

Britainthinks

— Insight & Strategy —

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Road congestion deliberative research

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Infrastructure Commission

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BritainThinks

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1. Introduction

Background and objectives

In July 2018, the National Infrastructure Commission (NIC) published its first ever National Infrastructure Assessment, setting out a plan of action for the country's infrastructure over the next 10 to 30 years. The National Infrastructure Assessment noted that “there has often been a disconnect between theoretically perfect road pricing systems suggested by policymakers and the perceived fairness and practicality of those systems by the public. Rather than propose a further technocratic recommendation the Commission will explore new ways to engage stakeholders and the public on this topic, looking at a full range of potential options in light of the major changes in road use and taxation that are inevitable”.

In October 2019, the NIC commissioned BritainThinks to conduct a deliberative engagement to develop a deeper understanding of how members of the UK public think and feel about the options for tackling congestion. Specifically, the objectives were to:

- Build understanding of public preferences to different policy approaches to congestion, including exploring in detail how participants made judgements about different policy options.
- Test the value of deliberative engagement techniques as a potential tool for use in the Commission's wider work programme.

Also involved in the project were:

- An Advisory Group made up of a range of Commissioners and stakeholders, who provided guidance on the content of the research materials and review of the final report.
- An independent evaluator, 3KQ, involved throughout the project to evaluate the robustness and quality of the research process and delivery, and produce a final evaluation report.
- Graham Parkhurst, Director of the Centre for Transport and Society (CTS) at UWE, who advised on sampling and the selection of locations, and reviewed outputs including the final report.
- 17 experts who attended workshops to provide evidence and further nuance to the research materials, as well as answer participants' questions.

What is deliberative engagement?

Deliberative engagement is an established method of including the public voice in decision-making. It is a technique that helps to enable productive conversations on complicated and/or controversial subjects. In deliberative approaches, participants learn about a topic that they might know little about or may not typically think about in much depth in their day-to-day lives. By engaging with information, evidence and expert opinion, public participants are enabled to come to a more considered view – particularly regarding the implications of different choices. Deliberative approaches seek to understand the public's values and explore how they make difficult trade-offs, after weighing up different evidence and information – it is also an opportunity to see why 'logical' solutions might be rejected.

Overview of methodology

This research has consisted of two stages conducted in parallel: a set of focus groups followed by a separate set of deliberative workshops.

1. Deliberative workshops were conducted 11th January – 15th February 2020. The aim of these workshops was to understand public attitudes towards congestion, specifically to understand:
 - how participants ranked scenarios for tackling congestion, and their views on different policy options within each scenario;
 - how participants felt about particular trade-offs;
 - the values and principles used to judge scenarios and policies.

A total of six day-long workshops were conducted, with two workshops conducted in each of Manchester, Nottingham and Bristol, with the same public participants attending both workshops in each location.

- The aims for the first wave of workshops were to capture initial reactions to and thoughts about road congestion, and to build knowledge about its impacts and how to influence it.
- The aims for the second wave of workshops were to build knowledge around potential approaches to tackling congestion, to help participants understand trade-offs, and to develop solutions.

For both waves of workshops, Manchester was conducted first, with materials, timing or the activities adapted for the other two locations where this was needed.

The four scenarios were developed by the NIC and the Advisory Group, and included:

- Making more effective use of space (by encouraging use of alternative modes of travel, including public transport, walking and cycling);
- Discouraging driving;
- Charging drivers;
- Accepting congestion.

The final scenarios packages were developed by the NIC and comprised 8 options:

1. Do nothing additional;
2. Significantly improve public transport;
3. Discourage driving;
4. Congestion charge;
5. Significantly improve public transport & congestion charge;
6. Significantly improve public transport & discourage driving;
7. Congestion charge & discourage driving;
8. Significantly improve public transport & congestion charge & discourage driving.

2. Focus groups were conducted ahead of the workshops between 10th – 11th December 2019. The focus groups were aimed at exploring how people think and feel about congestion and what should be done about it – in the context of a standard focus group setting. They were conducted in service of the second research objective around testing the value of deliberative engagement: the outputs from the focus groups were compared to the outputs from the deliberative workshops, to provide a sense of the comparative value of conducting deliberative engagement, in terms of the extent to which:
 - Participants were able to rank the options for approaching congestion;
 - The reasons for views were uncovered, and the level of nuance in views;
 - Participants considered the perspectives of others;
 - Participants considered solutions on the basis of fairness (compared to self-interest).

Six focus groups of 90 minutes each were conducted in total, with two groups conducted in each of Manchester, Nottingham and Bristol.

The focus group sample was separate to that of the deliberative workshops – focus group participants did not take part in any other activity. However, the sampling frame sought to mirror the proportions of key groups (for example, drivers of varying frequency, cyclists and public transport users) that were recruited for the workshops, for some comparability with the workshops. For more detail on the focus group findings, methodology and sample, please see chapter 8 and the appendix.

The structure of this report

The report is structured to illustrate the information ‘journey’ taken by participants across the course of the deliberative process, first examining unprompted views of congestion, before exploring more considered perspectives and participants’ ultimate preferences. The report primarily focuses on the outputs from the deliberative process, with a final chapter that reports on the focus groups and draws comparisons between the two.

- Chapter 3 explores public participants’ unprompted views on road congestion i.e. before they engaged with any information. This is key for understanding participants’ ‘starting point’ on the topic of road congestion.
- Chapter 4 explores the process of learning about congestion, the key information that was most influential on their views and the ways in which participant views of congestion differed from the ‘expert’ or policy perspective.
- Chapter 5 examines participants’ reactions to the different scenarios and the policies that sat underneath each one, and the reasons for their views.
- Chapter 6 outlines participants’ preferences for the different solutions ‘packages’ and the reasons for their views.
- Chapter 7 outlines the ‘principles’ that participants thought should govern decision-making about tackling congestion, such as who participants think should be considered, who they think is responsible and who they think should pay for congestion.

- Chapter 8 examines how participants respond to measures aimed at tackling congestion, and their preferences, using a focus group methodology – and compares this to the outputs of the deliberative engagement.

A note on the context and limitations of this report:

- This project was qualitative in nature, meaning findings do not seek to be representative of views, but to illustrate a broad range of views. The aim of deliberative engagement is to understand people's underlying values when discussing a topic in-depth, rather than to understand how they might respond to policies, or how to improve acceptability of particular policies.
- As with all research, there is inevitably some 'research effect' as a result of focusing on a topic in an observed environment. This means participants are likely, to some extent, to respond differently to how they would in a more natural or 'real life' context.
- While the results of ranking and scoring exercises are reported here, these were used as techniques to elicit overall preferences and to explore how participants judged and made trade-offs about solutions. Tables and proportions should only be taken as indicative – they are not quantitatively representative of national sentiment.
- The research was conducted in three cities in the UK, carefully chosen to reflect experiences in different parts of the country with different levels of existing measures:
 - Nottingham: introduced a Workplace Parking Levy (WPL) in 2012 to reduce road congestion by targeting commuting trips.
 - Manchester: had previously voted against introducing congestion charging in a referendum.
 - Bristol: had provisionally decided to introduce Clean Air Zones (CAZ) at the time of the workshops.

Views from each location will be influenced to some degree by local contexts, and cannot claim to reflect the broader experience of the UK public.

- This research focused on congestion in city centres, and was particularly aimed at thinking about congestion during peak commute times, caused by demand outstripping capacity. The workshops did not specifically address broader congestion (e.g. on motorways).
- Whilst the views of those who drive as part of their job (e.g. couriers, plumbers) were included, this research did not specifically include the point of view of businesses.

2. Executive summary

Background and method

The NIC commissioned BritainThinks to conduct a deliberative engagement to develop a deeper understanding of public preferences for approaching congestion, and to explore in detail how participants make judgements about different policy options. The project also aimed to test the value of deliberative engagement techniques as a potential tool for use in the Commission's wider work programme.

Key findings

Unprompted views of congestion

Congestion was widely regarded as an important issue, with no one saying they felt it was unimportant. It was seen as a very important issue for society to address, even among those who did not feel that personally affected by congestion (i.e. if they do not travel at peak time).

Its importance was linked to the negative impacts of congestion on time, wellbeing and mental health, and safety. Participants' spontaneous associations with congestion centred on negative emotions and stress, congestion around peak times, the reduction of free time and air pollution. Participants were much less familiar with economic impacts.

At the beginning of Wave 1, participants had not considered congestion, or the measures to tackle it, in any depth before. While they believed it was important, they also often expressed feelings of resignation about congestion, often saying it is something they had just got used to planning around.

Response to information about congestion

Initially, participants typically believed that congestion was caused by things like poor city planning and roadworks. Learning that it is primarily caused by demand outweighing capacity for road space was not immediately intuitive to participants, though this was broadly accepted. As participants engaged with more information about congestion, they began to feel more strongly that it was a pressing issue to be addressed. Participants responded particularly strongly when learning more about:

- The **scale of congestion** in the UK, and how congested UK cities are **compared to other European countries**
- The **cost of congestion** to the UK economy, made more tangible when thinking about **the impact on specific businesses** e.g. delivery drivers
- **Health impacts** associated with air pollution.

How views developed

As participants learnt more, and after discussion and debate, the ways in which they judged the different solutions for tackling congestion evolved. In the first workshop discussions, participants tended to make judgements based on:

- **Self-interest:** e.g. how punitive it would be for drivers, or whether it would improve public transport or cycling (among those using each mode)
- Preferring **'carrot' over 'stick'**
- Whether the **framing was positive or negative**
- **Cynicism** about fees and any form of charging.

By the end of Wave 2, participants tended to be thinking from a more societal perspective. Rather than thinking about whether they would be able to continue to drive, participants began to think about whether measures would encourage them to change their own behaviour.

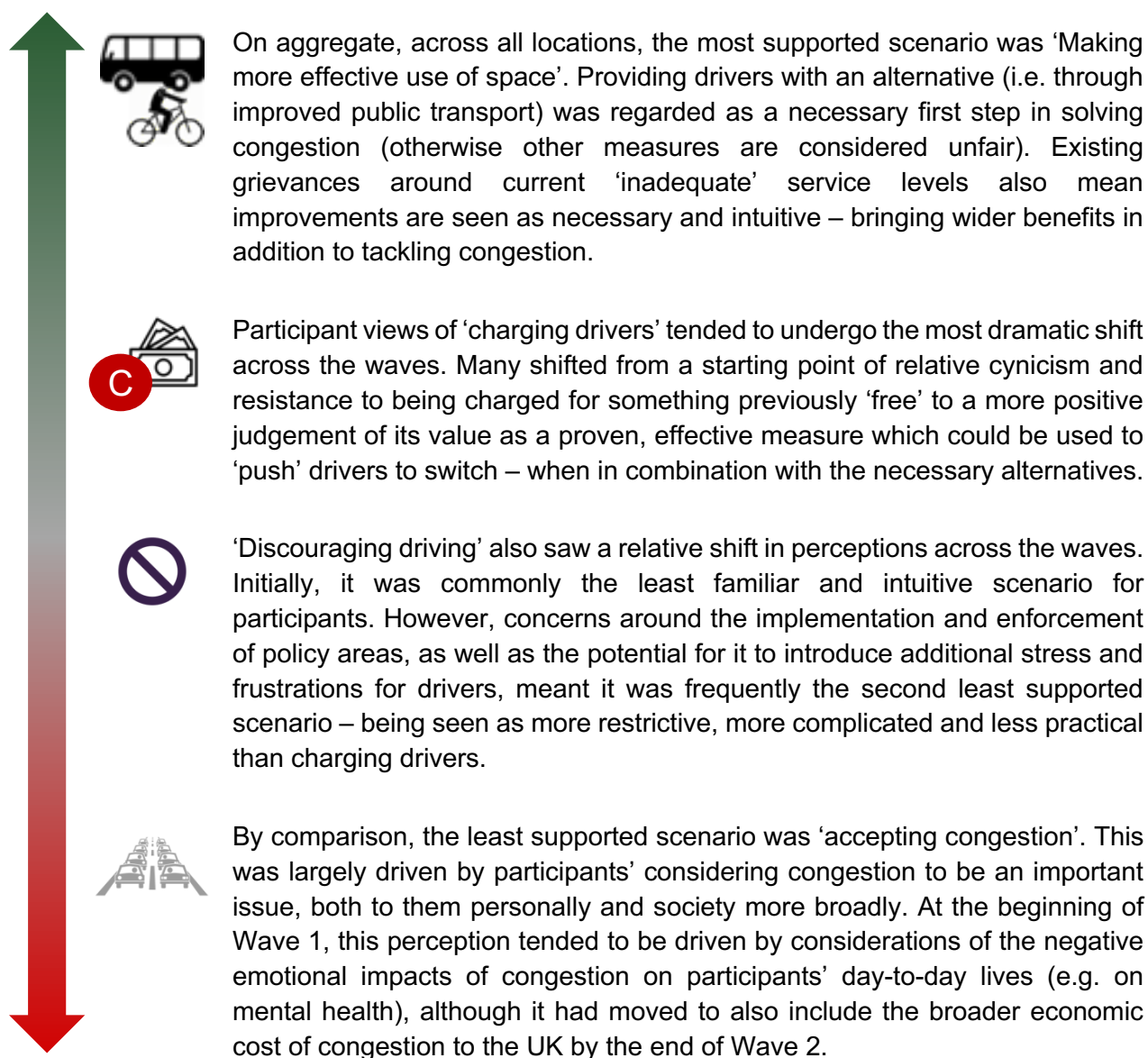
How participants judged measures to tackle congestion

Decisions around preferred scenarios and policy levers to tackle congestion by the end of the second day of the workshops tended to be based on:

- How **intuitive and practical** the measure felt to participants:
 - Particularly sensitive to perceived implementation and enforcement issues which might lead to:
 - some drivers 'gaming the system';
 - displacement of the problem elsewhere;
 - poor or inefficient implementation.
 - Valuing measures with some degree of simplicity, or compelling case studies, which they could visualise working practically in the real world.
- **Perceived efficacy** of the measure, both in terms of:
 - Likelihood to lead to reductions in congestion (i.e. in percentage terms); and
 - Likelihood of getting participants to reconsider or change their own behaviour.
- How **fair** the measure was felt to be:
 - For certain groups who may be particularly disadvantaged; and
 - Whether they felt punitive for drivers.
- Infringement on **freedom of choice** (less common criterion used by some drivers)

Responses to measures for reducing congestion

On the second day of workshops, participants were asked to judge four scenarios for tackling congestion, having been presented with a number of policy ideas under each. The order of the measures reflects the relative ranking, on aggregate across all participants and locations.

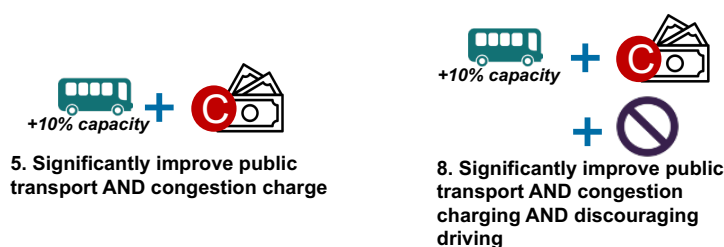


Responses to solutions packages for reducing congestion

Participants also judged which solutions or combinations of solutions they would most support. There were two common factors that emerged when participants selected their most preferred solutions for tackling congestion:

1. Solutions with **improvement of public transport at their core**
2. Importance of combining/balancing **incentivisation with deterrence**

The most supported solutions were:



These measures tended to be selected together because of improved efficacy (as improving public transport alone was not considered adequate to shift behaviour), and because the revenue raised by charging could go some way to funding public transport improvements.

On the whole, the fact that public transport improvements came with increased cost to the taxpayer (presented as £300-400 per household, per year) did not drive reconsideration of improving public transport as a solution. This was due to perceptions of investment being a tangible social good, and a necessary improvement of current provision.

By comparison, the least preferred solutions tended to be those that:

1. Did **nothing to improve congestion**, or
2. Introduced **only punitive measures for drivers**, with no alternatives, incentivisation or broader social benefits.

‘Doing nothing additional’ was the least preferred solution, being picked as the top solution by just two participants and as the least preferred solution the highest number of times.

Principles for tackling congestion

The most widely supported principles reflected participants’ support for congestion charging by the end of Wave 2, as long as safeguards are taken seriously, and that alternatives to driving are in place before charging is introduced.

In particular, participants across all three locations prioritised balancing charges against benefits, or ensuring they were reasonable for working people. In addition, participants supported the idea of ring-fencing revenue raised from charging; for improvement to transport infrastructure or public transport.

While most saw the need for drivers to shift modes, on the whole there tended to be some agreement that funding of alternatives to make this possible was everyone’s responsibility (i.e. taxpayers funding public transport improvements).

3. Unprompted views of congestion

Summary

This section explores participants' spontaneous views about congestion, before engaging with any information, including their top-of-mind associations with congestion, their current experience of congestion and their views about whether they regard it as an important issue to address.

Key findings:

- 1. Top-of-mind associations with 'road congestion' tended to be focused on negative emotions, with participants frequently mentioning stress, anger and frustration. The impact of congestion on people's personal time, specifically to spend time with family, was also front of mind.*
- 2. Many participants reported experiencing congestion regularly, mostly during peak times. Transport mode, frequency, and whether they had to travel at peak times affected how personally affected participants felt they were by congestion.*
- 3. Planning around congestion was become a daily reality for many. Factoring extra time into journeys or leaving home for work very early in the morning were fairly common, and some participants mentioned more significant measures such as turning down work or changing jobs as a result of congestion.*
- 4. Participants spontaneously identify the main impacts of congestion including on their health, time, safety and wellbeing.*
- 5. Most participants said they thought congestion was very or somewhat important to reduce from a personal perspective, but even more important from a societal perspective. Despite this, some participants describe a sense of resignation around the issue, having adapted to its impacts over time.*

3.1. Associations with congestion

We asked participants what they associated with the term 'road congestion'. This exercise was designed to gather their top-of-mind thoughts and feelings about congestion.

While spontaneous associations with road congestion were varied, they were almost exclusively negative. In particular, participants frequently began by talking about negative emotions that they associated with congestion.

Common themes emerged from participants' associations with congestion, including:

- **Negative feelings and emotions** including stress, anger, frustration, ‘road rage’, sadness, anxiety, uncertainty, bewilderment, helplessness, and poor mental health.
- **Congested places around peak times**, frequently including motorways, as well as routes and roads used by large numbers of commuters, school runs and areas with road works or road closures.
- **Temporal impacts** including being late for important things such as work and medical appointments; unpredictable journey times and delays.
- **Other negative impacts and experiences** including air pollution, traffic jams, drivers sitting in traffic on their phones, and dangerous and reckless driving (linked to the frustrations caused by congestion).

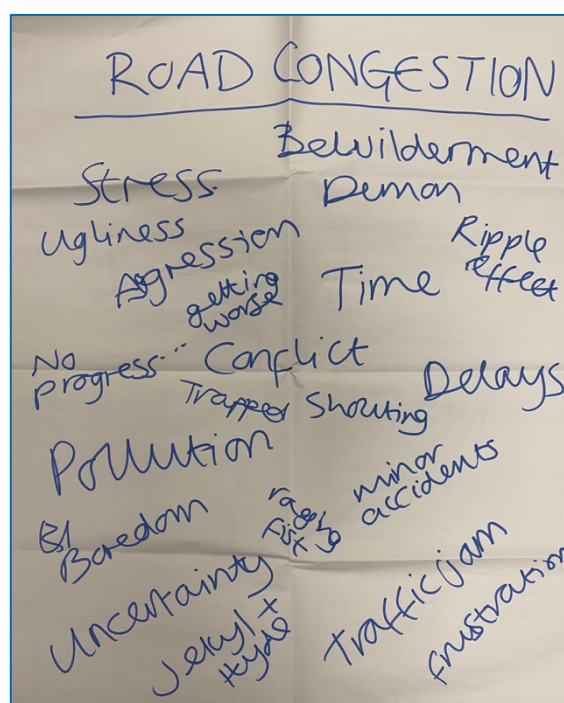


Figure 1. Initial flipcharted associations with the term ‘road congestion’. Showing flipcharted responses for one table.

“As soon as you get into your car and things happen, you turn into something else – like Jekyll and Hyde.” – Bristol participant

“My daughter has just been born and now I still have to leave the house early. Not getting to see her in the mornings, just so I can get out earlier, and that’s upsetting.” – Manchester participant

3.2. Experiences of congestion

Participants often said they experience congestion regularly, i.e. on a daily or weekly basis, with some experiencing congestion more than once a day.

Those experiencing it at least once a day were travelling daily during peak times (either commuting to work or on the school run). These were mainly high-frequency drivers and public transport users, plus a few cyclists.

“Between 4.30pm-6pm, a 10-minute journey can take you 45 minutes.” – Nottingham participant

A small number who typically travel outside peak hours (e.g. students, those with flexible working hours and retirees) said they experience congestion less regularly or rarely.

Some participants (regardless of whether they travelled during peak or off-peak times) mentioned experiencing congestion at times when roads were closed due to accidents or roadworks – key factors believed to cause congestion during initial discussions.

