out and your quality of life has gone right down." [Freight drivers, male]

3.3.2 Professional drivers

People who are driving as part of their profession report extremely rational and logical impacts of impeded flow. Freight and other commercial drivers place a great deal of importance on time. For them, time is money and therefore impeded flow can directly impact their livelihoods.

"It's all about time isn't it? There is always some sort of deadline! Time is definitely of the essence so yeah it's quite stressful. " [Commercial drivers, male]

"I deliver concrete, so if the concrete is in the back and it's hot, it dries out. Before I know it the concrete has gone off and I have to go back to the job with more concrete. The boss doesn't blame me; they know it's the traffic but

they lose money because a load of concrete costs £800-900.” [Freight drivers, male]

While rational and logical factors are often key, this is not the full picture for commercial drivers. Many also say that they have to deal with the personal stress related to being delayed and will often encounter stressful situations once they arrive at their destination.

“You’re getting stressed because you’re going to be delayed and there’s nothing you can do about it. And when you get there they’re all going to be stressed out with you as well.” [Freight drivers, male]

3.3.3 Cyclists and P2W riders

For cyclists and P2W riders, safety and time are the main concerns. Cyclists feel safer if they are travelling at a speed which at least approaches that of other vehicles, however, if their momentum is reduced, cyclists often feel more vulnerable

“I think you’ve got to cycle as aggressively as you can out there to be seen if nothing else. If you’re by the kerb then people open doors on you and, I think you’ve got to really be in the flow of the traffic as much as you can to be seen.” [Cyclists, male]

“When I’m going down the road I’m saying to myself ‘get me there safely’ because I’ve seen so many accidents. I’ve seen people fall of their bike, get hit by cars or just driving past and seeing a motorcyclist on the floor surrounded by an ambulance crew; so it’s getting there safe and quickly.” [P2W]

3.4 Responses to proposed interventions

3.4.1 Overall

Overall there is a high degree of consistency between the different types of road users, and it is quite clear which measures people feel will have the greatest impact on traffic flow.

Broadly, it is possible to group these measures into three tiers dependent on level of appeal and the perceived likelihood to improve traffic flow. However, it is important to note that these groupings are derived from qualitative insight and not quantitative measurement. They are therefore designed to be indicative only.

Measure	Overall appeal	Likelihood to improve traffic flow
Tier 1		
Coordination of road works	✓✓✓	✓✓✓
Re-phasing of traffic lights	✓✓✓	✓✓✓
Priority for bus / cycle	✓✓	✓✓
Better road surfacing	✓✓(✓)* Cyclists & P2W	✓✓(✓)* Cyclists & P2W
Tier 2		
Fast incidence response	✓✓	✓
20mph zones	✓	✓
Tier 3		
Road pricing	✗	✓

*Majority of respondents give two ticks whereas cyclists and P2W give it a higher rating.

People feel that overall these measures have the potential to make a big impact on traffic flow. People therefore believe that the responsible public bodies should be letting them know about measures that are being undertaken to improve travel conditions in London.

“They should let us know about these things and inform the public. It’s good to know where the money is being spent” [P2W]

Attendees identify the following methods of possible communication:

- Signs by the side of the road indicating what initiatives are in place in that area e.g. signs on road works explaining that the works are being done in

partnership between British Gas and Thames Water in accordance with the London Permit Scheme

- Radio advertisements
- Newspaper advertisements – particularly the free London papers e.g. Metro and London Lite
- Advertisements on TfL website
- Newsletters from the Mayor’s office
- Advertisements on the back of buses

Some attendees also feel that awareness of traffic-improving measures at local level would be driven through a dialogue between the local community and TfL – allowing decision-makers to utilise local knowledge – before any measures were implemented.

We will now go through each proposed intervention in more detail.

3.4.2 Coordination of road works

Better controlled road works which are restricted during the busiest times and for which advance notice is made allowing customers to plan their journey around them. The proposed new London Permit Scheme aims to regulate street works in the Capital by ensuring that street works are undertaken as quickly as possible and at the same time as other necessary works at the location, wherever practical. As a result road works should cause as little disruption to Londoners as possible.

Likes

People react positively to the idea of conducting road works outside of the busiest times. They can also see the benefit of ensuring that road works will be undertaken at the same time as other necessary works at the location.

“Doing it at night. They resurfaced the road where I live, must be about a year and a half ago now. They did all of it at night and they came back and did a bit each night going right the way down. I tell you it was fantastic.” [Private motorist, female, 36+, outer London, non-time critical]

“At the moment the council don’t regulate it. If the gas company wants to do some road works then all they do is send something to say they are going to be doing it. It should definitely be regulated and someone should be saying when they’re going to do it.” [P2W]

“If British Gas and BT are doing a job together at the same time, I think that would benefit, that is a good idea, it lessens the time in which the road is going to be dug up, as long as its going to be efficient and both companies are going to do the work within that time that is allocated, then I think its a good idea.” [Private motorist, female, 20-35, inner London, non-time critical]

Advanced notice is appreciated because it promotes consistency and predictability by allowing people to plan alternative routes.

Dislikes

Some people envisage the likelihood of people living in areas where road works are being conducted, complaining about noise levels, e.g. at night. Attendees also question whether this might result in increased costs for contractors e.g. they might need to employ more people to work on a particular site in order to complete work within a given deadline.

“They would have to pass on the cost to others in some form, so it could increase your utility bills; gas for example.” [Private motorist, female, 20-35, outer London, non-time critical]

As mentioned previously, cyclists and powered two-wheel vehicles can generally avoid disruption caused by road works. The knock on effects of increased congestion does affect the amount of road space they have to play with.

Optimisation

People feel that coordination of road works should also involve coordinating road works in a given area so as to minimise disruption. Some mention that it is important to ensure that roads which people are being diverted to, are clear of road works.

“And perhaps they could avoid having two sets of road works going on at the same time. They must have known there was a weak bridge at the top of the road here and then you’ve your other set down at the bottom which is going to

be 14 weeks. It is a bit difficult actually to plan a different journey because whatever way you go you're going to hit either one of the sets of road works."
[Private motorist, female, 36+, outer London, non-time critical]

Attendees also think that coordination should also involve more careful planning throughout the year.

"I don't want them all to be in January, February and March when they're spending what's left over in their budget and you just can't move. Certainly up in the centre it is absolutely ridiculous, you will go 10 yards and have some road works and go another 10 yards and everywhere you turn there'll be road works just because they're spending money getting rid of their budget"
[Private motorist, female, 20-35, outer London, non-time critical]

Attendees say that there also needs to be closer monitoring and enforcement of timescales i.e. stricter penalties for companies who fail to complete work on time.

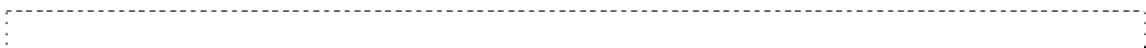
In addition to giving advance notice of road works, people feel that predictability will be improved if they are provided with accurate details of how long the road works will be in place. This will enable them to better decide whether they need to plan an alternative route.

Potential impact on traffic flow

Attendees can see how conducting road works outside of the busiest times will promote consistency of traffic flow by preventing major routes from being blocked during rush hour.

People also believe this measure promotes predictability by giving advance notice of road works and allowing people to plan alternative routes in advance. Predictability is also improved in the sense that once that set of road works has been completed the road should not be dug up again in the near future.

3.4.3 Re-phasing of traffic lights



Reviewing traffic light timings in order to ensure they are operating as efficiently as possible and allowing sufficient times for all users to be able to flow through the junction.

Likes

All attendees have experience of lights taking too long to change to green and then changing back to red too quickly. The overall reaction to this measure was very positive.

“That could work very well in certain places. We’ve all been at a traffic light where it’s basically turned red, amber, green, gone green for 3 seconds and then gone red again. You just don’t get any flow at all so on specific junctions that would work very well.” [Private motorist, male, 36+, outer London, time critical]

Dislikes

Very few attendees have anything negative to say about this measure. Some question how it would be implemented. They are slightly concerned that it would be expensive and would involve more road works.

Optimisation

People believe that the re-phasing of traffic lights should be implemented in such a way that known trouble spots take priority, i.e. certain junctions where traffic light phasing is causing congestion.

Many attendees feel that any form of fixed phasing is unlikely to offer enough flexibility. They therefore ask whether a flexible phasing system which monitors how much traffic is waiting at a junction is possible. People suggest if there is more traffic queuing at one side, the lights should stay green for longer and let more of that through before going green for the other side. They also suggest changing the phasing at night or during off-peak times.

“The worst thing is when you stop and there’s nobody in sight but you just have to sit there.” [Private motorist, female, 20-35, outer London, non-time critical]

Some attendees mention a system in Germany whereby there is a countdown indicating to motorists how long they need to wait until the lights will turn green again. They feel that this reduces the stress and anticipation of waiting at traffic lights.

“You’re not sat there hanging on. You know how long you’ve got to wait so you haven’t got your foot hovering above the clutch and accelerator pedal. In fact it allows you to switch off for a minute or two depending on how the lights are.” [Private motorist, male, 36+, outer London, time critical]

People feel that whatever happens, it is essential that the traffic lights are monitored afterwards to see how effective the re-phasing has been.

“It it’s re-programmed correctly then there shouldn’t be any problem. The worst thing would be if they were programmed badly and it didn’t get noticed for a while.” [Private motorist, female, 36+, inner London, time critical]

Some people feel that traffic flow will often not be improved through traffic light phasing alone. They suggest that the phasing of traffic lights should be looked at in conjunction with improving the road layout, e.g. ensuring that there is enough space for cars wanting to turn left or right.

For cyclists, rephasing meant allowing them to turn left on a red or giving them advanced signals. These measures would significantly help to maintain their momentum and improve their traffic flow.