In each location, there were also some contextual factors mentioned by participants that could have affected their experiences and views of road congestion (see table below)¹.

Location	Contextual factors relating to congestion commonly mentioned
Nottingham	<ul style="list-style-type: none"> • Lots of roadworks and infrastructure improvements seen to be happening at present <ul style="list-style-type: none"> ○ This meant some participants were generally very focused on roadworks and general city planning as a cause of congestion • The Workplace Parking Levy is seen by some to have displaced the problem with people driving around the city centre to find parking spaces leading to more congestion
Manchester and Bristol	<ul style="list-style-type: none"> • Motorways outside the city are seen to be connected to congestion going into the city centre • There is a perceived lack of direct routes for public transport going across the city centre, requiring multiple bus journeys • Public transport seen as very slow and unpredictable
Manchester	<ul style="list-style-type: none"> • While people were positive about the tram network, services were often described as overcrowded or too infrequent

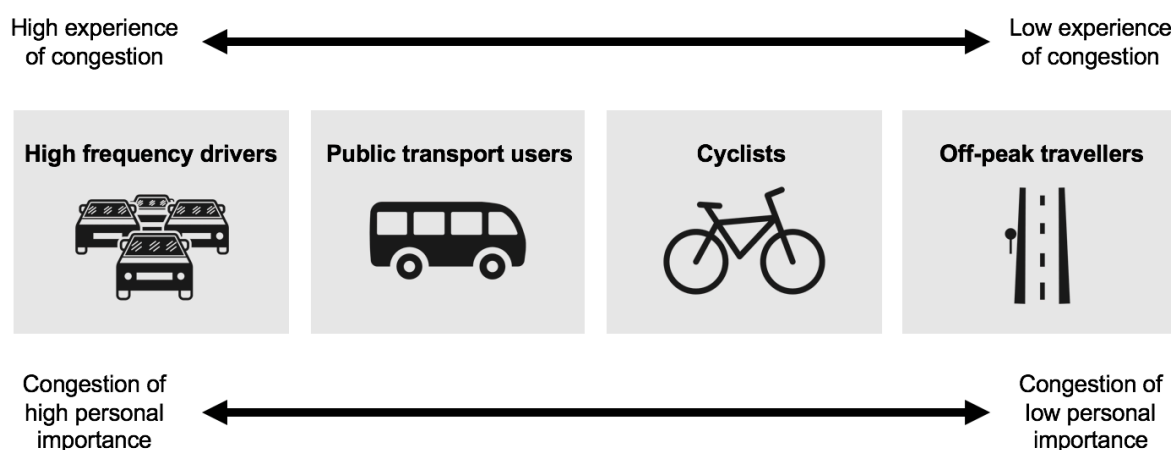
¹ The factors presented in the table are those that were commonly referenced by participants in each location. They are not intended to be comprehensive in terms of representing all the factors relating to congestion that are unique to each location.

Table 1. Specific contextual factors participants mentioned in relation to congestion that could affect how they thought about congestion.

Beyond their location, each participant who attended the workshops had a different and unique experience of road congestion. These experiences were largely shaped by three factors:

- Travel frequency;
- Time of travel;
- Mode of transport.

Among participants, these three factors typically (but not always) interacted to produce the following groups:



- **High frequency drivers (travelling at peak time)**
 - There were a range of experiences of congestion reported within this group:
 - Some focused on the time congestion added to their daily commute (e.g. a journey that should take 15 minutes on a 'good day' taking 40 minutes in a congested period) and others focused on the total time spent in congested traffic in a given time period e.g. several hours a week.
 - Some mainly experience congestion on motorways running into roads within the city centre on their commute to work, whereas others were experiencing congestion on local roads as well during the school run.
 - This group typically experience the temporal and wellbeing impacts of congestion (e.g. lateness, stress etc.) very strongly.

- Despite feeling congestion is an important issue, it was not unusual for participants within this group to say they are relatively resigned to congestion as an issue due to having adapted to its effects over time.
- **Public transport users (travelling at peak time)**
 - Very focused on issues with public transport system including high cost, unpredictable and delayed services, and too few services.
 - Because of this, many in this group attribute the negative impacts of congestion they experience (particularly temporal and wellbeing impacts) to low-quality public transport services generally.
- **Cyclists (travelling at peak time)**
 - Cyclists' experience of congestion is more varied compared to high frequency drivers or public transport users:
 - Some focus on the air pollution and safety impacts of congestion, which means they see congestion as affecting them on a daily basis.
 - Others feel that because they do not experience the temporal impacts of congestion (because they are able to 'weave' around traffic) that they have a low experience of congestion overall.
- **Off-peak travellers (mix of modes)**
 - Those who travel at off-peak times or less regularly (e.g. those who work varying or flexible hours, some students and some retirees).
 - As a result of having a low experience of congestion, these participants tend to be less focused on most of the impacts of congestion in initial discussions – with the exception of air pollution which is seen to impact everyone.

Participants were often surprised to hear about how many of them experienced congestion, and the extent of delays experienced by a few individuals in the workshops.

Despite differences in how much people experienced congestion, most participants were familiar with, and therefore able to pinpoint, the most congested roads in their city and local area. This was true even for those whose personal experience of congestion was low. There was also a commonly expressed view that congestion had gotten worse over the years, but at the same time, a sense that people had become accustomed to congestion.

"I've been driving the same route for 10 years and it hasn't improved, it's gotten worse if anything." – Bristol participant

“I am a musician; I don’t travel at rush hour. So, I don’t see it [congestion] as much.” – Manchester participant

It is worth noting that it was common for non-driver participants, particularly students who were currently public transport users or cyclists, to aspire to become drivers in the future. These participants predicted that their experience of congestion would become higher once they became drivers.

From discussions about experiences of congestion it also became clear that planning around congestion had become normalised and was taken for granted as part of managing everyday life. Actions mentioned by participants for planning around congestion included:

- Factoring extra time into journeys and / or leaving home very early;
- Taking longer routes that are less congested (which are therefore predictable);
- Utilising working from home or flexi-time options with employers.

“I try to avoid it [congestion]...I go out before 7am. I work around congestion with my actual daily routine, I’ve got flexi-time so I’m quite fortunate.” – Bristol participant

Less commonly mentioned but more extreme examples of planning life around congestion included:

- Altering work hours permanently;
- Changing jobs.

It was not always immediately clear to participants what changes they had made in their lives to plan around congestion. As discussions progressed, some participants would be struck with how some of their life choices had been indirectly influenced by high congestion – for example, deciding to go to certain schools or turn down certain jobs because they had judged the travel time would be too high.

“Truthfully, and I didn’t say or think this before, I have changed my hours...I work from 12.30pm – 9pm and this has less impact on my life journey wise, and sometimes, I can work remotely, and I do that.” – Manchester participant

Impacts of congestion

Very early on in the workshops, participants spontaneously identified the main impacts of congestion and could list a relatively wide range of direct and indirect impacts of congestion.

Particularly front of mind were:

- The impact on their personal time, most commonly lateness for work and personal commitments;

- The impact on their wellbeing and mood;
- The impact on their health from air pollution;
- The impact on their safety (specifically thinking about reckless driving caused by the frustrations of congestion).

The compression of **personal time** loomed large – including time wasted, lateness (especially for important appointments) and having to change or reschedule plans. Participants felt that the ‘knock on’ impacts on family, social and leisure time were significant – participants recognised they spent less time doing what they wanted to do, and more time travelling.

“You don’t do other things, like it takes me ages to get to the gym even, like an hour to and from, it [congestion] just really stops you.” – Manchester participant

“We were saying it’s an inconvenience, but more than that you spend more time commuting. The reason you work is to have quality time with your family and have a good life. If you’re always in the car that’s bad.” – Manchester participant

The reduction of personal time was seen to feed directly into negative impacts on **wellbeing and mood**. Feelings of stress, anger and frustration were commonly mentioned, and participants anticipated (or had experienced) feeling more ‘road rage’ and conflict on the roads, linked to congestion. Occasionally, participants suggested that older people may choose not to travel as a result of congestion, which could lead to increases in social isolation or loneliness.



Figure 2. Posters of direct and indirect impacts from Bristol (left) and Nottingham (right).

Participants were often concerned about the personal health impacts of **air pollution**, which were felt to have worsened in recent years. Participants referenced other countries where levels of air pollution were seen to have gotten far too high, such as China. Air pollution was

felt to negatively impact everyone in cities, but particularly cyclists and pedestrians as it was assumed they would be more exposed to polluted air.²

“Look at Beijing, the pollution is affecting people’s health. I think we are probably much closer to that than we think.” – Manchester participant

“They say living in London when you’re young is the same as smoking 200 cigarettes in a year.” – Nottingham participant

Some participants were concerned with the **safety** impacts. These were a particularly strong concern for cyclists who felt drivers behave less safely on the roads during congested periods due to being in a rush and feeling stressed.³

“It’s the danger congestion puts me in, lots of people are in a rush and not paying attention all the time, anticipation is a problem when I’m cycling.” – Nottingham participant

The **cost to the economy** was much less front of mind, though a handful of participants referenced broader societal impacts such as ‘time lost’ to the economy, ‘reduced productivity’, or self-employed people being able to make fewer trips in a single day. The impact on personal finances and the increased amount spent on fuel was also mentioned by some participants who experienced congestion regularly or more intensely.

“If you’re a lorry driver it affects how many jobs you can do in a day, so I do think it’s a major issue.” - Nottingham participant

People in cities and those who travel during peak hours (including commuters and schoolchildren or parents) were initially felt to be most impacted by congestion, due to experiencing it most regularly.

“Professionals and commuters are affected.” – Manchester participant

“All the people coming and going at work times, like me [are most affected], I go to college and travel at the same time, it’s just the rush hour.” – Manchester participant

3.3. Importance given to congestion as an issue

In table discussions early on in the workshops, most participants said they felt road congestion was a significant issue due to the negative impacts which they felt had become part of daily life for people. Participants with a low personal experience of congestion tended to focus more

² Medical evidence points to car occupants being affected worse, because the car environmental control systems concentrate pollutants which cannot be filtered out.

³ Whilst not spontaneously brought up by cyclists, some drivers anecdotally referred to the reverse being true as well – with cyclists undertaking unsafe manoeuvres to ‘cut through’ congestion.

on it being an important issue for society more broadly. It was also common to reference how congestion negatively impacted friends and family members if not them personally.

These discussions reflect participant responses to the worksheet completed at the start of the workshops, with most participants saying they thought congestion was very or somewhat important to reduce from a personal perspective, but even more important from a societal perspective.

How important do you think reducing road congestion is for you personally?				
	Bristol	Manchester	Nottingham	All
Very	16	10	11	37
Somewhat	6	10	6	22
Not that	2	2	3	7
Not at all	-	-	-	-
Don't know	-	-	-	-
How important do you think reducing road congestion is for the country?				
	Bristol	Manchester	Nottingham	All
Very	20	14	17	51
Somewhat	4	8	3	15
Not that	-	-	-	-
Not at all	-	-	-	-
Don't know	-	-	-	-

Table 2. Summary of responses to pre-workshop worksheet (completed at the start of workshop 1) from all locations.

Despite congestion being seen as an important issue and there being general agreement that it should be reduced, during discussions there was also some sense of resignation to it.⁴ Some participants articulated that they had gotten used to it worsening over time and had adapted to planning around it in their daily lives. Several compared it to 'the British weather' – an issue that gets people 'worked up' but around which there is a degree of acceptance.

And for some, particularly those who drive regularly in peak periods (such as commuters), despite longer journey times, driving was still seen as the most convenient option. Some

⁴ This dual finding of 'concern but resignation' is consistent with previous work, for example: Goodwin, P., Cairns, S., Dargay, J., Parkhurst, G., Polak, J., & Stokes, G. (1995). *Car Dependence*. Report to RAC Foundation for Motoring and the Environment, RAC, London.

drivers said they felt the negative impacts of congestion did not outweigh the benefits of driving for them personally, such as comfort and convenience. In most cases, these participants did have access to alternatives (such as buses or trains).

For many, though not all, this sense of resignation around congestion subsided during the second workshop as they began to learn more about the different solutions for tackling congestion. The view that congestion should not be something people stay resigned to became more common over the course of discussions.

4. Learning about congestion

Summary:

This section explores what information particularly stood out to participants when they were shown key facts about congestion, its impacts and what types of people it might affect. It also looks at some ways in which the public think about congestion and gives a brief summary of how views changed across the workshops.

Key findings:

1. *Many participants were surprised to learn about the scale of congestion in the UK. In particular, information on the cost of congestion to the UK economy and how congested UK cities are compared to others around the world particularly stood out and tended to increase the perceived importance of congestion as an issue to address.*
2. *The information about the current state of congestion in the UK made many participants feel more negative about the issue and question why there was not more being done by authorities to tackle congestion.*
3. *There are several ways in which general public participants thought about congestion that differ from the expert or policy perspective. Key assumptions and misconceptions that participants tended to have difficulty moving on from, even when shown evidence to the contrary, included:*
 - a. *Perceptions that congestion is caused by other factors besides demand for road space outweighing capacity, particularly poor city planning and roadworks.*
 - b. *Assumptions that people can easily relocate to avoid congestion.*
 - c. *The 'true costs' of driving tending to be under-estimated.*
 - d. *Measures for reducing driving being assumed to be 'all or nothing': i.e. designed to deter drivers from all journeys by car.*
 - e. *Assumptions that congestion could be solved by increasing road space.*
 - f. *Perceptions that the congestion charge is ineffective as a method of tackling congestion – with continued high road congestion in London being proof of this.*
4. *Whilst participants felt congestion was an important issue, they tended to focus initially on personal preferences and measures which would have a more limited impact, or direct benefits, on them personally. By the end of workshop 1, participants had learnt about the drivers of congestion and were better able to identify the wider socioeconomic impacts of congestion, meaning they started to engage more closely with a 'societal' perspective, rather than their personal point of view. This means they were more often thinking from the perspective of other groups in society (for example, small businesses, couriers and those with health conditions), thinking about who needed to take responsibility (including themselves) and how these specific groups should be considered in measures.*

5. *There were also some significant shifts between Waves 1 and 2 in how participants judged the scenarios (explored in detail in 4.1.2). One of the most noteworthy shifts in views between Waves 1 and 2 was in attitudes towards and support for charging drivers, which initially tended to be seen as an ineffective and unfair way to tackle congestion.*

4.1. What information on congestion most stood out to participants?

During workshop 1, we introduced information covering the current state of congestion in the UK, including its definition, where it happens, and the key causes of congestion. We also provided information on the impacts of congestion and some ‘pen portraits’ to illustrate how it might impact different types of people.⁵

From the information shown, the key facts that stood out to participants were:

- **The financial cost of congestion to the UK economy.** This was not something many participants had considered beforehand, and whilst there was a vague awareness of congestion wasting time and costing individuals and businesses financially, they were shocked to learn the estimated cost of £7.9 billion to the economy. Learning about this cost made some participants begin to see congestion as an issue for ‘society’ more broadly rather than just for themselves personally.
- **How highly congested UK cities are compared to others around the world, particularly other European cities.** We showed participants the INRIX congestion scorecard and whilst there was already a sense of congestion being an issue in the UK, participants were surprised to see how badly congested some UK cities are compared to others in Europe who are felt to have similar resources and infrastructure to UK cities (e.g. France and Germany).

“What are Europe doing that we’re not? You think we’re like America, we’re ahead of everyone but we’re not.” – Manchester participant

“I personally have always accepted congestion as a way of life, I’ve been shocked to see on a national and international basis how other countries are not suffering the same congestion.” – Nottingham participant

- **That congestion in towns and cities is seen as a serious problem by only around half of the public, according to the British social attitudes survey (2017).** The survey found just 56% of the public see congestion as a serious problem, and some participants saw this as evidence that most people accept

⁵ Please see the appendix for the full set of the stimulus materials (pp.93-113).

congestion as part of daily life and are largely unaware of its true scale and wider impacts.

- **Information on the health impacts of congestion.** Some participants commented this made them see how serious these impacts were, particularly how air pollution affects pregnancy, children and the elderly. Concerns around air pollution were particularly strong in Bristol specifically, and therefore this information tended to elicit a stronger reaction from participants.
 - Many drivers were particularly surprised to learn that air pollution affects drivers as much, if not more, from inside their vehicles as it does those outside i.e. cyclists and pedestrians. This made these drivers feel congestion was impacting them in more ways than they had realised previously.
- **The idea that congestion impacts everyone in society either directly or indirectly and the different ways this can ‘cost’ individuals.** We showed participants a series of pen portraits and participants were surprised by the breadth of people impacted by congestion in different ways. In particular the delivery driver losing out due to missed appointments was not a perspective many had considered before. This made them think of the financial, professional and social cost for self-employed people who rely on appointments.

Once they had learnt more about the current state of congestion in UK cities, most participants also found it easier to see congestion as a ‘cost’ of cities which also have many benefits to them (that participants were already conscious of).

More generally, many also said the information made them feel more negative about the issue and question why more wasn’t being done by authorities to tackle congestion.

“One of the justifications [of congestion] was UK cities being old – but there are other European cities that are old and I’m wondering why the UK Government hasn’t done more.”
– Bristol participant

After seeing background information on congestion, there were several areas of questioning that commonly emerged for participants:

- *How is congestion and the impacts of congestion (e.g. economic impact) measured?*
- *Why is the UK doing so badly compared to other (particularly European) countries?*
- *What is the UK Government doing to address this issue? How much are they spending currently on addressing road congestion as an issue?*

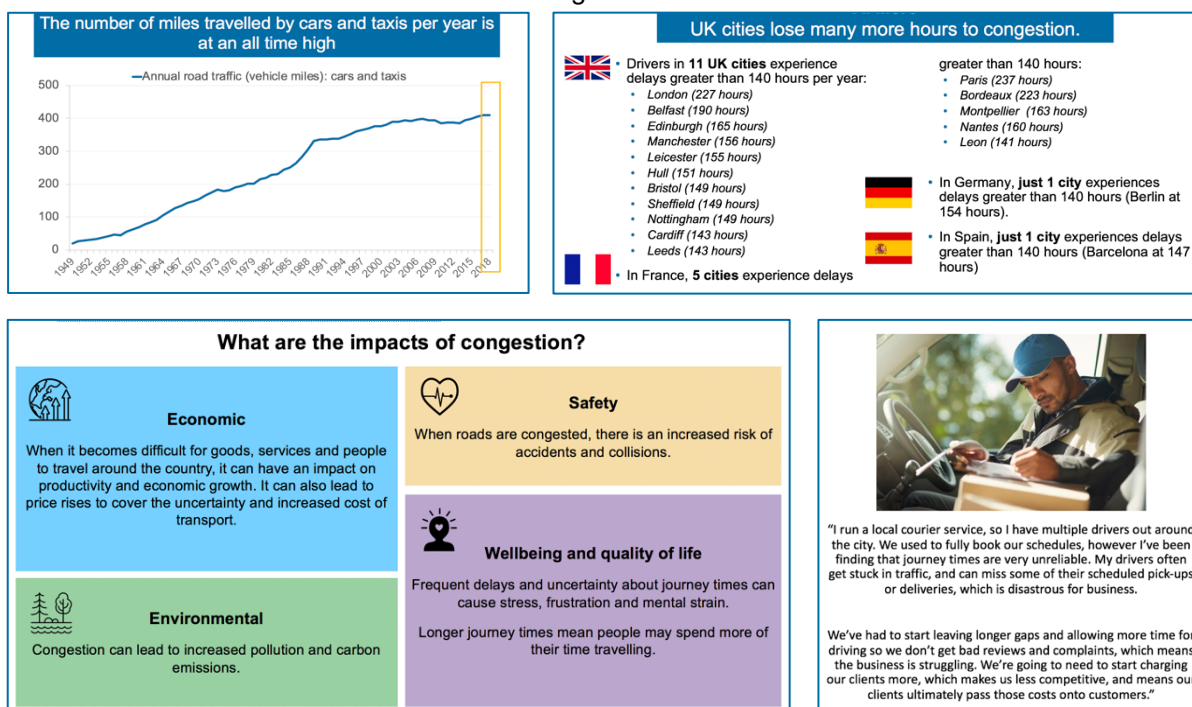


Figure 3. Some examples of information on the current state of congestion and on the impacts of congestion presented to participants.

4.2. Ways in which the public think about congestion

There are a number of ways participants spontaneously thought about congestion that differed from the 'expert' or policy-maker perspective. These ways of thinking about congestion were evident in participants' difficulties digesting or processing certain pieces of information, or where information appeared to challenge an existing view or belief, or through analysis of their responses. Key misconceptions or assumptions included:

- **A common perception that congestion is caused by other factors besides demand for road space outweighing capacity, particularly poor city planning.**
 - Many participants became fixated on roadworks and general poor city planning and/or inadequate infrastructure as the main cause of congestion and were shocked when informed at the start of the second workshop that TfL's modelling shows just 7% of congestion is caused by road or street works.
 - Participants' continued belief in the 'intuitive' causes of congestion also became clear when participants suggested their initial ideas for tackling congestion. For example, some participants questioned and suggested changes to:
 - Traffic lights and speed limits, particularly on junctions and roundabouts.
 - Road works appearing to be badly planned or timed, so several key roads are unusable at the same time.