Potential impact on traffic flow

Motorists feel that if they know traffic lights are working in their favour, it will reduce stop-start traffic as well as enabling them to better maintain a constant speed.

“If you’ve got good traffic flow you drive at a decent speed because you know it’s working to let you flow. Because you know its flowing you’ll stick to your steady 30mph or 40mph instead of constantly trying to make up the gap caused by being stuck at so many red lights.” [Freight drivers, male]

Attendees hope that traffic light re-phasing would make it less likely for them to hit a red light at every set of traffic lights on a given road. They believe this would encourage people to maintain a constant speed. People will be less likely to increase

their speed between traffic lights in an attempt to avoid having to stop at the next set of lights.

“It should keep it at more of a steady pace. If you are going on a long road like Marylebone Road, and if you’ve got green at the beginning then you can continue that speed. You can stay at a steady speed rather than stop-start all the time. If everyone was doing that and it was just a constant flow it would be lovely!” [Private motorist, female, 36+, inner London, time critical]

Cyclists and P2W riders tend to find the phasing of traffic lights a minor inconvenience. Often they are at the front of the queue anyway so it is less of a priority for them.

“I appreciate the benefit of being able to move up but it still slows me down. A constant flow of traffic would mean that I would get over the green lights rather than having to sit on the red light. I make my way to the front but the fact is I still have to stop.” [P2W]

3.4.4 Priority for bus / cycle

Bus and cycle lanes to help these modes get past queues of traffic and pull away from the lights first. Advance stop lines for cyclists so that they have an area to wait in front of the queue of cars and can pull away safely.

Likes

Nearly all motorists feel that keeping cyclists out of the way of other road users is a good idea. People like the idea of keeping buses away from other forms of traffic. They don't like driving behind them because of their stop-start nature and difficulty of getting past them on a normal road. P2W riders admit to using the cycle lanes when possible and taking advantage of that extra space away from other motorists.

Dislikes

Motorists generally appreciate the benefit of having cyclists kept to the side of the road. However, there are some motorists who feel that cycle lanes are taking road space away from them.

“The other thing you could say with that is you could potentially get two cars on that road. Sometimes having a cycle lane can take away an extra lane of traffic.” [Private motorist, female, 20-35, outer London, non-time critical]

Nearly all motorists dislike the advanced stop lines. They believe that they are being held up when they have a formation of cyclists in front of them as cars are capable of pulling away faster than cyclists.

“You’ve overtaken them on the street, you get to the lights, they come in front of you again, you’re back to square one again and you’ve got to overtake them again, the chances are you will knock them off eventually.” [P2W]

“They should have to queue up in their own lane of traffic like everyone else. They’re not as fast as a motorbike or a car. They should be kept out of the way. It would make the journey smoother in terms of the emotional stress if cyclists were kept in their own lane.” [Private motorist, female, 20-35, outer London, time critical]

Cyclists can often appreciate that motorists might find the advanced stop line frustrating, but nevertheless feel it is important for their own safety.

“I do agree that slows the cars down but if that wasn’t there I’d be sat next to a car, and you do get a bit of a wobble on then you start; you need to be in front of the car to get going.” [Cyclist, female]

Optimisation

The majority of motorists believe that it is better having a lane for cyclists to ride off in single file, i.e. remove the advanced stop line. Some motorists don't feel comfortable sharing road space with cyclists because of the likelihood of hitting them and the risk of causing serious injury to a cyclist if involved in an accident. They therefore advocate giving cyclists a dedicated space away from the road which is safer for cyclists and also offers increased road space to vehicles.

"I don't think cyclists should be on the road at all. I went to Prague and all the cycle lanes are actually on the pavement." [Private motorist, female, 36+, outer London, non-time critical]

People think that this measure should also specify that buses will be given an area to pull into at bus stops. This has the advantage of moving them out of the way of other road users and avoiding the need for people to have to drive around them and cause other motorists to stop.

People see this measure as being part of the Mayor's objective to make 'more efficient use of road space'. They feel that there should be standardised times when other motorists are allowed to enter bus lanes.

P2W riders are not sure whether they are allowed inside the advanced area, but often feel they should be. This would allow P2W riders to avoid dodging through cars as they pull off faster.

"I think that would be good for people on scooters and motorbikes because we pull off faster than cars. I think for cyclists then maybe car drivers are correct and you would slow them down because they are in the way." [P2W]

Potential impact on traffic flow

Keeping cyclists to the side of the road is seen to promote consistency and allowing traffic to maintain a constant speed. People also appreciate that this measure plays an important role in making it safer for people to cycle and thereby potentially reducing the number of cars on the road. Similarly, bus lanes also make travelling by bus more consistent and predictable and encourage people to use public transport instead of their cars.

“It is beneficial in the sense that you could look at every person on a bike or in a bus and they could also be in a car, not all of them but a lot of them would be so in a way you’re getting less cars in the traffic congestion.” [P2W]

“The reason why it would improve flow is because it would encourage more people to ride bikes and I think it does because a lot of cyclists don’t like to go on the road because it’s not safe. If they’ve got lanes it would encourage me to do it.” [Private motorist, female, 20-35, outer London, non-time critical]

For cyclists, this is a very appealing notion and is certainly the best way of improving their traffic flow; however, they are cynical about cycle lanes being improved in reality.

3.4.5 Better road surfacing

Well maintained road surfacing. An even surface with no bumps but a good level of grip allowing vehicles to stop safely in case of an emergency.

Likes

This idea is liked by cyclists and P2W riders the most. Their priorities when travelling are safety and speed, and the condition of the road surfaces has a direct impact on both of these factors. However, speed is not impacted to a very large extent as they can swerve round any obstacles quite easily.

“It’s so dangerous it really is. I’m concerned about my bike as well. I know we only pay £15 road tax but some of them are atrociously bad.” [P2W]

Freight drivers also appreciate that a consistent surface will enable them to maintain a constant speed if they are not having to worry about potential damage to the goods they are carrying.

Amongst other motorists, female drivers see the biggest benefit in this measure. They say that improved road surfaces would enable a smoother and more comfortable ride, as well as enabling drivers to maintain a more consistent speed. Male drivers tend to feel that road surfaces don’t impact on their driving to such an extent.

“There’s a road near me, King Henry’s Walk, that people use as a cut through and it’s quite a nice cut through, but it’s full of holes and it has been for at least 2 years, so for 2 years it’s not been touched, so to make the roads nice and flat and easy to ride on that would be good.” [Private motorist, female, 36+, inner London, time critical]

Dislikes

Many people feel that a good level of road surfacing should be standard given the level of road tax they are paying. Introducing this as a new concept may lead people to question why road surfacing is not currently being addressed.

Optimisation

Attendees say that this measure should include some mention of removing speed humps. They are widely disliked for causing discomfort, inconvenience, and damage to people’s cars. People accept that in certain areas they might be justified, but a lot of the time they fail to understand the purpose behind them.

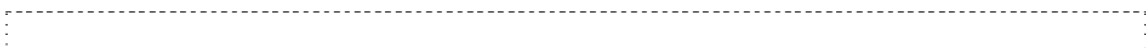
“I went over to south London today and nearly every road I went down had speed humps. I’m sure there’s no real reason for it you know. The ones that are just the squares so you can go over them or avoid them anyway so what’s the point of having them? I can understand in certain hotspots around schools, but it was nearly every road!” [Private motorist, male, 36+, outer London, time critical]

Freight drivers would also like to see fewer speed humps as many have damaged goods when driving over them.

Potential impact on traffic flow

People appreciate that smoother road surfaces will allow traffic to maintain a constant speed and remove the need for people to slow down or swerve. They feel that accidents will be less likely if people are able to concentrate on other road users rather than the road.

3.4.6 Fast incidence response



Rapid identification and response to incidents in order ensure minimum disruption to traffic. E.g. clearing the road after an accident.

Likes

People like the idea of ensuring minimum levels of disruption and allowing people to get back on track with their journey as quickly as possible. They feel that roads are sometimes closed unnecessarily in the result of an accident.

Dislikes

Some people think this suggests a system they've seen in other European countries where accidents are just dragged to the side of the road. They appreciate that often accidents warrant a full investigation and the needs of the people involved in an accident should take priority.

Optimisation

People struggle to see how incidents could be responded to any more quickly than they already are. They feel that response to incidents is already as quickly as possible.

"I guess they can only do so much. If there's an accident they've got to have ambulances, e.g. if there's a motorbike accident they can't move the person until medics get there. It's all very well having a fast response team but they cant do anything unless the paramedics are there so I don't think it could be improved very much." [Private motorist, female, 20-35, outer London, non-time critical]

Potential impact on traffic flow

People think this measure will have a minimal impact on traffic flow. Firstly, they believe that it is something that happens at the moment.

"Don't they have that already? I thought that always happens. If there is an accident or a burst water main don't people get called out?" [P2W]

People feel that incidents are already responded to as quickly possible, and therefore do not see this measure as offering any potential improvements to traffic flow.

“It’s going to take as long as it takes with serious accidents. If the police are present they’ll do it as quickly as possible; they know the road is blocked up and they’re not going to delay it for the sake of it. My thinking is that it’s probably as fast as it can be now so you couldn’t ask it to be faster.” [Private motorist, male, 36+, outer London, time critical]

“Because of the congestion caused by the incident the police and the other emergency services just can’t get through, especially on the narrow streets. It’s difficult for them to get there any quicker than they already do.” [Private motorist, female, 36+, outer London, non-time critical]

As with road works, fast incidence response does not significantly impact traffic flow for cyclists as they can easily avoid the incident by walking their bicycles around it. However, it is understood that anything causing traffic disruption to other vehicles can have a knock on effect on them.