- A smaller number of participants also challenged the logic and value of businesses being located in city centres.
- **Assumptions that people can easily relocate to avoid congestion.**
 - Though there was generally empathy for others experiencing very long journey times caused by congestion, a view that emerged several times during initial discussions was that people could choose to change jobs or move home if congestion became very high. The idea that relocating may be difficult for social or economic reasons was not front of mind.⁶
- **The ‘true costs’ of driving not being front of mind for participants.**
 - Particularly when talking about the costs of driving compared to those of public transport, many participants primarily thought about the immediate financial costs of driving (e.g. fuel and parking costs), rather than the wider costs of car ownership (e.g. the cost of the car, maintenance, and road tax).
 - Participants did not instinctively consider the ‘true costs’ of driving from a societal perspective and factor these into their calculations around the costs of their journeys, for example the costs from air pollution-related health issues or from temporal impacts such as lateness for work.
- **Measures for reducing driving being seen as ‘all or nothing’.**
 - Drivers initially tended to take an ‘all or nothing’ view, seeing punitive and restrictive measures as applying to all car journeys, despite framing around peak times and places. It took some time for drivers to see that measures aimed at reducing congestion did not aim to ban all journeys by car, including those they would consider ‘essential’, but rather intended to encourage modal shift at certain times and in certain places.
- **Assumptions that congestion could be solved by increasing road space.**
 - It was difficult for some participants to grasp or accept that building more roads or making roads wider would not solve congestion as it felt counter-intuitive to them. A handful of participants returned to this idea when discussing solutions, although most participants had moved past this by the Wave 2 workshops.

⁶ It is likely that the rigidity of the UK housing market causes people to commute further than in some other countries, which imposes more traffic on the road network in the UK.

- **The congestion charge being seen as an ineffective method of tackling congestion.**
 - During the Wave 1 workshops, many participants were under the impression that the congestion charge was not effective as a measure for reducing congestion, and that in London this had not worked because the roads still appeared busy. This is explored further in section 4 of this report.

4.3. Overall changes in views

There were some key shifts in views between the start and end of workshop 1:

- Although participants already viewed congestion as an important issue for the UK as a whole before taking part in the workshop (as captured in the pre-workshop worksheet), the information shown to them during Wave 1 prompted participants to think about road congestion from a societal, rather than a purely personal, point of view and reinforced the sense that this was an important issue to tackle for the benefit of all. This was largely due to:
 - Learning about the scale and severity of road congestion in the UK;
 - Learning about how road congestion impacts lots of different people in society, particularly people in different circumstances to themselves.
- Participants had learnt more about the drivers of congestion – that it is caused by more cars on the road than there is space for, rather than predominantly caused by roadworks and accidents.

“This has made me see I’m not the only one, congestion is an issue that affects everybody.”
– Bristol participant

There were also some key shifts in how participants were thinking about congestion between the Wave 1 and 2 workshops:

- During Wave 1, participants were judging the scenarios largely by ‘gut instinct’ and were more self-oriented. By Wave 2, participants were more commonly judging scenarios based on how practical, effective and fair they felt, and undertook a more societal perspective.
- During Wave 2, participants were much more positive about charging drivers overall as a method of tackling congestion, compared to Wave 1.
- On the whole, by Wave 2 participants had shifted from thinking about whether measures would influence *other people’s* behaviour (i.e. to encourage modal shift), to whether it would shift their *own* behaviour.

- The differences in attitudes and support for measures between different key groups (for example, drivers and public transport users) also became less distinct as they moved to assessing what would work for society more broadly, rather than focusing on their own personal preferences and measures which would reduce the overall impact, or have the most benefit, on themselves personally.

These shifts in behaviour are described in greater detail in the following section.

5. Responses to high-level scenarios for reducing congestion

Summary

*This section explores participants' responses to the four scenarios we introduced as potential measures for tackling congestion, including their **initial views** at the end of Wave 1 and their **more considered responses** after exploring the scenario in detail in Wave 2.*

The four scenarios explored were: 'Making more effective use of space'; 'Charging drivers'; 'Discouraging driving'; 'Accepting congestion'.

Key findings:

- 1. The overarching ways participants judged measures were by thinking about their practicality, efficacy and fairness. In the first instance, measures needed to be relatively intuitive to enable consideration and debate. Participants then wanted measures that balanced fairness to drivers (especially those on a low income) on one hand, with efficacy on the other – with particular consideration given to any proven success of previous trials.*
- 2. 'Making more effective use of space' was the highest ranked and scored scenario – although most, particularly frequent drivers, tended to be thinking exclusively about improving public transport rather than walking or cycling. Providing drivers with an alternative (i.e. through improved public transport) was regarded as a necessary first step in solving congestion (otherwise other measures are considered unfair). Existing grievances around current 'inadequate' service levels also mean improvements are seen as necessary and intuitive – bringing wider benefits in addition to tackling congestion. However, by the end of Wave 2, participants tended to recognise that improvements in isolation, without disincentives like charging, would lack efficacy.*
- 3. Most participants rejected the scenario of 'accepting congestion', due to the impact of it on their day-to-day lives and wider society. At the beginning of Wave 1, this perception tended to be driven by considerations of the negative emotional impacts of congestion on participants' day-to-day lives (e.g. on mental health), although it had moved to also include the broader economic cost of congestion to the UK by the end of Wave 2.*
- 4. Participant views of 'charging drivers' tended to undergo the most dramatic shift across the waves. Many shifted from a starting point of relative cynicism and resistance to being charged for something previously 'free' to a more positive judgement of its value as a proven, effective measure which could be used to 'push' drivers to switch – when in combination with the necessary alternatives.*
- 5. 'Discouraging driving' also saw a relative shift in perceptions across the waves. Initially, it was commonly the least familiar and intuitive scenario for participants. However, concerns around the implementation and enforcement of policy areas, as well as the potential for it to introduce additional stress and frustrations for drivers, meant it was frequently the second least supported scenario – being seen as more restrictive, more complicated and less practical than 'charging drivers'.*

5.1. How participants judged the scenarios

5.1.1. Initial judgements in Wave 1

When participants were first introduced to the high-level scenarios, without any supporting evidence or case studies, there were particularly strong ‘gut-instinct’ reactions to some of the base concepts.

Measures including an element of fees or charging tended to attract very vocal negativity and often outright rejection from participants. This was largely driven by it being judged to be **punitive** in nature as well as **cynicism** over the purpose and use of funds raised. A lack of knowledge about how charging schemes might be implemented meant that some participants felt their function would be to generate profits (for private companies) or extra general ‘tax’ revenue (for a government body).

- Those driving as part of their commute were particularly vocal about their frustrations with measures that would have personal financial implications and potentially restrict their choices. Whilst public transport users and less frequent drivers were less vocal, they still frequently voiced concerns about fairness and were also generally opposed to the introduction of new fees.

“There will be people who can’t pay the fee. A congestion charge could lead to a two-tier system in society – those who can and those who can’t pay.” – Bristol participant

Initially, there was also resistance to measures which were **framed negatively**, for example, focusing on disincentivisation rather than incentivisation:

- Initially, participants frequently called for greater emphasis on incentivisation and encouragement in the measures tackling congestion, whereas negatively framed measures were seen to be punishing drivers.
- Connected to this, there was frequent vocal support for the ‘making more effective use of space’ scenario – as the only concept framed positively and focused on improvements.

An existing misconception around charging drivers being **ineffective**, due to perceptions of London roads remaining busy despite the congestion charge also coloured table debates and judgements at the beginning of Wave 1.

- These misconceptions were directly challenged by experts at tables, during the Wave 1 Q&A and during the introductory session to Wave 2 – which led to more informed judgements and discussions at the end of Wave 1 and in Wave 2.

Initial reactions to the scenarios when first introduced also tended to be **relatively self-oriented**, rather than considering the broader impacts and benefits for society:

- Frequent drivers tended to focus on judging scenarios by their **impact on drivers** – both in terms of costs and choice.
 - This view had commonly shifted amongst drivers by the end of Wave 2, as they considered the broader benefits to society and nuances of the measures (e.g. set times) – although a minority retained this attitude.

- Those using public transport or cycling were more focused on thinking about making their current journeys better, so tended to judge scenarios on **how, if at all, they would improve public or active transport** in their city. This made some, particularly cyclists, more ‘pro-charging’ to reduce the number of cars on the road – although there were commonly still many sympathies with the needs of those who commute by car.

5.1.2. More considered judgements in Wave 2

By the end of Wave 2, as they engaged with the more detailed scenarios, case studies and pen portraits, participants developed a deeper, more informed process for judging and selecting measures. The differences between key groups (for example, drivers versus public transport users or cyclists) also became less distinct, as they began to make judgements based on broader society, rather than focusing solely on their personal preferences.

There were four key ways in which participants judged the scenarios by the end of Wave 2:

1. **How intuitive and practical the measure felt to participants**
2. **Perceived efficacy of the measure**
3. **How fair the measure is:**
 - **For certain groups who may be particularly disadvantaged;**
 - **And how punitive for drivers.**
4. **Infringement on freedom of choice (less common view)**

These are explored in detail below:

1. How intuitive and practical the measure felt to participants:

The measures which participants felt were most straightforward or easy to grasp as a concept for tackling congestion tended to be the ones they considered most and judged to be better. Measures which participants were able to pick holes in, flag potential problems with, or which they found overly complicated were often judged less positively. For example:

- With high occupancy lanes and restricted access, concerns around drivers ‘**cheating**’ or ‘**gaming the system**’ were frequently voiced and seen as integral problems that would undermine the measures.
- There was a very **low tolerance for the possibility of poor or inefficient implementation** judged likely to further contribute to congestion. For example, current experiences of seeing dedicated bus lanes on the roads empty influenced judgements around reallocating road space, for both drivers and public transport users.⁷

Connected to this, **simplicity** was often an underlying factor in judging measures and solutions. Measures were frequently weighed up based on how easy they were seen to be to

⁷ These views have also been observed in cases like the Liverpool bus lane removal and M4 bus lane experiment.

implement and administrate, as well as how easy they would be for drivers to understand. For example:

- Short-term implementation costs and pains (e.g. roadworks) vs. long-term benefits.
- Perceptions of how easy the measure would be to understand and navigate in practice (e.g. how easy paying a charge might be and how simple it would be to predict the charge for a journey).

A factor which influenced this overall judgement was the **existence of compelling case studies**, for understanding whether measures had been trialled or were untested or theoretical. Case studies were especially influential when the measure was shown to have been well implemented, well received or had an impact. For example:

- The fact Stockholm residents had voted to keep a cordon-based charge after a six-month trial was commonly seen as a particularly compelling reason to re-evaluate previous judgements about the measure's practicality, as it showed that the benefits eventually outweighed initial public backlash and rejection.⁸
- Participants commonly spent more time debating the area-based and cordon-based charging than time/distance/place based charging. For the latter, participants felt they needed either a similar case study to the other policies, or greater clarity about how it might be implemented. As a result, time/distance/place was overlooked or judged to be the least practical.

2. Perceived efficacy of the measure:

While the isolated impact of measures on congestion is very challenging to measure (a concept explained to participants in Wave 1), **evidence of efficacy** (e.g. statistics) was a key way participants sought to understand the usefulness of measures.

In discussions in Wave 2, references to **percentage reductions in congestion or volume of traffic** were largely seen as evidence a measure had been successful.

Participants tended to be quite **sensitive to evidence of failures**, judging this to include measures that could not evidence percentage reductions in congestion or traffic volumes, or which had displaced the problem of congestion elsewhere in the city.

- For example, the WPL was judged ineffective by some in Nottingham, as was the Walthamstow Forest case study due to displacement of congestion.

Another way that drivers implicitly judged efficacy was whether they felt measures would be likely to encourage or push them to **stop or reduce their own driving**. This more nuanced judgement represented a shift from Wave 1 (where they tended to be more focused on the behaviour of others, rather than their own) and was driven largely by a recognition of high demand being the cause of congestion (rather than external factors like city planning). As a result, by the end of Wave 2, drivers saw the need for measures to aid them in making better decisions to successfully tackle the problem.

⁸ N.B. The broader context of more common experiences of tolled infrastructure in Scandinavia and relatively small size of the charging zone.

3. How fair the measure is:

Judgements around fairness included considering different groups in society who might be disproportionately affected, as well as considerations around how punitive measures are for drivers.

By far the most frequently mentioned group when it came to judging fairness were **working people who need to commute to work**. For this group, fair measures were judged to be those that would not impede working people's ability to make a living. This included considering:

- Whether commuters would be able to travel to work with **reasonable ease** (i.e. not having to make too many changes on their route if switching to bus/train/tram).
- Whether commuters would be able to travel to work in (and at) a **reasonable and consistent time**, that they could easily predict and plan around.
- Whether the measure would introduce any **additional costs for workers**, that would cut into their earnings. Specifically considered were the balance of congestion charges or parking fees vs. public transport costs.
- Practicality for commuters who might have more difficulty replicating car journeys via alternative modes. For example, **those living in more rural areas** where public transport links are more limited in terms of availability or frequency.
- The ability of public transport to **handle additional capacity** (i.e. if current drivers are encouraged or pushed to switch to public transport).
 - This was raised by those with some existing experience of using or commuting via public transport, who felt that public transport (particularly buses and trains) already tends to be overcrowded during peak times.

There was strong sentiment against any possibility of measures leading to lateness for workers – particularly for shift and non-office workers who were more likely to talk about being penalised.

Another specific consideration within this judgement was around **how punitive measures would be to drivers**. Whilst this judgement was prevalent amongst drivers, it was often also voiced by less frequent or non-drivers – who felt measures should be proportionate to the problem and contexts/needs of local drivers.

- Amongst drivers particularly, judgements around the acceptability of punitive measures developed over the course of the workshops. Starting initially from a rejection of charging (related to fairness) to a more nuanced judgement which sought to balance fairness and efficacy.

People on a low income tended to be considered within measures which included individual fees (but not in measures based on restrictions or which had a more general tax implication). For these measures, charges that would impact everyone equally – and not have a disproportionate impact on those with a low income vs. those with higher incomes – were seen as fairer.

- For example, there were debates about whether high congestion charges would effectively price those on lower incomes off the roads, while those on a higher income could afford to continue to drive.

Connected to this, the **impact of fees on people who drive to earn a living** (e.g. couriers, plumbers) were also specifically considered, as it was felt that these groups had less of a choice over driving, meaning their needs should be taken into account.⁹

- For example, when judging area-based vs. cordon-based congestion charging, those using this judgement felt cordon would have a disproportionate and unfair impact.

Rarely mentioned within these judgements around fairness were **disabled people**, or those with a long-term health or mobility condition.

- This group tended to be raised on tables where a participant either personally had or knew of someone with a long-term physical or mental health condition. In most cases, those considering this group assumed they would be exempt from charges/driving restrictions – particularly after reviewing case studies and questioning experts.

4. Infringement on freedom of choice

Far less frequently, participants judged the acceptability of measures by the extent to which they felt it infringed on the freedom of choice to drive. This was raised by one participant in Nottingham and two in each of Manchester and Bristol. The importance of free choice was a matter of principle which remained important to them throughout the course of the deliberative exercise. In these cases, there was a rejection not only of measures that banned or discouraged driving, but also that sought to reduce it in any punitive way – i.e. charging.

In summary

The most important factors that participants used to judge were about practicality, efficacy and fairness. Ultimately, they preferred measures that felt simple, logical, effective – both intuitively and in terms of having been trialled. They wanted measures that balanced fairness to drivers (especially those on a low income) on one hand, with efficacy on the other. They wanted provisions made for those on a low income, small businesses and the disabled, all of whom may have no choice but to drive in the city centre.

5.2. Responses to four scenarios for reducing congestion

Participants were introduced to four scenarios detailing potential approaches to tackling congestion in the Wave 1 workshops. Wave 2 workshops focused on exploring each of these scenarios, including different policy examples, in more detail. Below, we explore participants' final preferences and ranking of scenarios, and their in-depth responses to each scenario in turn.

⁹ The potential for increased business productivity from reduced congestion leading to higher wages that would override any loss from the cost of charges was not considered by participants.

- Making more effective use of space was most frequently ranked as the most preferred measure participants wanted to see implemented (by just over three-quarters of participants), and 'accepting congestion' was most frequently ranked as the least preferred solution (by just under three-quarters).
- When looking at the which scenario was most frequently allocated to each ranking position, the overall ranking for all locations at an aggregate level was as follows:
 1. Making more effective use of space
 2. Charging drivers
 3. Discouraging driving
 4. Accepting congestion

Number of participants ranking in each position (all locations)				
Scenario	1 st	2 nd	3 rd	4 th
Base size	60	60	60	60
Making more effective use of space	46	10	4	0
Charging drivers	9	28	14	9
Discouraging driving	3	17	31	9
Accepting congestion	2	5	11	42

Table 3: Total number of participants placing each scenario in each ranking position across all three locations (Manchester, Nottingham, Bristol). N.B. excludes six participants' rankings (three in Manchester and three in Bristol) due to ambiguity (e.g. two different rankings written) or incomplete rankings.

It should be noted that the purpose of the ranking was to force participants to make a ranking in order to qualitatively understand how they traded-off options and made decisions, as well as provide an indication of overall aggregated preferences (though base sizes are small).

- 37 participants (out of 60) ranked 'charging drivers' as their first or second preference. Reasons given for their ranking tended to be related to efficacy of impact on congestion.
 - 30 of these 37 participants ranked 'accepting congestion' as their least preferred option.
- Seven participants (out of 60) ranked 'accepting congestion' as their first or second preference for tackling congestion. Their selections were driven by a rejection of measures which they felt impeded on freedoms of drivers or would impact them financially.
 - In six out of seven of these cases 'charging drivers' or 'discouraging drivers' were ranked as their least preferred options.

Variations by location

- There was little difference, in aggregate, between each location's first and last preferences with participants, with this reflecting the pattern described above.

- However, the preference for ‘making more effective use of space’ in Bristol was slightly more pronounced than in Manchester and Nottingham
- In Manchester and Nottingham, there was a slightly higher preference for ‘charging drivers’ than in Bristol.
 - Around 75% of participants in Manchester and Nottingham ranked ‘charging drivers’ as their 1st or 2nd preference compared to 40% in Bristol.
- In Manchester there was a lower preference for ‘discouraging driving’.
 - Less than two-tenths of participants ranked it as their 1st or 2nd preference vs. just a third in Nottingham and half in Bristol.

In-depth responses to the four scenarios are described in turn below.

5.2.1. Making more effective use of space

5.2.1.1. Initial views on making more effective use of space

Participants tended to be universally positive about this scenario and see it as an intuitive solution – public transport was frequently brought up spontaneously early on in the workshops as an alternative to driving that could reduce congestion.

The image of the amount of space taken up by people using different modes of transport (shown below) was considered persuasive by several participants and seemed to further drive the sense that public transport was a ‘common sense’ way to reduce congestion.

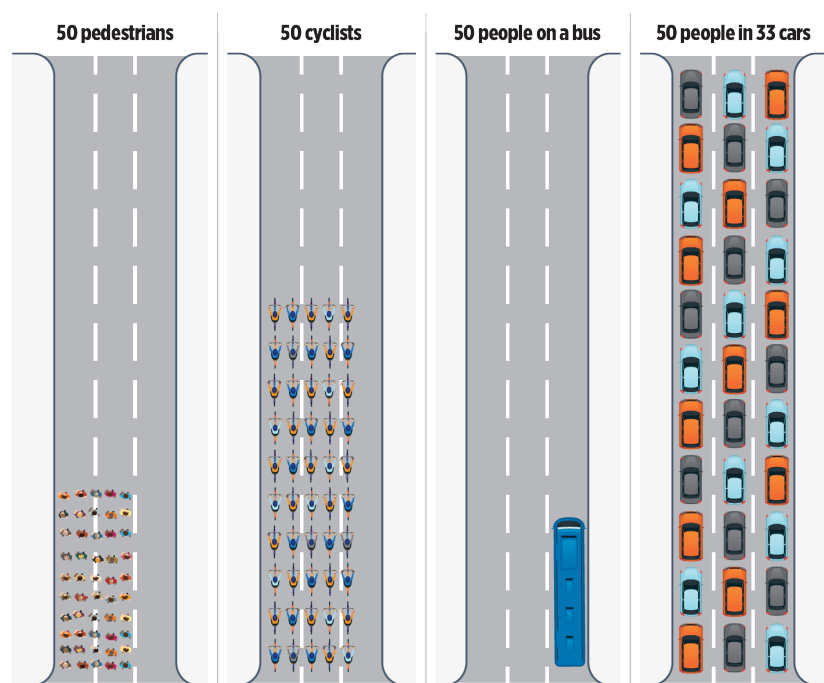


Figure 4. Graphic representing the scenario ‘making more effective use of space’

“If we showed people that image it might actually work!” – Nottingham participant

Public transport rather than active travel

However, the frequent focus of participants was almost exclusively on the public transport element, with fewer spontaneously discussing the walking and cycling elements of the scenario.

- When prompted, most of those making most of their journeys by car or public transport tended not to see walking or cycling as viable alternatives to driving, due to the distance of their commute or concerns about other factors like weather. A handful of women also brought up potential safety concerns.
- This was understandably different amongst cyclists, who tended to see cycling as a more viable alternative and spontaneously discussed additional health benefits. Cyclists tended to have relatively low expectations about how many people would switch modes of their own accord, but did tend to think that others would cycle more if there was better infrastructure, or encouragement (which might shift societal norms).

Barriers to using public transport

Public transport was brought up early in all locations as a clear alternative to driving, that could reduce the number of cars on the road, but one that many had grievances with. The main concerns around public transport that were consistently brought up centred on **cost**, **reliability**, **availability**, and **routes being inefficient**.

- **The cost of using public transport** was a key concern for most participants who drove frequently, as well as being criticised by several of those already using public transport:
 - Many felt that public transport is too expensive, and poor value for money, given current service levels. Many drivers described having calculated the cost of commuting by public transport and said their journeys would be more expensive.
 - Participants often complained about the different private bus operators in their city, which can require passengers to buy several tickets, increasing costs.
- **Reliability** of public transport, particularly trains and buses (more so than trams) was also consistently criticised by many participants and seen as a barrier to switching – particularly for commuters where delays and cancellations might make them late for work (due to there being a limited number of services per hour and/or a lack of capacity on services).
 - Strikingly, among many of those driving for their commute, there appeared to be a lower tolerance for delays on public transport than those caused by congestion whilst driving. This may be because congestion has become a planned-for fact of life for many commuters, being in a car is seen as favourable to waiting outside

for a delayed service and/or the fact public transport is regarded as a service (making it poor value for money if passengers are very delayed).¹⁰

- A few participants also criticised the reliability or lack of live public transport data – making it hard to plan for and around delays.
- **Availability** was mainly a concern for the handful of participants who lived in more rural areas outside the city. They tended to see driving as even more of a necessity due to the limited public transport options available to them (e.g. no station, limited bus routes nearby).
- **The inefficiency and inconvenience of routes** (particularly bus) was brought up by both drivers and existing public transport users as a common frustration. Both groups referred to the fact that public transport – particularly buses – focuses on getting people into the city centre, meaning that public transport journeys to and from different places in suburban regions or the outskirts of the cities take a much longer route than a car would need to, resulting in much longer journey times.¹¹
- **Other reasons** included:
 - The view that public transport was dirty, uncomfortable, and less safe than driving (especially at night)
 - Participants acknowledged that there may be some social reasons that might mean some sections of society do not use public transport (particularly buses) – this was a view more commonly raised in Manchester.

Strikingly, in Manchester, some participants (including drivers) spontaneously brought up and debated whether these factors are always genuine barriers that frequent drivers have experienced – or rather post-rationalisations used by those who want to drive.

“It’s about cost, convenience, and cleanliness. It’s just not comfortable to be on a bus.” –
Bristol participant

Differences by location

Attitudes to public transport were largely consistent across the groups, although there were some small differences:

- In Manchester, the tram was liked in principle, but seen as too infrequent and the current lines too short. Buses were frequently criticised for having a lack of efficient routes between locations outside of the city centre. The issue of cars diverting from the motorway worsening congestion on the city centre roads, including for buses, was also raised.

¹⁰ Academic studies have also pointed to this being driven by the locus of control. I.e. there is more potential to ‘take back control’ in response to a queue in a car (for example, by changing route) than on public transport.

¹¹ The UK has particularly deregulated planning system, which means there are a lot more residential suburbs and peripheral business parks than EU states with lower congestion, where high density urban living is still a norm in many places.

- In Nottingham, the extensive roadworks through the city centre were frequently raised as a concern – seen as causing buses to be very slow. There was also frequent criticism of bus and cycle lanes which take up road space being empty for most the day.
- In Bristol, both older and younger participants questioned why the tram was removed from the city.
- In Bristol and Manchester, participants criticised their experiences of trying to get across the city – where most buses take indirect routes via the city centre.

Preference vs. reliance

A broader observation, outside of the criticisms actively voiced by many participants, was that whilst this scenario was a popular choice for tackling congestion, many participants tended to be thinking of broader society rather than switching themselves.

- In addition to the barriers outlined above, there also tended to be an underlying personal resistance to switching mode amongst those driving frequently linked to the comfort and flexibility offered by driving.
- In a number of examples, participants who initially insisted they had no choice but to drive, later described the existence of public transport options. While the gripes about public transport were widespread, there was some indication that drivers might overstate their reliance on driving.

“I think that those people who are able to walk and cycle already do. The rest of us have to drive.” – Bristol participant

Questions from participants about this scenario centred particularly on **cost** and **reliability**, as part of a broader concern about the viability of alternatives:

- *Could we introduce means-tested fares, i.e. People pay % of income rather than flat rate?*
- *Some years ago, Sheffield introduced a small or no charge for their transport, do you know whether that had any significant effect on congestion?*
- *How are London buses funded and would that work in Bristol?*
- *Why should people get out of their car when public transport has really bad press and you know you're going to be late for things?*
- *How can we change people's mentality?*
- *Would it help if we nationalised rail?*
- *Should Bristol get a tram back?*
- *Why don't we have raised walkways?*
- *Could park & ride be a solution?*

5.2.1.2. Reactions to policy areas

On average, all policies were seen with some positivity (all scoring over 5 on average).

There was a particularly strong preference for investment in public transport and reducing costs of public transport, compared to reallocating road space and encouraging active travel.

No. of participants ranking in each position (Manchester)						
Scenario	1 st	2 nd	3 rd	4 th	5 th	6 th
Base size	23					
Reducing the cost of public transport	<u>10</u>	<u>7</u>	3	1	1	1
Providing new/more public transport	<u>10</u>	<u>6</u>	2	2	0	0
Allocating road space to public transport	1	5	<u>8</u>	1	3	2
Building new/more cycle or walking infrastructure	0	1	4	<u>6</u>	<u>5</u>	5
Allocating more space to cycling/walking	1	1	2	<u>6</u>	<u>4</u>	4
Actively encouraging cycling/walking	0	2	3	4	4	<u>7</u>

Table 4: Total number of participants placing each scenario in each ranking in Manchester. N.B. Some columns do not add up to 23 as participants chose not to include all options in their ranking.

Average scores /10 for each policy (Nottingham and Bristol)				
	Reducing the cost of public transport	Providing new/more public transport	Allocating road space to public transport / walking / cycling	Actively encouraging cycling / walking
Participants who allocated a score	44	44	44	41
Av. score	8	7.8	5.7	6.3

Table 5: Total number of participants placing each scenario in each ranking in Nottingham and Bristol. N.B. After Manchester, some of the policy options were combined and the ranking process was tweaked to a scoring out of 10, following feedback from the evaluator.¹²

¹² We combined 'allocating road space to public transport', 'building new/more cycle or walking infrastructure' and 'allocating more space to cycling/walking' following feedback from participants and the evaluator that these options were very similar and that participants were struggling to think about them distinctly – as well as to give more time to debating fewer options. Scoring was introduced as a replacement to give a better indication of sentiment, for

As in the initial conversations, participants continued to gravitate towards talking about the public transport policy options over active travel.

Providing more/new public transport:

- There was a clear, strong preference for this policy from early on, with both existing public transport users and drivers having brought up this solution spontaneously in Wave 1.
- However, when discussing what would push drivers to switch modes in more detail, frequent drivers and those driving for their commute commonly referred to a number of barriers to switching, outlined above. Drivers felt that the service required significant improvement (particularly in terms of reliability, frequency and capacity) before they would consider it.

Reducing the cost of public transport:

- Again, cost as a barrier to using public transport had been brought up spontaneously in Wave 1. The high expense was discussed by both drivers (who tended to claim it is more expensive than driving) and current users.
- However, there was also an emerging debate across some tables about whether reducing cost in isolation would be effective, due to strong preferences for driving, and consideration of combining with other measures.
- Whilst this idea was very popular, scoring the highest on average, when challenged about funding participants tended to opt for tax paying for tangible public transport investment and improvements rather than ticket reductions.

Encouraging active travel:

- Encouraging active travel tended to be less enthusiastically discussed on tables, particularly amongst public transport users and drivers who continued to raise several key barriers to switching already discussed.
- By comparison, cyclists were more supportive of the policy, seeing it as a method to both tackle congestion, reduce carbon footprints and be more active and healthier. Students also tended to be more positive, perhaps linked to travelling more frequently outside peak times (with this group seeing it as a more pleasant mode of travel than those thinking about switching in busy peak times).
- For a small number of participants, the health benefits of walking and cycling made it an aspirational mode, however more often, there seemed an underlying lack of appetite for these modes.

Reallocating road space to public transport/active travel:

- Responses to this policy tended to be coloured by low trust in city planning among most types of participants – particularly drivers, who felt the broader contexts of their city (e.g. key roads, workplaces, schools, roadworks) have not been taken into account in the

example showing the degree of preference for the favoured option, or whether if participants felt similarly or even rejected about all policy options.

past. Drivers also brought up frustrations with existing bus and cycle lanes remaining empty for most of the day – feeling they are underutilised so end up causing more congestion.

- However, after engaging with all policy areas and case studies, some participants began to consider the benefit of combining road reallocation with other measures, to drive people to use public transport through both disincentives (e.g. charging) and benefits (e.g. quicker journeys in bus lanes).
- For cyclists, this policy was seen as a necessity to driving modal shift – by making cycling safer.

5.2.1.3. Final views on making more effective use of space

Two key differences at the end of Wave 2 in discussions were emerging considerations of **the need to use measures in combination**, as well as debate around the **high costs** of public transport investment and willingness to pay.

- In particular, there was a growing recognition and debate around the need to encourage and push drivers to switch to using public transport and improvements alone, whilst being a necessary first step to ensure alternatives, not being enough in isolation to reduce congestion.
- Drivers and existing public transport users tended to consider public transport improvement vital despite the costs and were generally open to tax increases for a tangible benefit in their city. An exception to this was drivers with a strong preference for driving, who felt they would not benefit much personally.

However, it was also common for some participants to struggle to imagine what big, transformational public transport investment would look like. An exception to this was some older participants in Bristol who could remember the tramline and lower congestion on roads.

5.2.2. Charging drivers

5.2.2.1. Initial views on charging drivers

Charging was the measure for tackling congestion most familiar to many participants due to the London congestion charge – which most participants were aware of, and which several had spontaneously raised earlier in the workshops.

As a result, most participants were thinking specifically about the London congestion charge when discussing this scenario – rather than a hypothetical situation. This meant there were some pre-existing assumptions which tended to colour initial responses to this scenario, which included:

- The perception of the continued high volume of traffic and congestion present on London roads.
- The perception of the significantly better availability of public transport in London compared to their own cities.
- The perception that workers in London earn more money and/or are wealthier and therefore more able to pay congestion charges.

“People earn less in Manchester than they do in London, like in London they get paid a lot more so they can pay the congestion charge.” – Manchester participant

“It didn’t work in London; London is the most congested city and they have a charge.”
– Manchester participant

Reactions to ‘charging drivers’ were initially mostly negative, particularly compared to ‘making more effective use of space’. There were three particularly consistent perceptions and criticisms behind initial rejections across the workshops:

1. A belief that the rationale behind the scenario was to **make money** for local authorities or private companies.
2. A perception that the charge would **unfairly target workers commuting** to work in order to earn a living.
3. A perception that the scenario would unfairly **price lower-income people off the road**.
 - This was a spontaneous assumption for several participants, which they felt was confirmed when learning the cost of the London congestion charge (£11.50 per day).
 - This concern continued into Wave 2, even as participants developed a more nuanced view of effectiveness and fairness.

“I’m not keen [on charging drivers], I’d rather do nothing. It’s just to make money – I don’t see it.” – Bristol participant

“The congestion charge in cities like London, and workplace parking charge in Nottingham have not been effective. Why are they still being used? Money!” – Nottingham participant

Participant questions at tables and during the expert Q&A were focused on these spontaneous concerns around efficacy and fairness. Some of the key questions posed across the workshops were:

- *How much of an effect, long and short term, did the London congestion charge actually have?*
- *If they hadn’t had the congestion charge, would the level of traffic now be greater than what it had got back to? Does it still act as a deterrent?*
- *If the London congestion charge worked, why is it so congested?*
- *How much is the London congestion charge?*
- *Would people that live in the zone have to pay the congestion charge?*
- *Is it right to price people off the road to solve congestion and what would be the implications on an individual level?*
- *Could we have a pay for what you use/drive system?*

5.2.2.2. Reactions to policy areas

In Nottingham and Bristol, participants tended to score the area-based charging policy higher than cordon-based or time-distance-place-based charging, largely due to its proven

effectiveness, relative simplicity and intuitiveness and fairness on certain groups. In Manchester, the ranking was more mixed between area-based and cordon-based.

When scored out of 10, the ‘charging drivers’ policy areas scored lower than ‘making more effective use of space’ policies – with area-based charging the only measure to receive a positive score, (5.6 on average).

- However, the more neutral scoring represented a shift from the beginning of Wave 1, where many participants – particularly drivers – voiced opposition to charging.

An overview of each of the different policy areas is included in the appendix.

No. of participants ranking in each position (Manchester)			
Scenario	1 st	2 nd	3 rd
Base size	23		
Area-based charging	8	7	6
Cordon-based charging	11	5	5
Time-distance-place based charging	3	9	10

Table 6: Total number of participants placing each scenario in each ranking in Manchester. N.B. Some columns do not add up to 23 as participants chose not to include all options in their ranking.

No. of participants giving each policy each score /10 (Nottingham and Bristol)			
	Area-based charging	Cordon-based charging	Time-distance-place based charging
Participants who allocated a score	41	40	41
Av. score	5.6	4.6	3.8

Table 7: Total number of participants placing each scenario in each ranking in Nottingham and Bristol. N.B. after Manchester we combined some of the policy options and tweaked the process from ranking to scoring out of 10.

Area-based charging:

- The evidence for the impact of charging in the London case study was often commented upon by participants, and adjusted incorrect assumptions observed in Wave 1. The evidence was a key factor in shifting views and preferences amongst those who felt tackling congestion to be an important priority.
- Additionally, drivers commonly felt that a charge would be effective in making them think twice about the necessity of driving – provided the charge was a sufficient disincentive. Drivers had not commonly thought about the ‘true cost’ of driving prior to exploring the policy materials, thinking primarily about direct, personal costs of owning and using a car, rather than the wider socioeconomic and health impacts of driving and congestion, which also influenced their acceptance of charging and the maximum fee.

Maximum fair congestion charge per day (av.)		
	Nottingham	Bristol
Participants allocating a cost	17	15
Av. cost (£)	£6	£4.33

Table 8: Average maximum charge participants felt it would be fair for local authorities to charge as a congestion charge per day.

- When moving on to consider area-based charging as a potential solution, participants commonly referred to the fixed fee being simple to understand and to predict the impact of – which was seen as a key requirement. Some mentioned foreseeing there being some anxiety and fairness issues around miscalculating fees.
- In these more detailed discussions around implementation, participants often wanted more specific, local information – for example, the size of the area and where it would be located (i.e. covering a proportionate area of the very centre of the city, as in London).
- The use of fees raised for public transport was frequently picked up on by participants from the case study and expert video – which did lead to some positivity around fees contributing to public transport investment for their local city.

Cordon-based charging:

- Cordon-based charging was not as intuitive or easy for participants to understand as area-based charging, due to the more ‘complicated’ charging system. For example, there were some questions over whether charges applied on the way in as well as out, as well as around broader implementation.
- In particular, when considering implementation, many drivers were concerned about the lack of predictability and ease of understanding costs – which would make it harder to plan around and make decisions about journeys and switching.
 - Participants considered the charge level vs. efficacy of cordon-based and area-based charging. There tended to be some mixed views over which felt more expensive, and which would be most impactful in shifting behaviours.
- Cordon-based charging was also seen as less fair on small, local business owners (e.g. couriers, plumbers) who would be likely to cross the cordon multiple times, when assuming charges would be triggered each time it was crossed. On tables with a participant from this group, there was low tolerance of the idea of them being impacted financially.
- When discussing implementation, the benefits were seen as it being a generally cheap method of tackling congestion (with fees covering operating costs) and also a scheme that could be very flexible to cities – for example, changing costs, hours of operation or area depending on impact.

- However, this was traded off against common concerns about drivers being able to ‘play the system’ – it was sometimes felt that cordon-charging could encourage behaviours that would not necessarily reduce congestion (e.g. driving along back routes) or have unintended consequences.

Time/distance/place based charging:

- TDP based charging tended to be seen as the most complicated and least intuitive of all the charging driver scenarios. This was compounded further by the lack of case studies or detailed explanation of how it might work in a city.
- The policy materials tended to raise more questions than answers amongst participants, with participants considering the impact of parking within the city (under a time based charge) vs. driving around significantly (under a distance-based charge).
- As a result, most participants scored the policy relatively low, as they felt it would be more important to use a ‘tried and tested’ measure with proven efficacy and well considered impacts. For the most part, this rejection tended to be based on a lack of understanding about how the scheme would work, although some raised concerns about how it might be implemented – for example, needing accurate tracking or an extensive camera network to calculate time or distance in a zone.
- A very small number of participants – typically non-drivers – bounced off this policy to raise a consideration about whether drivers should be expected to pay for what they use’, although there was limited thought about how this might work.

5.2.2.3. Final views on charging drivers

Out of all the scenarios, participants tended to change their opinions the most on this scenario, common shifts in attitude were:

- **Seeing charging as a deterrent rather than an attempt at profiteering** – in particular debating the need for disincentives as well as incentives to combat underlying preferences for driving.
- **Recognition of effectiveness** – the percentage reductions in congestion and traffic in London and Stockholm case studies were often noted down and discussed at tables and helped combat misconceptions about lack of efficacy heard in Wave 1.
- **Predictability and simplicity** – whilst drivers initially did not want to be charged, by the end of Wave 2 those who wanted to tackle congestion tended to express a preference for a fixed fee over measures more unpredictable and challenging to work with (e.g. time/distance/place based charging and ‘discouraging driving’ measures).
- **Seeing it as something they would get used to** – several participants noted down and expressed surprise at the trial in Stockholm leading to acceptance of the scheme, which led them to thinking about the challenge in visualising the benefits without having any experience of lower congestion.

Ultimately, by the end of Wave 2, many participants were considering a combined approach involving charging – although improvements in public transport and providing alternatives

were seen to be an important first step. When considering charging more legitimately, many moved on to think about fair implementation – for example, ensuring fees are easy to predict, calculate and pay.

5.2.3. Discouraging driving

5.2.3.1 Initial views on discouraging driving

This scenario felt the least familiar or intuitive to most participants. The language of discouragement also felt relatively negative to many, and drove conversations around the importance of incentivisation and encouragement, rather than ‘punishing’ drivers – particularly commuters going to work to earn a living.

Many were unsure how the example policy areas, like carpooling, would work in practice – although some had heard of it being used in America, where there are more lanes.

- A small number of participants, particularly younger participants, were positive towards this idea – seeing it as a potential solution for workers commuting to the same location.
- However, there were broader concerns about how it would work in practice, including the inconvenience of trying to arrange it, discomfort over the idea of navigating conversations about fairly splitting fuel costs, and some concerns over safety.
- Some suggested an incentive scheme (potentially from employers) to encourage take-up.
 - This linked to earlier spontaneous discussions about the role of companies and employers to reduce congestion. Specifically, the idea of employers offering more flexible working and different start times gained some traction among some participants as a way to reduce congestion at peak times.

Participants had fewer questions about this scenario specifically, with it appearing to drive less debate and interest than the other scenarios for most. Some questions posed in some of the workshops were:

- *Should we close inner city car parks?*
- *How is the carpool lane policed?*
- *Would having children in the car mean you can use the carpool lane?*

5.2.3.2. Reactions to policy areas

On the whole, participants tended to find ‘discouraging driving’ policies less intuitive and practical than the policies sitting under the first two scenarios. In particular, concerns were often raised around:

- Implementation and enforcement, and how these schemes would work in practice
- Resistance to the underlying principle of punishment (i.e. making conditions really unpleasant), especially among drivers.

When scored out of 10, none of the policies were scored higher than 5 on average (neutral) indicating general negativity. The highest scored and ranked policy was access restrictions – although conversations pointed towards many participants considering this unlikely to be implemented in their own city.

No. of participants ranking in each position (Manchester)				
Scenario	1 st	2 nd	3 rd	4 th
Base size	23			
Reducing road space	4	6	5	6
Reducing car parking options	5	2	<u>8</u>	<u>7</u>
High-occupancy lanes	3	6	7	5
Access restrictions	<u>10</u>	<u>8</u>	1	3

Table 9: Total number of participants placing each scenario in each ranking in Manchester. N.B. Some columns do not add up to 23 as participants chose not to include all options in their ranking.

No. of participants giving each policy each score /10 (Nottingham and Bristol)				
	Reducing road space	Reducing car parking options	High-occupancy lanes	Access restrictions
Participants who allocated a score	44	45	44	44
Av. score	4.5	4.0	3.9	4.8

Table 10: Total number of participants placing each scenario in each ranking in Nottingham and Bristol. N.B. after Manchester we combined some of the policy options and tweaked the process from ranking to scoring out of 10.