3.4.7 20mph zones

Reduced speed limits in areas with the highest densities of pedestrians and cyclists in order to improve safety for these road users.

Likes

People tend to view this measure as a means of slowing traffic down. They therefore struggle to see how this measure would be able to improve traffic flow. There is some understanding that this measure could help people to maintain a constant speed in areas where there are likely to be lots of potential hazards. Attendees therefore feel that a 20mph speed limit is most suitable for roads around schools.

Dislikes

The majority of attendees believe that 20mph is too slow outside of areas where the safety of pedestrians needs extra consideration e.g. outside schools. They also say that a 20mph limit on normal roads could be potentially dangerous.

“I can guarantee you’ll have four cars all doing 20, and the fifth car will stick his foot down and go down the middle. There will be a car or pedestrian coming the other way and bang. I think it’s more dangerous having 20 mph on a normal route.” [P2W]

Optimisation

People see this measure as being designed to control traffic levels around schools. They feel that attention would be better paid to parking arrangements outside schools. Some suggest improved space for parking whereas others suggest having red routes outside schools to prevent anyone parking there.

Potential impact on traffic flow

A lot of people struggle to see how this contributes to improving traffic flow. It is seen as being more about increased safety for pedestrians and cyclists.

“That isn’t improving traffic flow that is just safety going overboard. I don’t see how making everybody drive at 20mph will improve traffic flow in any way shape or form.” [Private motorist, female, 36+, inner London, time critical]

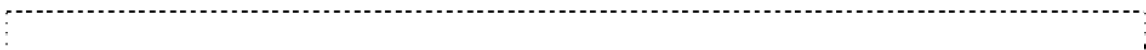
Most people say that they avoid roads that are likely to justify having a 20mph limit imposed, and this makes it more difficult for them to see the traffic flow implications.

“You will try and avoid a road if you know there’s a school down there and it’s that time of day for the school run, especially in London. You get these mums with their big cars parked all down the road so you can’t get down there anyway. You’re going to try and avoid that road like the plague.” [Private motorist, male, 20-35, inner London, time critical]

A minority of attendees can see a connection between improving safety for pedestrians and encouraging less school run traffic. However, they do not believe that it will have a significant impact on the number of cars on the road.

“You see that school run every morning and people are just in that you know, even if its sunny they’ll just jump in the car because it’s easier; just get the kids there, drop them off and go and do whatever they’ve got to do.” [Private motorist, male, 36+, outer London, time critical]

3.4.8 Road pricing



A charge for using congested roads in order to ensure that only the most essential journeys are made and to reduce congestion and improve journey time reliability for those who are willing to pay the charge.

Likes

A small minority of attendees felt that the congestion charge has improved traffic conditions in London. Some freight and commercial drivers appreciated the improvements, especially those who do not have to pay for it personally.

“The traffic used to be terrible all the time. Now it’s incredibly improved.”

[Private motorist, male, 36+, outer London, time critical]

“I don’t pay for it. My company pays for it and I have found going into the congestion zone, it’s a pleasure to drive there. There is so little traffic there now that I really enjoy it.” [Freight drivers, male]

Cyclists are somewhat dubious about the real effect the congestion charge has had on reducing traffic but are very much in favour of any scheme that takes other vehicles off the road as it is the other vehicles that hinder their own flow the most.

Consequently they ask for a much higher charge for entering the zone so that it acts as a real deterrent.

Dislikes

Most attendees feel that road pricing is a tax on motorists rather than a means of reducing the amount of traffic on the roads. They do not feel that people who need to drive into central London will be deterred by the £8 charge, particularly where companies rather than the individuals are paying it. Many say that it pushes more traffic into areas adjacent to the congestion charging zone.

“I hate it, it cost £600 million to put in effect and the people that I see that are getting caught with that are the innocent people like you and me that pay our road tax, register our cars and basically can’t go to a part of London that is absolutely abysmal to drive in anyway.” [Private motorist, female, 20-35, outer London, non-time critical]

There are also issues of enforcement which lead many to feel that the charge is unfair.

“The people that haven’t bothered registering their cars and all that just get away with it. They’ve got no way of chasing them up. It’s hard enough to track an individual car and you had people changing their plates and all sorts when it first came in.” [Private motorist, male, 36+, outer London, time critical]

Attendees also feel that it should not be the responsibility of the government to determine which journeys are *‘the most essential’*.

“I use my car a lot because I’ve been attacked walking from the bus stop to my home. For me an essential journey is getting in my car from my home and getting to the place where I need to be safely. Now that to me is an essential journey, but if I had to pay every time I got in my car to from A to B then I would be trapped in my own home.” [Private motorist, female, 36+, inner London, time critical]

Potential impact on traffic flow

Most people feel that congestion charging is about generating revenue and therefore has a minimal impact on traffic flow for the following reasons.