Multiple occupancy lanes:

- Discussion of this policy tended to centre on questions around implementation and enforcement.
 - Multiple occupancy lanes were rarely seen as a practical solution for UK cities, with confusion about how they would be implemented on typically narrow urban roads.
 - There were also frequent concerns raised about the potential for drivers to 'game the system'.

- Additionally, cultural barriers around comfort and safety were raised as a key limitation by drivers, who tended to feel they would only want to share space with friends or people they knew well.
- Those commuting to work by car also questioned the fairness of the measure, which would have greater impact on those who do not live close to colleagues and so would have limited opportunity to make use of the solution – particularly if no alternatives were offered (e.g. improved public transport).

Access restrictions:

- While this policy ranked and scored the highest on average out of all four areas, when discussed it tended to be seen as a very theoretical and likely unrealistic solution for the UK. This was particularly the case when thinking about measures like alternate day access for cars, based on the last number of licence plates, in Daktylios in Greece.¹³
 - It is likely that participants scored it higher relative to other, more strongly disliked options, while still not seeing it as a viable solution.
- In addition to lack of belief in the practicality, access restrictions were commonly felt to be arbitrary and less fair than a more standard measure like area-based charging. As with the other 'discouraging driving' measures, it was felt to be harder to plan around and work with as a driver than charging – which would still enable the driver to make a decision about their journey.
- A small number of participants, often cyclists and non-drivers, liked the idea of creating pleasant village areas (as in the Walthamstow Forest case study). This group saw walkable cities, which are more pleasant to live in, as a priority to encourage more active travel. However, this did not feel easy to visualise for other participants – who tended to be more concerned with the potential for congestion to be displaced to surrounding streets (meaning an unfair benefit for residents of the village vs. impact elsewhere).

Reallocating road space:

- Responses to this scenario were coloured by perceptions and experiences of frequently seeing bus and cycle lanes empty. This was found to be frustrating by drivers who felt it indicated the measure was inefficient and ineffective – a sentiment similarly shared by current public transport users, who had called for higher frequency of services.

¹³ This case study is included in the appendix (p.109).

- Among drivers specifically, this policy was sometimes felt to be counter-intuitive as reduced road space was seen as one of the key drivers of congestion in city centres – resulting in them seeing it as less effective. The concept of using congestion to reduce congestion was not immediately intuitive, but when participants grasped it they tended to think it was unfair for drivers (particularly thinking of circumstances when people would not have a choice but to drive).
- However, there was support from both non-drivers and some drivers when thinking about implementing this policy in conjunction with investing in the bus network – ensuring a beneficial alternative mode (i.e. quicker as they could use the bus lane) were available to drivers.

Restricting parking:

- In Nottingham most commuters driving to work were aware of the Workplace Parking Levy (WPL)¹⁴ and tended to have negative associates with restricting parking – perceiving it to displace the problem of congestion to suburban streets, due to drivers parking in suburban back roads.
- Drivers in Manchester and Bristol, and those unaware of the scheme in Nottingham, were also relatively negative towards this policy and discussed the likelihood of it being very frustrating and difficult to plan around – introducing the kind of stress that they associate with congestion.
- Non-drivers were more neutral about this policy area than drivers, and less aware of the WPL in Nottingham – although it did not always feel intuitive as they could also imagine drivers driving around the city centre looking for parking, consequently making congestion worse.
- In Manchester there were some concerns raised about the decline of the city centre and the negative economic impact, as a potential downside of restrictive parking, as it might drive people to other nearby cities to shop.

5.2.3.3. Final views on discouraging driving

Overall, there was limited positivity towards the policies within this scenario. There were several key, common concerns and criticisms raised:

- For drivers, the policies **felt more restrictive than charging** as they were seen as likely to be stressful and frustrating. Drivers also disliked the concept of being forced

¹⁴ Introduced in Nottingham in 2012, the WPL is a charge that employers pay on workplace parking places. Employers are responsible for paying the WPL charge (currently £415 per parking place per year); however, they can choose to pass on part or all of the cost to their employees. The scheme aims to reduce road congestion by targeting commuting trips.

or restricted to make changes, rather than having a choice over driving and being charged.

- Both drivers and non-drivers were concerned many of the policies would **displace the problem of congestion** and were vulnerable to **people cheating the system**.
- Most of the policies were seen as **complicated and less intuitive or practical** than the ones previously discussed. Many struggled to visualise what they might look like in their city. Low trust in city planning also meant there were concerns about the ability to do them well (and fears the full extent of impacts wouldn't be considered).

Very few seriously considered the 'bigger picture' of additional benefits outside of the impact on congestion – for example, greener, more pleasant areas (under access restrictions) – although this was acknowledged by some cyclists and non-drivers.

5.2.4. Accepting congestion

5.2.4.1 Initial views on accepting congestion

Accepting congestion was frequently rejected by participants, with the overwhelming rationale being that impacts, both on them personally and societally, warranted action.

- This view that congestion should be tackled was strengthened for many participants across the course of the Wave 1 workshops, particularly as they learned of the economic impact and European comparisons and heard each other's stories.
- As a result, rejection of this scenario largely included both drivers and non-drivers, as cyclists and public transport users also felt that broader impacts on the economy, environment and their personal wellbeing and safety caused by congestion were important.

However, this rejection sits in tension to the expectation or assumption that several participants felt at the start of the workshop – which is that while it has negative impacts, congestion is simply something you have to live with, and something that you get used to.

- One participant in Manchester and two in Bristol felt that congestion would self-regulate.

“Government can spend that money somewhere else, it would be a better use of tax money.” – Bristol participant

“I think it's inevitable, with population growth and all that. We can do things to mitigate but it's also something we have to accept.” – Bristol participant

“A lot of the money generated would be lost in red tape. I think doing nothing is the solution” – Manchester participant

Consistent questions for experts within this scenario centred on seeking examples of any countries or cities which had effectively tackled congestion (and the extent to which it is possible to do so), as well as responsibility for doing so:

- *Has anywhere solved congestion? How did they do it? Are there any good/comparable case studies?*
- *Who makes these decisions - locally/nationally? Given that it's a national problem, should there be a national solution?*

5.2.4.2. Final views on accepting congestion

- Despite generally citing a belief that congestion is important to solve at the beginning and end of Wave 1, drivers tended to be able to come up with long lists of benefits of continuing with the status quo, including, most commonly, comfort and convenience.
- Whilst congestion is a common frustration, there was also recognition amongst drivers that it only increases gradually – meaning that it is easy to get used to over time. When asked to think about what increase in journey time would encourage them to shift modes or not take their most frequently made journey, participants tended to visualise significant increments – with participants saying journey times would need to double (Manchester and Nottingham) or triple (Bristol).
- An exception to this view was amongst drivers in Nottingham, who had experienced dramatic increases in congestion in the weeks preceding Wave 2 caused by the closure of Clifton Bridge. This experience had largely strengthened their belief that congestion needs to be tackled.
 - One participant had brought along an article citing that according to TomTom data, Nottingham had been the most congested city in the world during peak evening hours.
- Balanced against societal and personal impacts the vast majority maintained their rejection of this scenario – with it receiving the lowest score of any of the policy areas (2.6 on average in Nottingham and Bristol).
 - There were a few outliers across the workshops, all of whom were drivers, including:
 - One person in Nottingham who ranked ‘accepting congestion’ as their preferred scenario – believing that congestion would self-regulate and that drivers should maintain their freedom of choice.
 - One person in Manchester who believed drivers freedoms should not be restricted.

- One person in Bristol who preferred 'accepting congestion' and retaining their choice, over having to pay (via charging drivers) to tackle congestion.

No. of participants giving each policy each score /10 (Nottingham and Bristol)	
	Accepting congestion
<i>Participants who allocated a score</i>	37
Av. score	2.6

Table 11: Total number of participants placing each scenario in each ranking in Nottingham and Bristol. N.B. after Manchester we combined some of the policy options and tweaked the process from ranking to scoring out of 10.

6. Responses to solutions packages for reducing congestion

Summary

This section explores participants' preferences for tackling congestion, by exploring their responses to a variety of different 'solutions packages'.

The solutions packages broadly mirrored the scenarios already discussed, and included options for solutions on their own or in combination. Each solution was presented alongside simple information on how much the solutions would cost to implement (for the taxpayer), and their likely impact.

Key findings:


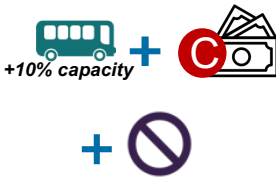





- 1. The most commonly preferred options were the solutions that combined improvement of public transport with either measures to discourage driving, congestion charging or both.*
- 2. The most popular first choice was 'significantly improving public transport and congestion charge'. These two were selected together because of improved efficacy (as improving public transport alone was not considered adequate to shift behaviour), and because the revenue raised by charging could go some way to funding public transport improvements.*
- 3. The second most popular package was to combine all three solutions (improving public transport, charging, and discouraging drivers). This package was selected by those who thought it would be most effective in reducing congestion. Those who did not select it felt that implementing all three solutions would be overly complex.*
- 4. Differences between preferences were based on participants balancing efficacy with either (a) how punitive it would be to drivers or (b) difficulty of implementation. The cost to taxpayer was comparatively less influential on decision-making – participants on the whole supported public transport improvement in spite of the increased costs to the taxpayer.*
- 5. Doing nothing additional was overall the least popular measure, with just two participants selecting this as their first choice and 25 selecting this as their last choice.*

6.1. Choices for solutions packages and rationale

At the end of Wave 2 workshops, participants were asked to select their preference from 8 different solutions packages – to explore which scenario or combination of scenarios they most wanted to see used to tackle congestion.

In Manchester, participants selected their most preferred package. In Nottingham and Bristol participants were asked to select their first, second and last choice, rating each of these out

of 10¹⁵, based on a scale of how far they would like to see them being used to tackle congestion (with 0 being ‘definitely not’ and 10 being ‘definitely’).

Solutions package	No. of times selected 1 st	No. of times selected last
<i>Base size</i>	66	45
<i>Locations</i>	All	Bristol / Nottingham
 5. Significantly improve public transport + congestion charge Cost to taxpayer: £250-350 per household, per year	29	0
 8. Significantly improve public transport + congestion charging + discouraging driving Cost to taxpayer: £300-400 per household, per year ¹⁶	15	1
 4. Congestion charge	8	7
 2. Significantly improve public transport Cost to taxpayer: £300-400 per household, per year	8	0
 6. Significantly improve public transport + discouraging driving Cost to taxpayer: £300-400 per household, per year	7	0
 3. Discouraging driving	2	3
 7. Congestion charge + discouraging driving	2	6

¹⁵ In the pilot area (Manchester), participants selected their first choice only. This was amended following the pilot to capture more data and to account for the fact that some participants felt that two options came quite close in terms of first preference. The purpose of the revised rating was to help uncover strength of support for the options selected.

¹⁶ N.B. Solution package 8 erroneously read £300-400, rather than £250-350 (as some congestion charging income would be used towards public transport). However, the analysis, including of the reasons given for preferences, indicates this likely had limited effects on results.

	1. Do nothing additional	2	25
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Table 12: Total number of times each solutions package was selected¹⁷ as a first preference (across all three locations) and as least preferred (in Bristol and Nottingham).

Despite the additional context about the cost to the taxpayer, **significantly improving public transport remained the most well supported measure** for tackling congestion. Across all locations, 59 out of 66 participants' first preference included this measure within their chosen package (in packages 2, 5, 6 or 8).

The congestion charge was also a well-supported measure overall, with 54 out of 66 participants including this measure within their chosen packages (in packages 4, 5, 7 or 8) – with support largely driven by the inclusion of investment in public transport, evidence in increased efficacy (vs. public transport investment alone) and small reductions in the cost of investment to the taxpayer by combining these measures.

- The most popular first choice was 'significantly improving public transport and congestion charge' (5) which was selected 28 times, more so than 'significantly improving public transport' alone.

Doing nothing additional was the least supported option with just one participant in each of Nottingham and Bristol selecting it as their first preference, and over half selecting it as their least preferred solution.

Preferred solutions packages

As already discussed, improved public transport was felt to be at the core of any potential solution, because:

- Participants felt providing viable alternatives to driving to be a necessary first step, before introducing other measures; and
- Many had existing grievances with local public transport.

On the whole, information about increased cost to taxpayers (estimated at £300-400 per household per year) did not drive participants to reconsider their views on the importance of investment. This was largely driven by views that:

- Public transport is a tangible social good, i.e. by paying increased taxes, people would see an improvement in services beneficial to the whole city. In contrast, congestion charging was seen to have minimal societal benefits alone.

¹⁷ This table includes the following: In Manchester, four participants made more than one selection. In the other locations, two participants did not select a last preference; three participants did not allocate any scores.

- Tax increases felt less tangible and immediate when compared to congestion charges for drivers.
- In practical terms, improvements to public transport would more likely be paid for through budget reorganisation (rather than households experiencing a sharp, noticeable tax rise) – though this was a less commonly articulated view.

The most frequently selected package combined improving public transport with a congestion charge (package 5). The rationale behind this selection commonly being:

- It could slightly reduce the annual cost of investment in public transport to the taxpayer.
 - It was generally seen as fair, even among drivers, that those still choosing to drive after the provision of viable alternatives (i.e. improved public transport) should be expected to pay more.
- Public transport improvement alone was deemed unlikely to reduce congestion, as participants – including drivers – acknowledged that there is a strong preference for driving – so disincentives would also need to be used to push people to make a switch.
- There is seen to be precedence for this solution package in the London congestion charge – and some evidence to show that it has had an impact on congestion.

“Carrot and stick is most important to me. I think you’ve got to charge people, or it won’t work but you’ve also got to give them an incentive in the form of cheaper public transport for it to work.” – Bristol participant

The second most popular package combined improving public transport with two disincentives (package 8) and tended to be picked by those who prioritised efficacy in reducing congestion as the most important factor. These participants felt that combining multiple punitive measures would be most likely to be successful in pushing drivers to shift onto public transport.

- However, some participants were less supportive of this idea than simply combining public transport improvements with charging, as they felt that it would be too challenging to try to implement so many measures at once. This was both from a logistical point of view and due to the perceived likeliness of public pushback (particularly from drivers due to the more punitive approach of package 8).

Outside of these two most popular packages (selected by two-thirds of participants) there were some common themes in how participants selected their top preference:

- Amongst those selecting improving public transport alone (package 2) or doing nothing additional (package 4) as a first choice, there was a strong preference for avoiding any measures which punished car use. To them, freedom of choice to use their cars was paramount.

- Congestion charging (package 4) tended to be selected by those who felt it was the most effective or proven method for reducing congestion, as well as occasionally by those who felt they would not use public transport – and did not feel they would personally benefit from paying more tax for improvements.
- Some options including ‘discouraging driving’ (packages 6, 3) were chosen by a smaller number as an alternative punitive measure to charging, driven by a strong rejection of the concept that it should be drivers who pay for congestion.

Least preferred solution packages

Doing nothing additional (package 1) was clearly the least popular measure overall, with just two participants selecting it as their first choice and 25 selecting this as their last choice. This reflected the earlier discussion of the rejection of the ‘accepting congestion’ scenario, with most participants seeing congestion as a significant issue that warrants action.

The combination of congestion charging and discouraging drivers (package 7) was also unpopular, being selected as the least preferred package more frequently than the most preferred.

- This measure was generally rejected by drivers, who felt it was unfair to only punish drivers, without providing adequate alternatives (i.e. improved public transport). There was also discussion about whether the introduction of this package would lead to a major public backlash – which could make it challenging to implement.

Congestion charging alone (package 4) was the most divisive package, being selected as the least preferred option nearly as often as the most preferred option. Those who selected it as their least preferred overall did so based on:

- A sense that it would be unfair to charge drivers without providing them adequate alternatives.
- Concern, based on the case studies shown in the workshops, that the congestion charge would only be effective in the short term if implemented alone.

6.2. Differences in views

Selections varied very little between the different locations, with the aggregated first preferences the same across all locations.

- Although there was slightly more resistance to congestion charging as a sole measure (package 4) in Bristol compared to Nottingham (with five vs. two participants selecting it as their last choice, respectively).

Solutions package	Manchester	Nottingham	Bristol	Total
Base size	21	21	24	66
1. Do nothing additional	0	1	1	2
2. Significantly improve public transport	2	2	4	8
3. Discouraging driving	1	1	0	2
4. Congestion charge	3	2	3	8
5. Significantly improve public transport & congestion charge	<u>12</u>	<u>8</u>	<u>9</u>	<u>29</u>
6. Significantly improve public transport & discouraging driving	1	2	4	7
7. Congestion charge & discouraging driving	2	0	0	2
8. Significantly improve public transport & congestion charge & discouraging driving	7	5	3	15

Table 13: Total number of times each solutions package was selected as 1st preference. N.B. four participants made more than one selection in Manchester (all included in the table).

Drivers tended to reject measures which focused only on penalising those driving, either through charges or discouraging (i.e. packages 3, 4 and 7), without also providing alternatives (i.e. improved public transport).

A very small minority also rejected options involving public transport investment, as they felt that delivering the improvements would be too disruptive (i.e. causing more roadworks) and lead to increased congestion on the roads.

“I don’t think it [discouraging] is fair at all. I’d rather see better alternatives. People should have choice.” – Bristol participant

Public transport users and cyclists were less likely to totally rule out the measures punitive to drivers, and particularly likely to pick public transport improvements and congestion charging in combination – driven by the rationale that it would be more effective, but also that those still choosing to drive should be expected to pay, once alternatives are available.

Two participants thought doing nothing additional was the best solution. Those who voiced this opinion valued freedom of choice, feeling it would be best to allow drivers to make the decision as to whether to drive in congested areas.

Although options including public transport improvement were the most popular overall, there were a small number of participants less willing to pay for this personally.

- Some of those who could not see themselves switching to public transport or using it regularly rejected the idea of having to pay increased taxes for something that would not benefit them.
 - This group often excluded cyclists, who tended to be willing to pay for improved public transport they were unlikely to use, for the good of their city.
- Some of those in the workshops on a lower income felt that the tax increase would be unaffordable for them personally, and others similar to them.

7. Principles for reducing congestion

Summary

This section explores the principles developed and voted on by participants at the end of Wave 2, which they felt should govern and inform approaches to tackling congestion in the future.

Key findings:

- 1. The most widely supported principles reflect their greater support for congestion charging by the end of Wave 2, as long as certain safeguards are taken seriously, and that alternatives to driving are in place.*
- 2. In particular, participants across all three locations prioritised balancing charges against benefits, or ensuring they were reasonable for working people. In addition, participants supported the idea of ring-fencing revenue raised from charging for transport infrastructure.*
- 3. While most saw the need for drivers to shift modes, on the whole there tended to be some agreement that funding of alternatives to make this possible was everyone's responsibility (i.e. taxpayers).*

7.1. Principles that should underpin decisions

In all locations, **ensuring adequate alternatives** for drivers (usually meant as public transport) tended to be a key priority and overarching principle for participants. A variation on this theme was the second most voted for principle in both Manchester and Nottingham.

Ensuring **costs are affordable, or balanced against benefits** (e.g. lower travel fares), was also a widely prioritised principle across all locations.

In both Manchester and Bristol participants also prioritised the principle of ensuring that any **money raised tackling congestion (i.e. from charges) needs to be invested back into public transport and road infrastructure**.

Strikingly, in Bristol, one of the key overarching principles was around solutions also needing to promote health and wellbeing. This principle was initially only introduced by one participant, (a cyclist), but gained traction during the voting.

This may be indicative of Bristol's 'green' status, with the council having recently decided to implement a Clean Air Zone and diesel ban.¹⁸

Other important principles included democratic involvement, transparency over how funds raised by charging would be used, and public education so that people understand the impacts of congestion and the rationale behind measures to reduce it.

Top 5 overarching principles voted for by participants			
	Manchester	Nottingham	Bristol
1 st	Democratic; trial and vote	Find a balance between costs, impacts, benefits and rewards	Any money raised needs to be transparently invested in public transport
2 nd	Improved public transport before charging	Provide adequate alternatives (to driving)	Any solution should promote health and well-being
3 rd	Affordable charging	Promote a common understanding/educate	Being accessible for everyone (discount for anyone who would be disproportionately/unfairly affected) – not penalising one group unfairly and having alternatives available
4 th	Charging revenue should go into public transport & improving roads	Get businesses/employers to do their bit	Provide value for money for taxpayer
5 th	Transparency, e.g. over where the money goes	Be empathetic and fair; take the context of everyone into account	Carrot and stick – there needs to be an incentive as well as a deterrent

Table 14: Top five overarching principles by location, as voted for by participants

¹⁸ The scheme is currently still pending permission from the Secretary of State.

7.2. Who should be considered?

As discussed in section 4.1.2., there were specific groups of people who tended to be considered more directly by participants throughout the workshop when ranking and selecting measures to tackle congestion, including the self-employed, shift workers, those on a low income, manual labourers and families.

However, when discussing the final principles for tackling congestion there were three core groups commonly mentioned and built into considerations:

- **Those who currently commute to work by car** remained the most frequently mentioned at the end of Wave 2. Whilst there was more support and recognition of the need for these drivers to shift mode, a common principle was that there should be adequate alternatives provided for them – defined as those which would not cost them any more money to use and get them to work on time.
- **Those who have no choice but to drive** – including disabled people and those living in rural locations with no alternatives available. In these cases, there tended to be calls for exemptions or reduced charges – although participants acknowledged that might be hard to implement and manage for the latter group.
- **Those who drive as part of their job** (e.g. couriers, plumbers, etc). As with those who commute by car, there was a resistance to the idea of charging measures impacting on this group's income. It was commonly felt that this group should either be exempt from charges, or pay a reduced charge.

7.3. Who should be responsible for tackling and paying for congestion?

As discussed in section 3.2., the ways participants felt about responsibility at the start of Wave 1 was influenced by misconceptions about the key drivers of congestion – for example, potentially overstating the role of city planning and roadworks. This had largely moved on by the end of Wave 2, with drivers beginning to take more responsibility for thinking about the necessity of their own journeys.

As a result, there was a switch from calls being centred solely on incentivisation and encouragement to a combination of 'carrot' and 'stick' at the end of Wave 2.

- This was with the exception of a handful of outliers who preferred freedom of choice and 'accepting congestion'.
- Within this view there was also strong prioritisation of the need for alternatives like public transport.

Overall, when thinking about paying to fund alternatives like public transport:

- There were a small number of public transport users and cyclists who felt strongly that it was those largely responsible for causing congestion (i.e. drivers) who should pay.
- There were also a small number of drivers who felt that they would prefer to pay to drive rather than switch to public transport – so as a result, rejected the idea of having to pay tax for something that wouldn't benefit them.
- However, the more **common view was that everyone (i.e. taxpayers) should pay** for alternatives like better public transport, as it would be a tangible benefit for everyone in the city.

8. Comparison between focus groups and deliberative workshops

Summary

One of the objectives for the research was to test the value of deliberative engagement techniques. In service of this objective, we conducted six focus groups to compare the analytical outputs to those from the deliberative workshops, specifically in terms of the nuance in findings, participants ability to rank the options for tackling congestion, and the extent to which participants were able to consider the perspectives of others in their ranking.

Key findings:

1. The focus groups provided a snapshot sense of how participants feel about congestion now, and an indication of how the public might respond to measures being introduced. In particular, the unpopularity of charging and the widespread comparative support for public transport improvement, and the importance participants placed on emphasising ‘carrot’ over ‘stick’.

2. However, they also highlighted a number of methodological limitations, including low understanding and lack of engagement with policies under the scenarios (particularly ‘discouraging driving’), a lack of time and space to consider evidence and costs to taxpayers and defences or counter-arguments compared to the deliberative workshops – leading to differing principles and outcomes.

Objectives

One of the objectives for the research was to test the value of deliberative engagement techniques as a potential tool for use in the Commission’s wider work programme. This objective is primarily covered through the independent evaluation, the findings of which are published separately. However, this was also explored in part by conducting focus groups in parallel to the main deliberative project, to compare the outputs from both methods, and examine:

- How far participants in the focus groups were able to rank the options for approaching congestion;
- The extent to which the reasons for views were able to be uncovered, and the level of nuance in views;
- How far participants considered the perspectives of others and how far participants considered solutions on the basis of fairness (compared to self-interest).

Focus group design

To serve as a comparator, the focus groups were designed and run as ‘standard’ focus groups, in terms of the sampling and recruitment methods, length, moderation, and the number and

complexity of the topics covered. The locations matched those of the main deliberative project. The focus groups explored:

- Spontaneous views of road congestion
- The importance of congestion as an issue to address, and initial ideas for how it should be addressed
- Views on the impacts of congestion
- Views on the four high-level scenarios, and views on attractiveness, fairness and whether it is an approach government should consider
- Ranking the scenarios and the reasons for views
- Principles underpinning responses.

	Focus groups	Workshops
Length	90 minutes	2 x full day workshops
Participant numbers	Eight participants	24 participants per workshop, split into tables of 8
Format of session	Group discussion, led by moderator	Mix of group discussions led by moderator, and plenary sessions with the whole room and lead moderator, supported by experts

Table 15. Comparison of the focus group and workshop sessions.

The stimulus used in the focus groups sessions was limited compared to the workshops due to the time constraints of focus groups. Participants saw: a definition of congestion, information about the impact of congestion, and the 4 high-level scenarios. The scenarios used in the focus groups were the same as those introduced in the first wave of deliberative workshops, in terms of the level of detail and visuals provided, and are available in appendix.

Key findings from the focus groups

- Participants were engaged with the issue of congestion and thought it was important that congestion be reduced, due to the negative impacts it has.
- Outside of the congestion charge in London, awareness of the measures to reduce congestion was low. There were also misconceptions about the efficacy and impact of the congestion charge, and consequently fairly strong rejection of this.
- Encouraging greater use of public transport by improving services was seen as the best method for approaching the issue of congestion, although participants had little sense of how much this would cost or how it would be funded.
- Participants felt that emphasising 'carrot' over 'stick' (incentivising drivers to use alternatives rather than punishing them for driving) as well as providing good,

attractive alternatives to driving should be among key principles that should underpin the UK's approach to congestion.

Discussion of the extent to which the focus groups generated insight on ranking, nuance in reasons for views, and how participants made judgements, is provided below, with consideration of how the results compare to the deliberative workshops.

8.1. How far participants were able to rank the measures for approaching congestion

In the focus groups, participants worked in pairs to rank the scenarios from best to worst. It is striking to note that the rankings within each group were very consistent across all the focus groups and different locations, with almost all participants ranking the scenarios as follows (from most to least preferred):

1. More effective use of space
2. Disincentivising driving
3. Charging drivers
4. Accept congestion

The outliers to this pattern were:

- One of the focus groups in Bristol ranked 'charging drivers' below 'accept congestion', as did one pair of participants in one of the focus groups in Manchester – though the other scenarios were ranked in the same order as above.
- Three participants in Manchester and one in Nottingham selected 'accept congestion' as their preferred scenario – with the other scenarios ranked in the same order as above.

As discussed in section 5, while there was a fairly strong pattern in how participants ranked the scenarios in the workshops, there was more variation in the sample than is seen in the focus group ranking. Further, the ordering between 'discouraging driving' and 'charging drivers' changed in the workshops, as after further discussion participants felt that discouraging drivers felt less fair and less effective than charging drivers.

There are a number of limitations to the ability of participants to rank the measures in the focus groups, including:

- In the focus groups, participants said they did not feel they had enough information to make an informed decision when it came to the ranking the different scenarios for approaching congestion. Specifically, they wanted more information on the cost and efficacy of the policies under each scenario, and the experiences of others.
 - "I would need to know what it's like to be a driver – as it does not affect me personally." *Bristol focus group*

- The ranking exercise was also influenced by pre-existing knowledge of and familiarity with the different measures for tackling congestion. Knowledge of measures tended to be quite low, particularly with regards to 'discouraging driving'. However, participants had usually heard of the London congestion charge, though knowledge about the scheme was patchy – for example the level of the charge was rarely known. There were also several misconceptions about the scheme, for example, that it is privately run, or designed for profit. There was also a fairly common perception that the London congestion charge had been unsuccessful, due to the fact that levels of congestion in London are seen as very high. While a detailed case study about the London congestion charge was presented to good effect in the deliberative workshops, as well as information explaining the difficulty in measuring the impact of individual measures to tackle congestion, there was not time for this in the focus groups. As a result, pre-conceptions about the congestion charge often influenced the views of the group and how they ranked the scenarios.
- Participants did not have time to explore trade-offs involved in different measures, such as cost to taxpayers. When ranking the different measures from best to worst, encouraging greater use of public transport by improving services was selected as the best method for tackling congestion, although participants had little sense of how much this would cost. In the deliberative workshops, by contrast, participants were shown an estimated cost per household, and were asked whether their ranking would change as a result.

8.2. Uncovering the reasons for views

Analysis of the focus groups uncovered a number of reasons for views, primarily that:

- Incentives are preferable to disincentives, i.e. 'carrot' is preferable to 'stick';
- Measures that negatively impact drivers, or put too much onus on drivers, should be avoided;
- Measures should be fair and consider individual access to alternatives and ability to pay;
- Alternatives to drivers should be made available – specifically that public transport should be improved.

While there is some thematic consistency in terms of what came out in the deliberative workshops, comparing the analysis of the reasons for views shows that decisions made in the deliberative workshops were based on more reasoned and nuanced arguments, and less contradictory, instinctual or self-oriented views. Some examples of how rationale developed in the workshops compared to the focus groups include:

- Deliberative participants acknowledged that disincentives were necessary to achieve reductions in congestion. Rather than seeking carrot over stick, or the avoidance of disincentives they sought a balance of benefits against costs. Specifically, they suggested reduced public transport fares in light of any costs introduced to drivers.
- While deliberative participants were very focussed on avoiding measures that felt punitive to drivers in Wave 1, this became less important in Wave 2. Reasons given

for decisions were more often about considering the needs of the working population (i.e. commuters and those that drive for a living) rather than ‘drivers’.

- Fairness was often discussed in relation to alternatives and ability to pay, and a principle that emerged strongly in the deliberative workshops was around the affordability of measures. In addition to this, participants debated who should bear the cost of measures to reduce congestion, and discussed the importance of value for money for taxpayers, realised through the reinvestment of funds raised through charging into public transport improvement.
- The importance of alternatives to driving also came out strongly in the workshops, and was considered particularly important when introducing any disincentives (such as charging). Another component to this principle was that alternatives need to be in place *before* charging is introduced.

More detail on the drivers of views is explored in section 5, illustrating the depth of nuance elicited from the deliberative discussions.

8.3. How far participants considered the perspectives of others

In the focus groups, participants were able to think through a wide range of groups who might be disproportionately affected by congestion, including:

- Those who work shifts, who cannot work from home or get public transport at night;
- Those in lower paid jobs who don’t have the flexibility with their working hours and risk getting fired if late;
- Manual labourers who may be too exhausted after work to cycle or walk home (in contrast to office workers);
- Those with health conditions who may rely on driving;
- Families who may not find it practical to use public transport; and
- Tradesmen or other occupations who need to have a vehicle for their tools or equipment and so are unable to use non-driving methods of transport.

While focus group participants were able to list these groups relatively easily, it is less clear the extent to which they were able to consider their perspective in depth. A number of observations about this include:

- That other groups or individuals were rarely mentioned in the principles discussion or the reasons given for views, with the exception of the disabled, or those on a low income less able to pay.
- Instead – the extent to which measures were considered punitive to drivers was most commonly cited and discussed, especially among drivers, and rationale was often self-oriented.
- That participants occasionally mentioned that they did not know what others would think if they did not have a similar experience (e.g. living in a rural area).

- Compared to the deliberative workshops, participants rarely referred to other people's experience (i.e. other participants) as a reason why a particular measure would work or not, or a reasons that a certain measure felt fair or unfair.
- Compared to the deliberative workshops, attitudes and support for measures tended to vary more across key groups, based more on personal preference than considerations of broader society. For example, frequent drivers were much more likely to reject congestion charging as a measure than public transport users – due to the fact it would have more of an impact on them personally.
- That in the deliberative workshops, participants began to consider what would effectively change *everyone's* behaviour, and what would benefit the most people, rather than how they might continue to pursue their preferred travel mode.

Conclusions

The focus groups provided a snapshot sense of how participants feel about congestion now, highlighted the unpopularity of charging and the widespread comparative support for public transport improvement. They provide an indication of how the public might respond to measures being introduced and to high level public discourse about different measures to tackle congestion. However, we would caution a number of limitations of this methodology, particularly with regards to:

- Low understanding of and engagement with the specific policies under each scenario. For example, views of 'discouraging driving' were quite different in the focus groups compared to the workshops, as participants in the former had relatively low knowledge of how discouragements might work in practice, and so often relied on assumptions (and frequently misconceptions).
- Not having enough time to discuss the evidence and/or expert predictions of likely impact of each scenario. For example, lacking time and presence of experts to robustly refute misconceptions that congestion charging is ineffective in tackling congestion (due to perceptions of continued high levels of traffic in London). This meant misconceptions expressed by a small number of participants could influence other focus group participants.
- Not having time or space to consider of costs to taxpayers, meaning it was unclear whether support for public transport improvements and investment would remain as firm in light of personal and societal costs.
- Not having time or space to consider explicit defence or counter argument considered with regards to 'accepting congestion', such as discussions around peak car – meaning the groups were particularly susceptible to 'research effect' around solutionism.

It would also be inappropriate to make claims to having used participatory methods or civic engagement on this issue after conducting focus groups in isolation, particularly as

participants stated that they did not feel they had enough information to make an informed decision.

9. Appendix

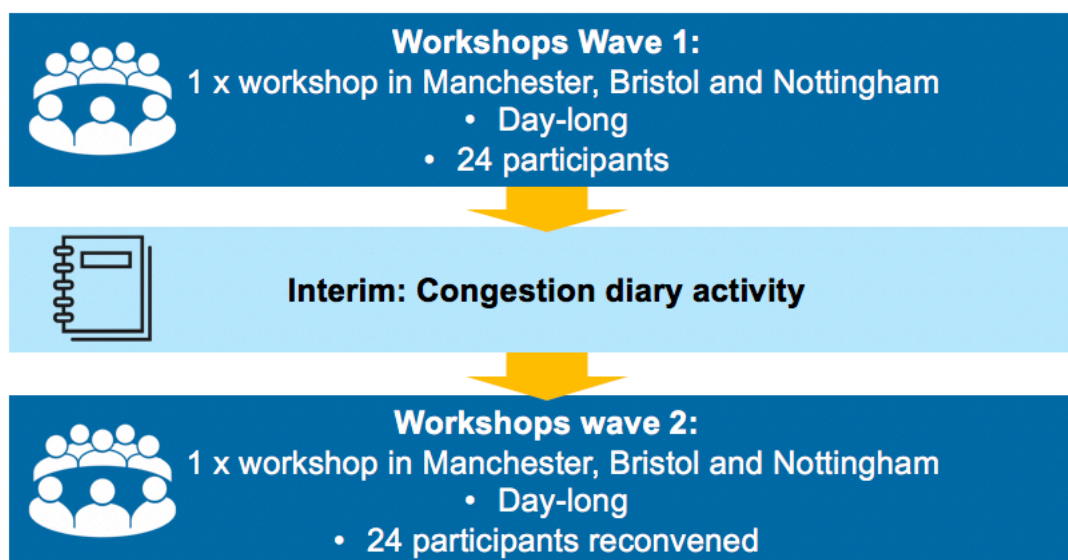
9.1. Methodology

The **focus groups were conducted in three locations** (Bristol, Manchester, Nottingham). For each of the **six groups**, we recruited **eight participants** with a spread of age, gender, ethnicity and socio-economic grade. Within each group we also recruited a mix of drivers and non-drivers, as well as parents and non-parents.

The **day-long face-to-face workshops were conducted in the same three locations, with 24 participants** in each location.

In the interim between the two workshops, we gave participants a 'congestion diary' to fill out with their experiences of congestion and how they thought about congestion after learning more about the topic.

We then reconvened the same participants for the second workshop in each location.



Each workshop had a spread of demographics to be reflective of the local population and included groups who were likely to have a particular 'stake' in the congestion debate, including:

- Drivers with heavy car use (including driving for work) – *10 in each location*;
- Drivers with medium car use – *6 in Manchester, 8 each in Bristol and Nottingham*;
- Non-drivers / occasional drivers – *6 in Manchester, 5 each in Bristol and Nottingham*;

- Cyclists and public transport users – 3 cyclists and 17 public transport users in Manchester, 5 cyclists and 14 public transport users in Nottingham, 6 cyclists and 15 public transport users in Bristol;
- Those with young children – 3 parents of primary-school-aged children in Manchester, 4 in Nottingham, 5 in Bristol.

Participants were paid a total of £200 to take part in both workshops. A total of 71 participants attended the first workshop, 67 attended the second workshop.

Recruitment was conducted by BritainThinks' network of professional, specialist market research recruiters, according to a pre-agreed screening questionnaire. Quotas were also set on recruitment methods used in each location, to ensure equal distribution in each location between free-find, 'panel' and social media recruitment.

9.2. Sample frame for deliberative workshops

For each location, participants were recruited to the below recruitment specification. 25 participants were recruited per location.

Recruitment overview: 25 recruited per location

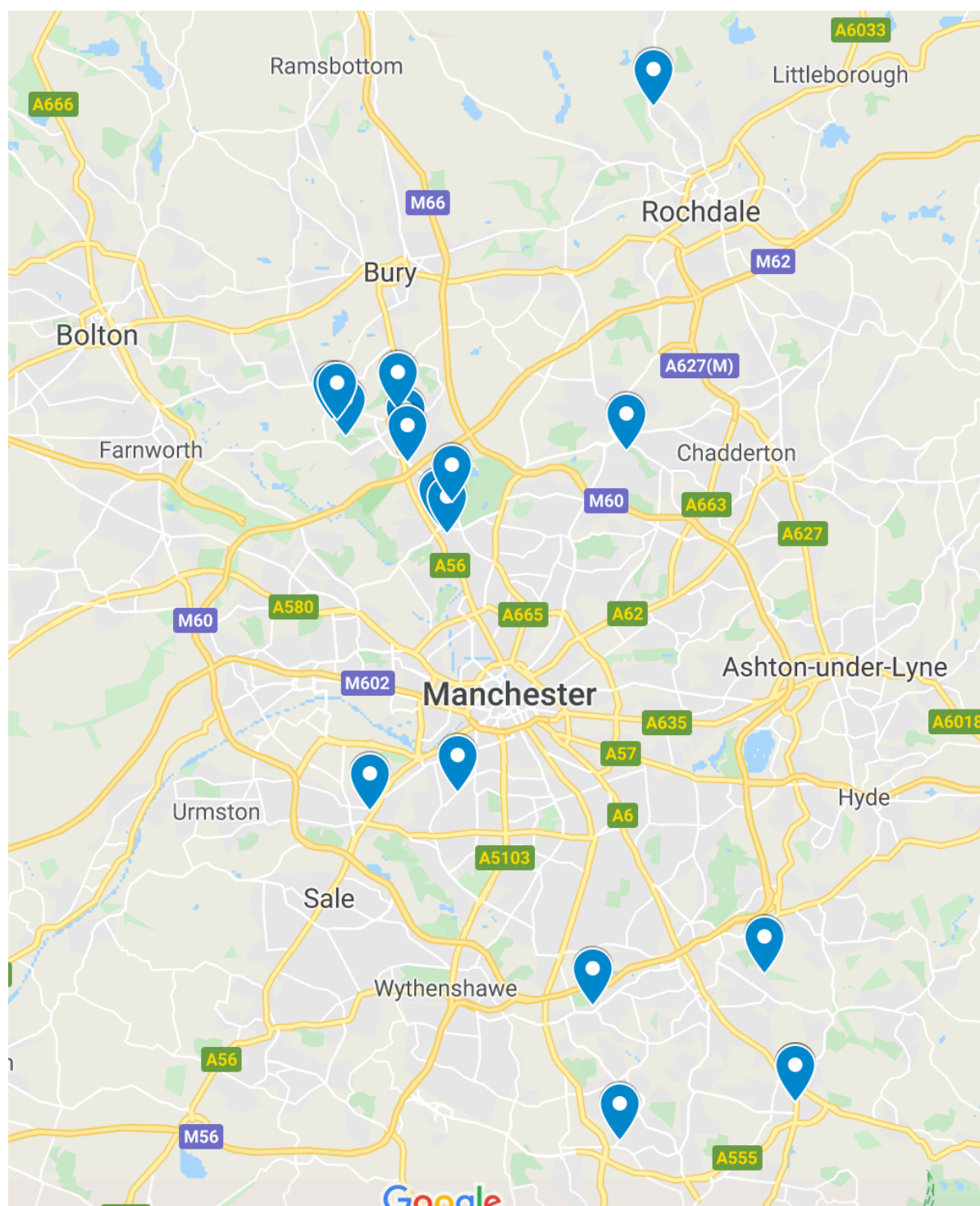
	Criteria	Quota per location
Age	• 18-25	Min. 5
	• 26-45	Min. 5
	• 46-64	Min. 5
	• 65+	Min. 5
Gender	• Men	Min. 10
	• Women	Min. 10
	• Other	Record
Ethnicity	• BAME ¹⁹	Bristol: Min. 3 Manchester: Min. 6 Nottingham: Min. 6
Location	• Urban	Min. 6
	• Suburban	Min. 6
	• Rural	Min. 3
Family status	• Children, of primary school age (5-11), living with the respondent	Min. 3
	• Children of secondary school age (11-16), living with the respondent	Min. 3
	• Children, older than 16 or no longer living at home	Record

¹⁹ Ethnicity quotas are informed by ONS 2011 Census ethnic group data for each city, and 'softened' to account for the inclusion of participants from suburban / rural areas as well as those from urban areas. Data source: <https://www.nomisweb.co.uk>