- The £8 per day is not an effective deterrent
 - People who need to make essential journeys within the zone are still going to do so
 - People who drive big 4x4s in the city and cause the most problems are the people who are going to be able to afford to pay
 - For many people their company will foot the bill, and they can afford to do so
- Traffic levels are higher on the outskirts of the congestion zone due to people finding alternative routes which avoid the zone.

“It’s congested because of the congestion zone. If you’re trying to get from one end of the city to the other, it’s quicker to go through the city, but because of the congestion charge nobody does that any more; everyone goes round the outskirts.” [Freight drivers, male]

People driving in inner London often feel that road pricing has a negative impact on traffic flow. It makes them feel less confident when they are driving close to the congestion charge zone. They feel a certain degree of apprehension about entering the zone accidentally and often they are not certain whether they are outside or not.

3.5 Road network information

There are two types of travel information used by motorists.

- **Pre-travel information:** Sources of information which are accessed before people set off on a journey
- **On-journey information:** Information which is accessed whilst travelling

3.5.1 Pre travel information

Most people do not actively seek out road network information for journeys which they make regularly. The majority try to plan unfamiliar journeys, usually route planner websites. These sites are used predominately before a long trip as motorists tend to be less familiar with these routes.

The AA website is regarded as the most reliable site for providing an efficient route. Other sites are seen to provide either longer routes or less time efficient routes whereas the AA website provides the most time efficient, and shortest where applicable, route.

People are aware that the site also provides travel time information. Nevertheless people still find it difficult to plan journeys properly. Many are reluctant to rely on these travel times and will often add half an hour to the estimated travel time to ensure that they arrive at their destination on time.

“I always use the AA route planner to help me know how I’m going to get there and it gives you a rough time and distance. I like organising myself but it’s difficult to plan properly. I usually over-compensate so I normally get there early. I don’t know if I’ll get stuck at a level crossing or something.” [Private motorist, female, 20-35, outer London, time critical]

It's important to note that very few motorists actively seek out traffic disruption information from any source before setting off. The only exception is for long, planned journeys usually outside of London.

Freight and commercial drivers are often unable to plan their own routes. Usually they are not given enough notice of the journeys they will be making to be able to plan them.

"Sometimes, if you know your jobs and what you've got to do from the morning, you can plan ahead. Usually you have them phoning you up throughout the day and saying 'go here' 'go there', 'where are you?' If you've got the jobs already you can plan your day and can do the deliveries in the order you want to do them in but even then you might get a call from the supervisor saying there's an urgent delivery and then you might have to go back to the warehouse and go off again." [Freight drivers, male]

PHV drivers did not have a prescribed route and their journeys would depend on a variety of circumstances that unfolded during the course of the day. Taxi drivers however do tend to plan their first journey of the day i.e. they plan where they want the first pick up to be and will not switch their light on until they arrive there e.g. at an airport. Other commercial drivers tended to have a mixture of journeys they were able to plan and those that were ad-hoc.

"If I have appointments booked then I can plan my journey; I have certain customers who I need to go and see every 4 weeks. If I'm touting for new business I don't know where I am going. That's the random days and I could be anywhere." [Commercial drivers, female]

For cyclists, extra information is important for them and many say they would like an equivalent of the AA route finder which offers two alternatives - a scenic (low traffic, through parks) route and a quick route.

3.5.2 On-journey information

Information accessed whilst on journey is usually accessed through radio stations or signage on the roads.

People say that on journey information helps to manage their expectations, especially when unexpected events occur along the route. They seek information to explain why the delay has occurred to help them to estimate the delay to their journey. On journey information is not necessarily to help them to change their route, but simply to provide understanding of the unexpected delay. This information helps to calm motorists and potentially relieve some of the stress and frustration.

The biggest frustration for motorists is not feeling in control when they come across unforeseen hold ups. They find not knowing why they are not moving extremely frustrating. Nearly all attendees want more information that tells them what's causing the delay, how long the delay is likely to be and whether it is worth seeking an alternative route, and how to get back on track.

“Give people the information people need to solve the problem. Want to know where to go. If they warn you about the problem they should tell you alternative ways to go.” [Private motorist, female, 20-35, outer London, time critical]

Attendees feel that there could be signs on road works or someone at the scene of an incident giving information on alternative routes. Many complain that in inner London especially there should be more visible and detailed signage to allow people to follow diversions.

Many people like the idea of being able to receive real time information during their journeys to alert them of incidents, e.g. via their mobile phones. They think that this would enable them to feel more in control and be able to solve problems during a journey. However, most feel that receiving this information via mobile phones would not be practical due to the restrictions on mobile phone usage while driving.

The majority listen to the radio whilst driving to receive general traffic information. People tend not to listen to radio stations specifically for travel information and instead utilise the Radio Data System (RDS) and Enhanced Other Networks (EON) features to monitor stations for traffic programmes, and automatically temporarily tune into that station. Radio stations provide drivers with information regarding accidents and build up of vehicles. Some mention that information on radio stations is

often not as up-to-date as they require. For example, a build up may be reported but when travelling down that route, they find that there is no significant delay.