	<ul style="list-style-type: none"> No children 	Record
SEG	<ul style="list-style-type: none"> AB C1C2 D E (unemployed) 	Min. 4 Min. 6 Min. 2 Min. 2
Driver type	<ul style="list-style-type: none"> 'Heavy': drive any vehicle at least once per day 'Medium': drive any vehicle at least once a week 'Light': drive at least once a month 'Occasional': drive less than once a month 'Non-drivers' 	Min. 6 Min. 6 Min. 3 Min. 3
Driver journey types	<ul style="list-style-type: none"> Min. 2 to drive as part of their job (e.g. couriers, delivery drivers, tradespeople) A mix of journey types (e.g. inter-city, motorway, countryside/local roads) Min. 6 to regularly drive within the city 	
Cyclists	<ul style="list-style-type: none"> Cycle at least once a week, within the city 	Min. 2 (at least 1 to be a non-driver)
Public transport users	<ul style="list-style-type: none"> Travel by train/underground at least once a week Travel by bus/tram at least once a week 	Min. 2 (at least 1 to be a non-driver) Min. 2 (at least 1 to be a non-driver)
Additional criteria	<ul style="list-style-type: none"> Exclude anyone that has worked in market research, marketing/advertising, government, media, transport (except drivers e.g. taxi, HGV) or regulation None to have taken part in market research in the past 6 months No 2 people to know each other 	

9.2.1. Geographic spread of the sample by location

9.2.1.1. Manchester*

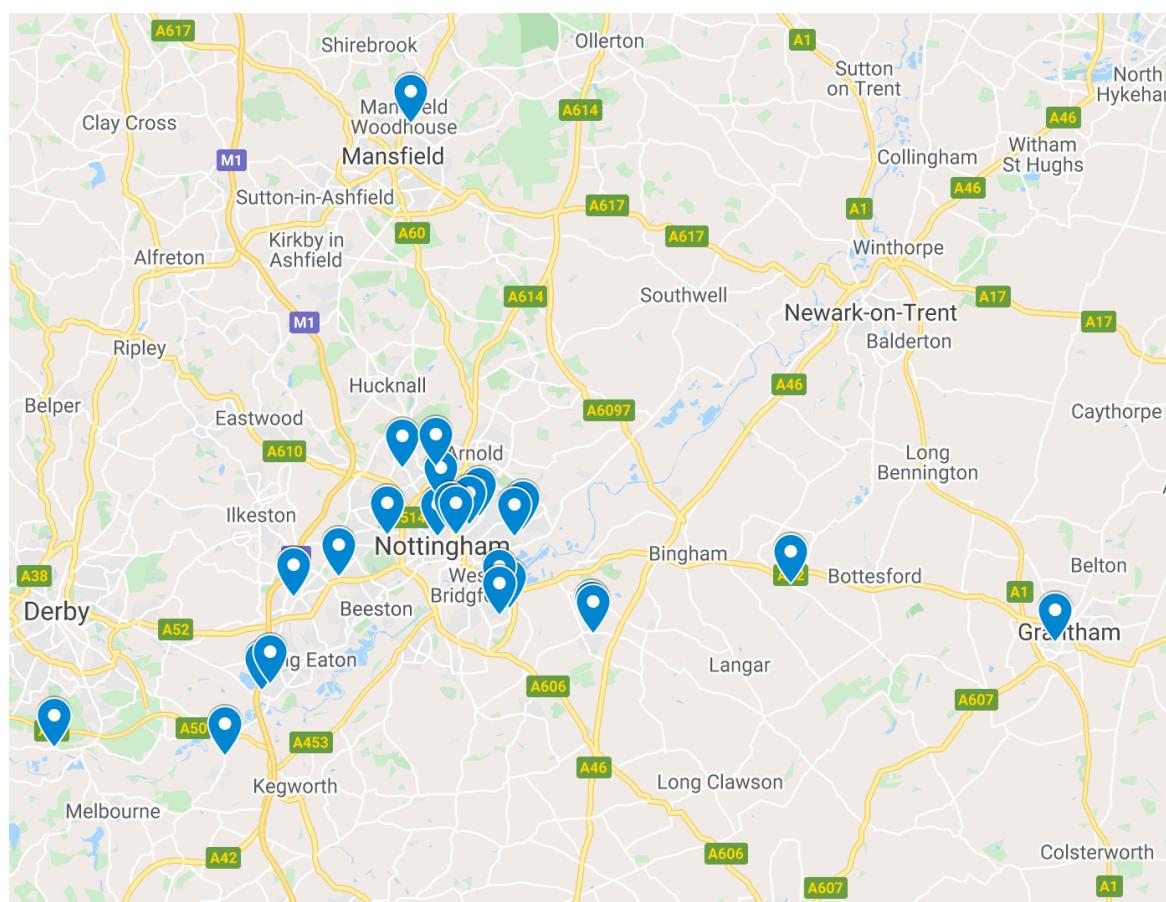


*Two participants were from the Colne area and one from Clitheroe, these locations are not shown on the map.

9.2.1.2. Bristol



9.2.1.3. Nottingham



9.3. Focus group agenda

Section	Key discussion points and probes
Pre task	<p>On arrival, participants to complete a pre-task worksheet:</p> <ul style="list-style-type: none"> • What does the term 'road congestion' mean to you? [open text box] • How often do you experience road congestion? [Daily; Weekly; Monthly; Less often; Never] • How important do you think reducing road congestion is? <ul style="list-style-type: none"> ○ For you personally [Very important; somewhat important; not that important; not at all important] ○ For the country [Very important; somewhat important; not that important; not at all important]

	<ul style="list-style-type: none"> • “How difficult do you think it is to reduce road congestion?” <ul style="list-style-type: none"> ○ [Very difficult; somewhat difficult; not that difficult; not at all difficult] • What one method, if any, would you choose to tackle congestion? <ul style="list-style-type: none"> ○ Why?
1. Introductions	<p><i>Introduce moderator, BritainThinks and the purpose of the discussion:</i></p> <p>The research is being conducted on behalf of the National Infrastructure Commission, an independent body that provides advice to government on long-term infrastructure needs: from energy to transport. Today we will be discussing the topic of road congestion and your views of different approaches to reducing congestion. The session will be focused on your opinions and experiences of this topic and there are no right or wrong answers.</p> <p><i>Run through key ‘housekeeping’ details, including:</i></p> <ul style="list-style-type: none"> • Ensure consent forms signed • Importance of hearing from everyone in the room • Confidentiality/anonymity • Obtaining permission to record • Introducing any observers <p>Please could you all introduce yourselves by sharing: your name, what you do for a living, and how you travelled here tonight (i.e. mode of transport, how long it took)</p>
2. Spontaneous views of road congestion	<p><i>Moderator to ask participants to feedback individually on the pre-task worksheet and lead discussion exploring spontaneous views of road congestion:</i></p> <ul style="list-style-type: none"> • What do you associate with the term ‘road congestion’? <ul style="list-style-type: none"> ○ Moderator to prompt around objects, thoughts, places, images and feelings: <ul style="list-style-type: none"> ▪ What do you picture? Hear? ▪ How does the term make you feel? What emotions come up? • Where/when do you experience congestion? How often? • What impact, if any, has this had on you? • To what extent do you ‘work around’ or ‘plan for’ congestion? How? • How much of an issue is congestion? Why?
3. Exploring the current state of congestion and its impacts	<p><i>After exploring spontaneous views: moderator present A3 showcard with definition of road congestion, before checking participants have understood. Moderator to leave on table for participants to refer back to throughout the session:</i></p> <p>‘There are lots of benefits to cities: when you bring people together, there are more job opportunities, increased productivity, and cultural benefits. But</p>

	<p>densely populated cities also leads to congestion – as more people want to travel on the roads than there is road space.</p> <p>In urban areas, congestion is highest at peak times when there are lots of people trying to get to the same place at the same time. Congestion is characterised by slower speeds, increased queuing and longer journey times, compared to times where there is free-flowing traffic.'</p> <ul style="list-style-type: none"> Any questions or reflections? <p><i>Moderator to lead discussion around spontaneous views on the impacts of congestion:</i></p> <ul style="list-style-type: none"> What do you think the main effects of congestion are? How much are you affected by congestion? <ul style="list-style-type: none"> Who is most affected by high levels of congestion? <p><i>Moderator to briefly run through impacts of congestion:</i></p> <ul style="list-style-type: none"> Economic Environmental Safety Wellbeing and quality of life Anything new/any surprises? Can you imagine living in a future with greater congestion? <ul style="list-style-type: none"> How would it impact you? <p><i>Moderator to lead short discussion on spontaneous views of how, if at all, congestion should be tackled:</i></p> <ul style="list-style-type: none"> How important is it that congestion is reduced? How do you think congestion should be reduced? <ul style="list-style-type: none"> What kinds of measures are appropriate and fair? Are there any measures that are considered less appropriate? Less fair? Why? Who should be considered when thinking about measures to reduce congestion?
<p>4. Views on existing levers for approaching congestion</p>	<p>The government is thinking about how it might approach the issue of congestion in future. Generally, there isn't the space available in cities to widen roads or build new ones. Outside of cities, it has also be seen that building or widening roads tends to be only a temporary solution for congestion, as new available space encourages more driving and roads tend to quickly fill up and become congested again.</p> <p>However, there are a number of ways congestion in cities could be tackled, and I would like to get your views on four key ideas for how this could be done.</p>

	<p><i>Moderator to introduce high-level information showcards for the four scenarios:</i></p> <ul style="list-style-type: none"> • <i>Making more effective use of space</i> • <i>Charging drivers</i> • <i>Discouraging people from driving</i> • <i>Accepting congestion</i> <p><i>Each pair to have one showcard between them for each scenario. For each, explore:</i></p> <ul style="list-style-type: none"> • Initial reaction? • What are your thoughts on the 'main idea' / and examples given? <ul style="list-style-type: none"> ○ How might this affect you? ○ How might it affect other people? <p><i>Overall:</i></p> <ul style="list-style-type: none"> • How do you feel about this way of tackling congestion? <ul style="list-style-type: none"> ○ How does it compare to the previous measure we just explored? ○ How attractive is it, and why? ○ How fair is it, and why? ○ <i>Flipchart responses</i> • Do you think it is an approach government should consider <ul style="list-style-type: none"> ○ <i>Flipchart reasons why/why not</i>
<p>5. Rationale for ranking levers and identifying principles</p>	<p><i>Moderator to lead discussion on each lever in turn, noting down any questions that come up and working with participants to help them rank the levers from best to worst, e.g.</i></p> <ul style="list-style-type: none"> • Which idea did you most support overall? • Which idea did you least support overall? <p><i>Moderator to fully explore the rationale for the ranking of the levers:</i></p> <ul style="list-style-type: none"> • Why have you ranked these ones as the best? • Why have you ranked these ones as the worst? • <i>Explore any differences in view – and reasons</i> • Are there any other kinds of measures you think should be used to tackle congestion, not covered here? <p><i>Moderator to flipchart all reasons given for ranking</i></p> <p><i>Moderator to lead discussion summarising views:</i></p> <ul style="list-style-type: none"> • Out of all the ideas we looked at, which do you think would be most effective at reducing congestion? And least? • Out of all the ideas we looked at, which do you think would be most fair? And least? <ul style="list-style-type: none"> ○ Explore reasons for views <p><i>Reflecting on the rationale for ranking –</i></p>

	<ul style="list-style-type: none"> • Looking at this list of reasons, which do you think are the most important to bear in mind when thinking about how to control congestion? • Would you add any other 'principles' to this list? <p>Finally, we want to understand what you would do if you were put in charge of reducing congestion – it could be one or a combination of some of the measures you have heard today, or something different.</p> <p><i>Participants to complete final worksheet:</i></p> <p><i>Based on everything discussed today:</i></p> <ul style="list-style-type: none"> • <i>How balanced and credible do you think the information you heard/saw in the session was?</i> <ul style="list-style-type: none"> ○ <i>[Very balanced and credible, somewhat balanced and credible, not that balanced and credible, not at all balanced and credible]</i> • <i>How useful do you think the information you heard/saw in the session was in helping you discuss road congestion and/or form opinions?</i> <ul style="list-style-type: none"> ○ <i>[Very useful, somewhat useful, not that useful, not at all useful]</i> • <i>How important do you think reducing road congestion is?</i> <ul style="list-style-type: none"> ○ <i>For you personally [Very important; somewhat important; not that important; not at all important]</i> ○ <i>For the country [Very important; somewhat important; not that important; not at all important]</i> • <i>“How difficult do you think it is to reduce road congestion?”</i> <ul style="list-style-type: none"> ○ <i>[Very difficult; somewhat difficult; not that difficult; not at all difficult]</i> • <i>What one method, if any, would you choose to tackle congestion?</i> <ul style="list-style-type: none"> ○ <i>Why?</i> • <i>Have your views on congestion changed at all since before this session?</i> <ul style="list-style-type: none"> ○ <i>[My views have changed a lot, my views have changed a little, my views have not changed]</i> ○ <i>If yes, please tell us how your views have changed:</i>
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Conclusions	<i>Moderator to thank participants. Participants to sign incentive signature sheets.</i>
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9.4. Workshop agenda

9.4.1. Day 1 full agenda

Day 1 of the workshops was used to build participants' knowledge of the context of congestion, existing congestion measures and the future of congestion (i.e. under 'status quo' conditions).

Session	Outline
Arrivals	<ul style="list-style-type: none"> Participants arrive at the venue and complete research and film consent forms. Teas and coffees provided. Participants fill out a pre-workshop worksheet
Introduction	<p><i>Aim: to introduce participants to the topic and purpose of the research, to build rapport and warm up discussion.</i></p> <ul style="list-style-type: none"> Plenary session: <ul style="list-style-type: none"> BritainThinks lead facilitator welcomes participants, introducing them to the purpose of the two days of workshops, key team members and ground rules. Sir John's video introduction is played outlining who the NIC are, what they do and why it is important to hear the views of citizens – including a brief account of how the results will be used. Expert stakeholders introduce themselves and say a little bit about their role/interest in the area. BritainThinks lead facilitator to run through the agenda for the day. Breakout tables <ul style="list-style-type: none"> Table moderators introduce themselves, reiterate ground rules, and re-introduce the 'car park' and 'knowledge bus' <ul style="list-style-type: none"> Obtain permission for audio recording Cover anonymity Warmups and icebreakers <ul style="list-style-type: none"> Participants to introduce themselves to the rest of their table, outlining their name, what they do for a living, and how they travelled to the workshop today. Table discussion: <ul style="list-style-type: none"> What forms of transport do they use most regularly, and less regularly <i>Draw / use emoji stickers to show the way you feel about travelling around your local area. Participants to show the table and explain their drawing.</i>
Spontaneous views on congestion	<p><i>Aim: to explore participants' spontaneous associations with congestion, their experiences of it, and their (unprompted) views of how much of a</i></p>

	<p><i>problem it is – starting to hear from one another and sharing experiences of congestion.</i></p> <ul style="list-style-type: none"> • Table discussion: <ul style="list-style-type: none"> ○ Participants feedback their responses from their worksheets and moderator to lead discussion aimed at understanding their spontaneous views of congestion. <ul style="list-style-type: none"> ▪ <i>What do you associate with the term ‘road congestion’?</i> <ul style="list-style-type: none"> • Moderator to prompt around objects, thoughts, places, images and feelings and flipchart discussion. <ul style="list-style-type: none"> ○ <i>What do you picture? Hear?</i> ○ <i>How does the term make you feel? What emotions come up?</i> ▪ <i>Where/when have you experienced congestion? How frequently? What impact has this had on you?</i> ▪ <i>How much of an issue is congestion?</i> <ul style="list-style-type: none"> • <i>For you personally / for the country? Why?</i> ○ Participants complete a congestion map exercise, marking where congestion is worst on a map of their local area • Plenary session: <ul style="list-style-type: none"> ○ 1-2 participants from each table to summarise the views of the table and feedback their map to the rest of the room. ○ Maps collected at the front and stuck to the wall
<p>The current state of congestion</p>	<p><i>Aim: to build participants’ knowledge about the current state and drivers of congestion, and to understand what information is new or surprising and whether anything affects their views.</i></p> <ul style="list-style-type: none"> • Plenary session: <ul style="list-style-type: none"> ○ BritainThinks lead facilitator runs the ‘pub quiz’, covering facts about the current state of congestion in the UK. ○ Each table is a team and the winning table will receive a small prize. • Plenary session: BritainThinks lead facilitator to play from the front an animation conveying information on the current state of congestion (definition of congestion, where it happens, drivers etc.). • Table discussion: <ul style="list-style-type: none"> ○ <i>Do you have any questions on what you have just seen?</i> ○ Moderator to note any important clarification questions, which are put to the expert on the table. Moderator remind participants that they are encouraged to jot down any emerging / burning questions on post-its which we will collect. ○ <i>What, if anything, is new or surprising?</i> <ul style="list-style-type: none"> ▪ <i>How does the information you have just seen compare to what you thought about congestion before today? EG how similar or different to what you wrote on your worksheet / what we discussed as a group?</i> ○ <i>What stood out to you?</i> <ul style="list-style-type: none"> ▪ <i>Had you thought about the benefits of cities vs. the downsides of congestion before? What did you think of this?</i>

	<ul style="list-style-type: none"> ▪ <i>Had you heard of the concept of new road space eventually causing roads to fill back up again? What did you think of this?</i> ○ <i>How does this information affect the way you feel/think about congestion?</i> • Plenary session: <ul style="list-style-type: none"> ○ 1 participant from each table to share the most surprising fact or bit of information from their table.
The impacts of congestion	<p><i>Aim: to explore participants' spontaneous views on the impacts of congestion and then build knowledge on both impacts and the type of people impacted; to encourage participants to think about these issues from alternative perspectives.</i></p> <ul style="list-style-type: none"> • Table discussion: <ul style="list-style-type: none"> ○ Moderator introduce mind map exercise: participants to work in pairs to create a mind map of the direct and indirect impacts associated with congestion. ○ Moderator to lead discussion around spontaneous views on the impacts of congestion: <ul style="list-style-type: none"> ▪ <i>What do you think the main impacts of congestion are? [flipchat]</i> ▪ <i>Who is most affected by high levels of congestion?</i> ▪ <i>How important do these impacts feel to you personally? How important do they feel for society generally?</i> ○ BritainThinks table moderators to run through the information from impacts of congestion with the group. <ul style="list-style-type: none"> ▪ <i>What, if anything, was new or surprising in the information you just heard?</i> ▪ <i>How do these impacts compare to the ones you came up with earlier?</i> ▪ <i>Can you imagine living in a future with greater congestion? How would it impact you? Your community? Your colleagues?</i> ▪ <i>Does anyone have any questions they want to ask the expert? [Capture emerging questions / points of clarity and put to table experts]</i> ○ Moderator to lead discussion on who is affected by congestion: <ul style="list-style-type: none"> ▪ <i>Who do you think is more likely to be affected by the impacts of congestion?</i> <ul style="list-style-type: none"> • <i>In what circumstances do you think people will be most affected (i.e. when/where/doing what)?</i> • <i>Are there any groups of people you think might be more affected?</i> ▪ <i>What types of people do you think are less likely to be affected by congestion?</i> ○ Moderator introduce pen portraits of people in different circumstances who may be affected by the negative impacts of congestion (someone running a delivery business, someone who relies on public transport, someone with a health condition): <ul style="list-style-type: none"> ▪ <i>Does this resonate with anyone else's experience?</i> ▪ <i>How, if at all, does this information affect the way you think about congestion?</i>

	<ul style="list-style-type: none"> ○ Moderator to introduce real life pen portraits exercise: write a short account of how congestion affects you in your day-to-day life or a time where it has affected you/someone you know. ○ As a table participants to select the 1-2 pen portraits they believe show the biggest impact from congestion / the biggest range (i.e. someone affected a lot, someone hardly affected) – to feedback to the group. • Plenary session: <ul style="list-style-type: none"> ○ 1-2 participants from each table feedback their personal accounts of the impacts of congestion to the room
Recap	<p><i>Aim: to understand participants' views on what the most significant and pressing impacts of congestion are.</i></p> <p>Half of participants to move to the next table and share their personal congestion story with someone from another table. Pairs encouraged to explore how the other person feels about the impacts of congestion and which of the impacts they think are the most important and why.</p> <ul style="list-style-type: none"> • Table discussion: <ul style="list-style-type: none"> ○ Participants to feedback from the conversations they have just had.
Existing measures	<p><i>Aim: to explore participants' initial views on how (if at all) congestion should be tackled, to build high level knowledge about existing levers ahead of Workshop 2, and gather initial feedback about these levers.</i></p> <ul style="list-style-type: none"> • Table discussion: <ul style="list-style-type: none"> ○ Moderator to lead short discussion on spontaneous views of how, if at all, congestion should be tackled: <ul style="list-style-type: none"> ▪ <i>How important is it that congestion is reduced? Have your views on this changed compared to this morning? How and why?</i> ▪ <i>How do you think congestion should be reduced? [flipchart] What measures are appropriate and fair?</i> ▪ <i>Who, if anyone, should take responsibility for reducing congestion?</i> ▪ <i>Who should be expected to take actions or do things differently?</i> ▪ <i>Who/what should be considered when thinking about ways to reduce congestion?</i> ○ BritainThinks table moderators to work through High level scenarios information with the table. [Moderator to share handouts summarising this information for participants to refer back to throughout the discussion]. Questions and points of clarity to be recorded. ○ <i>How do you feel about the measures discussed?</i> Throughout discussion, moderator to probe and capture the rationale / reasons behind the views of the different measures. <ul style="list-style-type: none"> ▪ <i>What are the benefits / risks of each?</i> ▪ <i>Who would be affected by each – who are the winners/losers?</i> ▪ <i>Any questions about the different measures? (to be put to the experts)</i> After flip-charting questions, group to select 2-3 top to pose to the experts.