“I just don’t trust how long the information has been there, and sometimes the best time to go to an area is when they have told you there is traffic, because there is usually about an hour’s difference, this has happened lots of times.”

[Commercial drivers, female]

Variable message signs on motorways are also a source of on journey travel information. Motorists find these to be helpful in providing alerts to any upcoming congestion. This information is perceived as accurate and offered in good time. It gives road users the option to exit from the motorway before they reach an incident, allowing them to use alternative routes. Many feel that it would be beneficial to have similar signs on roads other than motorways, i.e. providing updates of situations on local roads.

Another main source of on journey information is satellite navigation systems. These are used to provide route information. They eliminate requirement to access route information before the journey. For some, they also reduce the stress of ensuring they are travelling in the correct direction. People often feel that this technology should be utilised more widely to warn motorists of incidents and to provide them with alternative routes to navigate around trouble spots.

Many cyclists feel that cycling is about freedom and spontaneity and so being beholden to log in to the internet every time they wish to go somewhere is less appealing for them. As a result, better signage on the current network e.g. coloured lines on the road marking the way, or an alert on their mobile should they get lost were generally more likely to be considered as relevant.

3.6 The road network as experienced by pedestrians

Although there no explicit positive aspects, there were a lot of attendees who simply had no issues with using the road network as a pedestrian.

- **Overcrowding** – People find congestion a source of frustration. They often feel that pavements can be crowded, especially in London where there are so many tourists

“People just aren’t taking notice of other people. You have lots of them dawdling down the street, stopping in the middle of the street and looking in shop windows.” [Private motorist, male, 36+, inner London, non-time critical]

- **Navigation** – Pedestrians often find it difficult finding their way around in London. They suggest improved signage for pedestrians as well as ensuring that street names being made more visible

“I was in Oxford today and they had finger pointers that would help you go in certain directions, for example to the station, and they were just really attractive. Maybe those could point people down the road in the direction of the crossing, or just simple things like that might help people navigate pavements better.” [Commercial drivers, female]

- **Condition of pavements** – The condition of the pavements is a particular frustration for female attendees. Often they have experienced getting their heel caught down a crack or gap in the pavement.

“My worse one is losing my heels down the cracks of the pavements.”
[Female, Outer London, Non-time Critical, 36+, BC1]

- **Motorists** – People feel that often motorists show a lack of consideration for pedestrians.

“People need to be more courteous on the road. You can stand there for ages, and no-one lets you go. If I see someone crossing with a buggy, or an old person, I always let them cross.” [Commercial drivers, female]

As pedestrians, people often feel vulnerable in relation to other road users.

“You feel like you need to have your wits about you all the time, be very aware of your surroundings and use crossings all the time.” [Private motorist, female, 36+, outer London, non-time critical]

However, some attendees suggest that pedestrians should be made more aware of the needs of motorists, and that signage could improve awareness of potential issues.

“If I was looking, and I see a car coming round, I would think that car has the right of way, especially when its on a main road and it has to get round the corner, if it stops it is causing a hazard, and the car behind, who doesn’t expect it to stop, can go into it, so I would wait and let the car come round, but some people think, oh no I haven’t got time, and expect you to just stop.” [Commercial drivers, female]

People also experience problems when motorists mount the pavement to park as this causes an obstruction.

- **Cyclists** – A lot of people say that cyclists are a hazard because a lot of them don’t obey traffic signals and ride through crossings when pedestrians are on there.
- **Pedestrian crossings** – Some people say that they have experienced waiting at a zebra crossing when the oncoming traffic hasn’t stopped. They feel that pelican crossings are usually more effective. Most attendees think that crossing the road isn’t a problem, and that pedestrians are well catered for in this area.

“They put pedestrian crossings in the most common places there’s a couple of crossings where you’d like them to be but they’re not and you have to walk a little bit further up but on the whole it’s not too bad.” [Commercial drivers, male]

Although there are some attendees who do not use crossings as they feel it is not the fastest possible route for them.

“There are enough zebra crossings, but you might be here and the crossing is down there. You can’t be bothered to walk all the way down. I have to do everything as quickly as possible, regardless of anything.” [Commercial drivers, female]

3.6.1 Responses to pedestrian interventions

Safe crossings for pedestrians

Ensuring that pedestrians are given sufficient time to cross the road safely before the traffic gets a green light.

Most attendees feel that people are already given enough time to cross the road. Some people, particularly those with children, appreciate that some lights don’t give enough time for pedestrians to get across.

“It’s terrible to think you could get hit on a crossing. You press the button and it’s ridiculous, so they should give the priority to the pedestrian and allow them to cross.” [Commercial drivers, female]

Pedestrian countdown

A second timer counting down how much time pedestrians have left to cross the road.

Likes

Attendees see the main benefit of this measure as giving people the ability to judge whether there is enough time to cross the road. They expect that pedestrians will not cross if there is not enough time. This will result in traffic being able to move away more quickly as it increases the likelihood that the crossing will be clear when the light turns green.

Dislikes

Most people see this measure as being similar to the 'flashing green man'. They feel that money would be better spent on educating drivers as to the meaning of flashing amber light. Many pedestrians feel that drivers are not aware that they are supposed to give way to people already on the crossing.

People also feel that a pedestrian countdown could cause some people to panic if the countdown starts and they are in the middle of the crossing e.g. the elderly

"They have this in Mallorca. You have everyone pushing and shoving as the timer runs out." [Private motorist, male, 36+, inner London, non-time critical]

They also feel that it could encourage reckless behaviour by encouraging people to take risks when crossing the road e.g. trying to beat the countdown if they see they only have 2 seconds remaining.

"I think it would encourage people to make a dash for it and it could be more dangerous." [Private motorist, female, 20-35, outer London, time critical]

3.7 The road network as experienced by bus passengers

3.7.1 Positive aspects of the road network for bus passengers

- **Bus lanes** – People acknowledge that bus lanes have helped make journeys by bus a lot faster. They also result in a smoother journey because buses do not have to weave their way in and out of traffic. Bus lanes promote both predictability and consistency.
- **Predictability** – Predictability is a priority for people when travelling by bus. Attendees feel that when travelling by bus they usually have a good idea of how long it will take to reach their destination. They also feel more likely to know what's going to be ahead of them, assuming that the bus lane is clear and nobody has parked in them illegally.

“All you really want is to know what time it’s going to turn up and know what time it’s going to get you there. I plan my whole journey along those lines.”

[Private motorist, male, 36+, outer London, time critical]

“Let’s say that I got on the bus to Wimbledon. I know that it will take me half an hour maximum, maybe if it was in the morning rush hour it would take me 40 minutes, but I know that because of the bus lanes and because of some of the priority spaces that the busses have I won’t be affected by other cars on the road going to work.” [Commercial drivers, male]

People also perceive buses to be more likely to stick to timetables nowadays, and that this enables them to plan their journeys more effectively. Electronic timetables are also appreciated as a means of reducing uncertainty and increasing predictability.

“You’re not just standing there any more thinking when is this bus going to come. You actually know!” [P2W]

- **Consistency** – People say that bus lanes also improve consistency by reducing ‘stop-start driving’. However, they feel it could be made better through improved enforcement to prevent motorists stopping in bus lanes.

“If you get some idiot parking in a bus lane or at a bus stop then the bus has to go around or stop outside and that’s what causes irritation.” [Private motorist, female, 20-35, outer London, non-time critical]

People find the stop-start nature i.e. stopping at every bus stop frustrating. However, they also feel that since the introduction of the Oyster card buses are spending less time at bus stops.

"I think if more people have the oyster card then the less time the bus is going to be stationary because you get on dab it and you're on the move, but if someone is fumbling through change for 60p or whatever." [Commercial drivers, male]

- **Reduced stress** – When travelling by bus people often feel more relaxed than they do in their own cars.

"You're not sitting at the wheel. Generally you're just more accepting when you're on the bus because you can't do anything anyway." [Private motorist, male, 36+, outer London, time critical]

3.7.2 Negative aspects of the road network for bus passengers

- **Pedestrians and bus lanes** – People often believe that giving priority to buses has reached a stage where it is confusing and dangerous for other road users, especially pedestrians. There seems to be a lack of understanding of who has right of way in bus lanes, especially when traffic lights operate differently within the bus lane compared to general lanes.

"One of my sons friends got killed in a bus lane because there was like a zebra crossing, the lights had stopped for the road but the lights hadn't stopped for the bus lane, he walked across and got killed so I think they are very confusing some of the bus lanes." [Private motorist, female, 36+, outer London, non-time critical]

"There's a bus lane in Catford and there's a one way system that goes round but the buses don't go through the one way system, they come through the middle of the town bit and the buses are going the opposite way to the traffic so when you are crossing the road you don't know what way to look because

although the traffic is coming one way the bus is going the opposite way, it's so confusing." [Private motorist, female, 36+, outer London, non-time critical]

- People find cyclists frustrating as they move slowly and get in the way. They feel that cyclists have a negative impact on traffic flow by forcing buses to pull out of the bus lane and blocking other lanes of traffic in doing so.

"Sometimes they can slow the bus down. If you are a passenger it's frustrating if you have a bike going really slow in front of you, especially where the bus can't pull out because there is traffic to the side of it." [P2W]

As bus passengers, people find cyclists less of an issue than when driving themselves. They no longer need to deal with the stress of having to avoid them and the potential of being involved in a collision.

- Bus drivers are often criticised for contributing to levels of discomfort and the stop-start nature of journeys.

"The reason I stopped using the buses was the quality of the bus driving. It has deteriorated over the years. It's stopping and starting all the time; a lot of the time they don't even wait for people to sit down before they put their foot down on the accelerator, and they slam the brakes on all the time." [P2W]