	<ul style="list-style-type: none"> Plenary session: <ul style="list-style-type: none"> Expert Q&A: questions from each table are posed to the experts in the room (supported by smaller group discussions)
Existing measures and potential solutions	<ul style="list-style-type: none"> Plenary: 'Talking heads' videos on congestion are played (Steve Gooding and Ann O'Driscoll) Table discussion: <ul style="list-style-type: none"> Moderator to continue discussions of existing measures, after clarifications. <ul style="list-style-type: none"> Participants to individually rank the four scenarios from 1st – 4th. <i>At this point, which do you feel more supportive / less supportive of, and why?</i> <i>Which measures do you think are most effective at reducing congestion?</i> <i>How fair do you think each of the measures is? Who might they impact most?</i> <i>Are there any other kinds of measures you think should be used to tackle congestion? Are there other things that could be considered?</i> <i>How do you think you would reduce congestion in your city?</i> <ul style="list-style-type: none"> <i>Are there any ideas for approaching congestion that we haven't covered so far today?</i> <i>Do you have any big questions about approaching congestion that haven't been answered so far?</i> Plenary session: 1-2 participants from each table share their idea for approaching congestion with the room. Table discussion: <ul style="list-style-type: none"> Moderator leads a discussion wrapping up key themes of day: <ul style="list-style-type: none"> <i>What do you think of what you have heard today?</i> <i>How, if at all, have your views of congestion changed?</i> <i>To what extent, if at all, do you think we should change how we are currently approaching the issue of congestion?</i> <p>Participants complete a post-workshop worksheet to track how, if at all, their views have changed and why.</p>
Re-cap of key themes and close	<p>Aim: summarise participants views from the day and instruct them on the interim activity.</p> <ul style="list-style-type: none"> Plenary session: <ul style="list-style-type: none"> Lead facilitator to recap key conclusions from the day Representative from the NIC to thank participants for their contribution Introduce interim diary activity, explain what we will cover in second workshop, and remind of timings and location. Participants complete evaluation forms.

9.4.2. Day 2 full agenda

Day 2 of the workshops was used to present a list of different policies and scenarios for tackling congestion, for participants to respond to, debate and rank.

Section	Outline
Arrivals	<ul style="list-style-type: none"> Participants arrive at the venue and are shown to their table. Teas and coffees provided. N.B. Key outputs from Day 1 to be stuck up on the walls for participants to use as reference points throughout the day.
Welcome and re-cap of day 1	<p><i>Aim: to help warm up participants and recap on key findings from Day 1 (across the three locations)</i></p> <p><u>Plenary session:</u></p> <ul style="list-style-type: none"> BritainThinks lead facilitator and NIC representative welcome back participants. Film crew (Nottingham) and observers introduced. BritainThinks lead facilitator to run through the agenda and aims for the day. <ul style="list-style-type: none"> Purpose: to inform the advice NIC provides to government The aim for the day is to understand in detail their responses to the four scenarios, which ones they prefer and why. We will also think about the overall principles that should guide decisions made about congestion. Member of BritainThinks moderating team give a presentation re-capping Day 1, using a 'you asked, we answer' format. <p><u>Table discussion:</u></p> <ul style="list-style-type: none"> Permission for audio recording, reiterate ground rules Participants to re-introduce themselves, and briefly, their main mode of transport used Moderator to lead a short warm-up discussion about the participants' diary task: Did you notice or think about any of the impacts of congestion since the last workshop? <p><i>Probes:</i></p> <ul style="list-style-type: none"> <i>What has your experience of congestion been like since then?</i> <i>Did you notice anything new following the workshop?</i> <i>Have you talked to anyone (e.g. friends, family, colleagues) about congestion following the workshop?</i>
Scenarios, part 1	<p><i>Aim: to explore participants views of each of the four scenarios and the policy areas which sit under it. To understand the principles by which they judge and make decisions about the fairness of congestion measures.</i></p> <p><u>Plenary session:</u></p> <ul style="list-style-type: none"> BritainThinks lead facilitator to introduce the scenarios rotation exercise: participants will rotate around the room to visit 4 policy stations (making more effective use of space, charging drivers, discouraging driving and accepting congestion).

	<ul style="list-style-type: none"> • Each station will have: a laptop to play videos, posters to describe the high-level scenario, the policy options, case studies and pen portraits. • Participants spend 20 mins exploring each station. An expert will be on hand to answer any participant questions. • Each participant will have a small booklet with a recap of the key information and a blank space to capture their own notes. Each page will also have a framework for participants to score policies out of 10, thinking about how much they would like to see them used to tackle congestion. <ul style="list-style-type: none"> ○ Lead facilitator and booklet to outline a guide to scale: <ul style="list-style-type: none"> ▪ 0 = I would definitely not like to see this measure used to tackle congestion ▪ 5 = I am neutral about whether I would like to see this measure being used to tackle congestion ▪ 10 = I would definitely like to see this measure used to tackle congestion • Participants will score the policies individually in their booklets after viewing all of them. • Participants will then spend 20 mins discussing the scenario on their tables and ranking the policies as a table, led by the moderator, before rotating to the next one.
	<p>Participants visit scenario one. Moderators should:</p> <ol style="list-style-type: none"> 1. Play the scenario video 2. Introduce the information and order to be read: 1. high-level explanation, 2. specific policy areas, 3/4 case studies/pen portraits. 3. Instruct participants to note down things in their booklets as they read, particularly: <ul style="list-style-type: none"> ▪ Which policy areas they do and do not like and why. ▪ How this scenario compares with the last one. ▪ How fair they think this scenario and the policies are. ▪ How effective they think this scenario and the policies are. 4. Encourage participants to ask questions of the expert throughout. 5. Ask experts to add in any additional examples or information 5 mins before the end. 6. Remind participants to score each policy out of 10
	<p><u>Table discussion</u> of scenario one. See specific questions for each scenario.</p>
	<p>Participants visit scenario two. Moderators should:</p> <ol style="list-style-type: none"> 1. Play the scenario video 2. Introduce the information and order to be read: 1. high-level explanation, 2. specific policy areas, 3/4 case studies/pen portraits. 3. Instruct participants to note down things in their booklets as they read, particularly: <ol style="list-style-type: none"> a. Which policy areas they do and do not like and why. b. How this scenario compares with the last one. c. How fair they think this scenario and the policies are.

	<p>d. How effective they think this scenario and the policies are.</p> <ol style="list-style-type: none"> Encourage participants to ask questions of the expert throughout. Ask experts to add in any additional examples or information 5 mins before the end. Remind participants to score each policy out of 10.
	<p><u>Table discussion</u> of scenario two. See specific questions for each scenario.</p>
	<p><u>Plenary session</u>:</p> <ul style="list-style-type: none"> 1-2 participants from each table to recap how, if at all, they think the scenarios/policies could be implemented, i.e. how would you make this work effectively?
Scenarios, part 2	<p><i>Aim: to explore participants views of each of the four scenarios and the policy areas which sit under it. To understand the principles by which they judge and make decisions about the fairness of congestion measures.</i></p> <p>Participants visit scenario three.</p> <ol style="list-style-type: none"> Play the scenario video Introduce the information and order to be read: 1. high-level explanation, 2. specific policy areas, 3/4 case studies/pen portraits. Instruct participants to note down things in their booklets as they read, particularly: <ol style="list-style-type: none"> Which policy areas they do and do not like and why. How this scenario compares with the last one. How fair they think this scenario and the policies are. How effective they think this scenario and the policies are. Encourage participants to ask questions of the expert throughout. Ask experts to add in any additional examples or information 5 mins before the end. Remind participants to score each policy out of 10.
	<p><u>Table discussion</u> of scenario three. See specific questions for each scenario.</p>
	<p>Participants visit scenario three.</p> <ol style="list-style-type: none"> Play the scenario video Introduce the information and order to be read: 1. high-level explanation, 2. specific policy areas, 3/4 case studies/pen portraits. Instruct participants to note down things in their booklets as they read, particularly: <ol style="list-style-type: none"> Which policy areas they do and do not like and why. How this scenario compares with the last one. How fair they think this scenario and the policies are. How effective they think this scenario and the policies are. Encourage participants to ask questions of the expert throughout. Ask experts to add in any additional examples or information 5 mins before the end. Remind participants to score each policy out of 10.

	<p>Table discussion of scenario four. See specific questions for each scenario.</p>
Summary and feedback	<p><i>Aim: to understand which scenarios and policy areas participants' support the most and which are least popular, and the reasons behind this.</i></p> <p>Table discussion: Moderator to give a quick recap the four scenarios using the high-level scenario A4 sheets.</p> <ul style="list-style-type: none"> Moderators to ask participants to rank the scenarios (1st to 4th) individually on A4 worksheets, according to how much they would like to see them used to tackle congestion. <p>Moderator to lead an initial discussion summarising their tables' views on all four scenarios:</p> <ul style="list-style-type: none"> Moderator to quickly go around the table and ask each participant for their best and worst ranked option - to get a quick read on the table ranking Which scenario area did you most support overall? Why? Which scenario area did you support least? Why? <p>Plenary session:</p> <ul style="list-style-type: none"> 1-2 participants from each table to feed back their ranking and rationale, commenting on the extent of similarity or different between responses (e.g. did everyone vote the same way? What were the key debates or outliers?)
Ranking ways of approaching congestion	<p><i>Aim: to explore the ways participants rank the policies and scenarios for tackling congestion and understand which measures have the most and least support.</i></p> <p>Table exercise: Moderators introduce the solutions packages exercise (combining different scenarios with an indication of efficacy/costs). Explain that we want to understand what solutions they would put in place, if they were in charge. Experts will join the tables to ensure discussions are grounded in reality and that participants have a clear sense of trade-offs throughout.</p> <p>Note to moderator: for the purpose of the exercise the tax increase is to be considered a rough average for all households (rather than in the context of a specific method e.g. income/council).</p> <p>Participants work in pairs to read and discuss the solutions and then:</p> <ul style="list-style-type: none"> Individually select their top 2 preferred solutions by writing the numbers and reasons on their worksheet Individually select their worst solution by writing the number and reasons on their worksheet <p>After selection, moderator to ask participants to add scores /10 to their top 2 and worst options.</p> <ul style="list-style-type: none"> Reminder of scale: <ul style="list-style-type: none"> 0 = I would definitely not like to see this measure used to tackle congestion

	<ul style="list-style-type: none"> ○ 5 = I am neutral about whether I would like to see this measure being used to tackle congestion ○ 10 = I would definitely like to see this measure used to tackle congestion <p><u>Table discussion:</u></p> <ul style="list-style-type: none"> • Tell me about which solution package you picked and why? <ul style="list-style-type: none"> ○ How did you make the decision / what did you base it on? <i>(moderator listen out for and take note of the factors influencing the decision, e.g. fairest for drivers/everyone, most effective, least restrictive on freedoms, best for environment, etc)</i> • How do you think your solution might impact different people in society? <i>Probes:</i> <ul style="list-style-type: none"> ○ Who is it fairest for and why? ○ Are there any people it might be less fair/work less well for? <i>How could this be dealt with?</i> <p><u>Plenary session:</u></p> <ul style="list-style-type: none"> • BritainThinks moderators to feed back their table's conversations and trade-offs.
<p>Developing principles</p>	<p><i>Aim: to understand the overarching principles participants use to rank policies and scenarios.</i></p> <p><u>Table discussion:</u> Moderator explain that now we want to develop some principles for authorities and government to consider when they make decisions about tackling congestion. <i>NB Moderators to ensure that only principles are added to the list – and solutions (i.e. scenarios/policies) are not.</i></p> <ul style="list-style-type: none"> • What are the principles authorities should bear in mind when approaching tackling congestion? [flipchart and vote on top 5] <i>Probes:</i> <ul style="list-style-type: none"> ○ Who should pay for tackling congestion? <ul style="list-style-type: none"> ▪ Should everyone contribute, or should drivers pay more? ▪ Should there be exemptions or 'caps'? For who, and why? ○ Who should be expected to switch journeys? Why? <ul style="list-style-type: none"> ▪ How should this be enforced or encouraged? ○ How should measures be implemented? • What are the biggest challenges/limitations to acting in line with these principles? <i>Sub-question:</i> <ul style="list-style-type: none"> ○ How could these be overcome? <p><u>Plenary session:</u></p> <ul style="list-style-type: none"> • 1-2 participants on each table to feed back their table's conversation and top priorities. • Lead facilitator records a consolidated list of priorities on flipchart <p><u>Voting exercise:</u></p>

	<ul style="list-style-type: none"> Each participant give three votes (dot stickers) to use on consolidated principles list at the front (they are allowed to vote for the same one more than once).
Reflections and close	<p><i>Aim: to understand participants key take-outs from the day, and any new information which has altered their views.</i></p> <p>Plenary session:</p> <ul style="list-style-type: none"> BritainThinks lead facilitator to draw on any commonalities across the room. An NIC representative to thank participants for their time and reflect on the session. BritainThinks lead facilitator to close the workshop. <p>Participants complete a post-workshop worksheet and evaluation form.</p> <p>Participants provided with incentive payments and sign incentive signature sheets.</p>

Specific scenario questions

Scenario	Outline
Charging drivers	<ul style="list-style-type: none"> What did you see as the key benefits and limitations in this scenario? [flipchart] How fair it is to charge drivers to drive within a congested area at congested times? <i>Probes:</i> <ul style="list-style-type: none"> <i>Who, if anyone, do you think charges might be less fair on? (e.g. residents, taxis)</i> <ul style="list-style-type: none"> <i>How should these people be considered?</i> Do you think a higher-one off charge per day (Area-based) or lower charges each time you re-enter an area would be better? <ul style="list-style-type: none"> <i>Which would be fairer? Why?</i> <i>Which would be more effective? Why?</i> Exercise: moderator to ask each participant to write down what they think is the maximum charge it would be fair for the local authority to set as a congestion charge in their city, on a post-it note. Each participant to share and explain their value. How effective do you think charging drivers will be at reducing congestion? <i>Probes:</i> <ul style="list-style-type: none"> <i>What would make it (more) effective?</i> <i>Would charges make you more likely to change driving habits (i.e. switch from driving during peak times)?</i> Moderator to go around the table to hear best and worst policy from each participant (according to /10 scores). <i>Probes:</i>

	<ul style="list-style-type: none"> ○ Which policy areas do you think are best? Why? ○ Do you have any concerns or think any might be problematic? Why?
Making more effective use of space	<ul style="list-style-type: none"> • What did you see as the key benefits and limitations in this scenario? [flipchart] • Is it fair for everyone (i.e. taxpayers) to subsidise cheaper public transport, even if they don't use it? Probes: <ul style="list-style-type: none"> ○ Who most benefits from the options under this scenario? ○ Is there anyone that would lose out? • How much better would public transport need to be across your area for this to be effective at reducing driving during peak times? • Would you personally switch from driving to public transport if it was available/improved? Probe: <ul style="list-style-type: none"> ○ What would encourage you? • Moderator to go around the table to hear best and worst policy from each participant (according to /10 scores). <ul style="list-style-type: none"> ○ Which policy areas do you think are best? Why? ○ Do you have any concerns or think any might be problematic? Why?
Disincentivising driving	<ul style="list-style-type: none"> • What did you see as the key benefits and limitations in this scenario? [flipchart] • How fair do you think it is to control who can drive or park where and when? Why? Probes: <ul style="list-style-type: none"> ○ Who would this impact most? <ul style="list-style-type: none"> ▪ Who would benefit in this scenario? ▪ Is there anyone that loses out? • How effective do you think these measures are at reducing congestion? Why? Probes: <ul style="list-style-type: none"> ○ What would need to be in place to make them more effective? <ul style="list-style-type: none"> ▪ I.e. laws and regulations vs. encouragement vs. freedom of choice? ○ How do you imagine high occupancy lanes working in practice? ○ What would encourage you/others to use car-pooling or using ride-sharing services? • Moderator to go around the table to hear best and worst policy from each participant (according to /10 scores). <ul style="list-style-type: none"> ○ Which policy areas do you think are best? Why? ○ Do you have any concerns or think any might be problematic? Why?

<p>Accepting congestion</p>	<ul style="list-style-type: none"> • What did you see as the key benefits and limitations in this scenario? [flipchart] • What do you think the impacts would be of accepting congestion, assuming the projections of it getting worse are correct? <i>Probes:</i> <ul style="list-style-type: none"> ○ <i>Which of these impacts are the most important?</i> ○ <i>Who would this approach impact, and is there anyone it would impact more than others?</i> • Is it more important for drivers to have freedom of choice, or for congestion to be kept within acceptable limits? Why? <i>Probes:</i> <ul style="list-style-type: none"> ○ <i>How do you think we should define 'acceptable limits'?</i> ○ <i>How bad do you think congestion needs to get before people demand change?</i> ○ <i>Why do you think congestion is so hard to solve?</i> • Moderator to ask participants to write down the current length of their commute (or a journey they most often make) on a post-it, then note how far they would be willing to extend their journey time before choosing a different method of travel or not to travel. • Please share your answers with me. <ul style="list-style-type: none"> ○ <i>What do you think the impact would be on you if journey times increased to this point?</i> <i>Probes:</i> <ul style="list-style-type: none"> ▪ <i>What would be the impact on your area?</i> ▪ <i>What kind of switch would you make if journey times went beyond your maximum?</i> <ul style="list-style-type: none"> • <i>Is there any other way you could be encouraged to make this switch (outside of journey times becoming this long)?</i>
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9.5. Key questions asked during Wave 1

Below is a list of key questions that were asked during the Wave 1 workshops. These questions were answered in a 'you asked, we answer' style session at the beginning of Wave 2.

Topic	Key questions
Background to congestion	How is congestion measured?
	Why are we doing so badly compared to Europe?
Drivers of congestion	<u>What are the main drivers of congestion?</u>
	- Do speed limits affect congestion?
	- Why are there always roadworks/why are they so badly managed?
	- What is the impact of 'poor' city planning? E.g. poorly laid out roads, empty bus or cycle lanes taking up road space, traffic lights on roundabouts, etc.
	- Do commercial or commuter vehicles cause more congestion?
	- What should we do about sporting events, concerts, etc?
	<u>Why is congestion so hard to solve?</u>
	- How can we get people to switch?
	- Why should I switch when public transport is so unreliable?
	- Has anyone solved congestion?
Impacts	How do you work out the economic cost of congestion?
Solutions	Has anywhere solved congestion? How did they do it? Are there any good/comparable case studies? (e.g. Copenhagen)
	Would nationalisation of public transport help? / Why is public transport so unreliable? / How could public transport become an alternative?
	Has the London congestion charge worked? If so, why is it still so congested?
	What is the impact of park and ride? Could this be a solution?
	Who makes these decisions - locally/nationally? Given that it's a national problem, should there be a national solution?
	Should we close inner city car parks? / Shut cities off to cars? / Divert people around cities? [Birmingham's recent pedestrianisation announcement was referenced by a few]
	Why don't we counter-commute? [i.e. work on the periphery of towns] / Why are all business in the centre? / Should everything be in cities?

9.6. Additional tables by section

9.6.1. Scenario rankings by location

No. of participants ranking in each position (Manchester)				
Scenario	1 st	2 nd	3 rd	4 th
Base size	19	19	19	19
Making more effective use of space	<u>14</u>	5	0	0
Charging drivers	5	<u>9</u>	4	1
Discouraging driving	0	3	<u>13</u>	3
Accepting congestion	0	2	2	<u>15</u>

Table 16: Total number of participants placing each scenario in each ranking in Manchester. N.B. excludes 3 participants' rankings due to ambiguity (e.g. two different rankings written) or incomplete rankings.

No. of participants ranking in each position (Nottingham)				
Scenario	1 st	2 nd	3 rd	4 th
Base size	21	21	21	21
Making more effective use of space	<u>15</u>	3	3	0
Charging drivers	4	<u>11</u>	2	4
Discouraging driving	1	6	<u>11</u>	3
Accepting congestion	1	1	5	<u>14</u>

Table 17: Total number of participants placing each scenario in each ranking in Nottingham.

No. of participants ranking in each position (Bristol)				
Scenario	1 st	2 nd	3 rd	4 th
Base size	20	20	20	20
Making more effective use of space	<u>17</u>	2	1	0
Charging drivers	0	<u>8</u>	<u>8</u>	4
Discouraging driving	2	<u>8</u>	<u>7</u>	3
Accepting congestion	1	2	4	<u>13</u>

Table 18: Total number of participants placing each scenario in each ranking in Bristol. N.B. excludes 3 participants' rankings due to ambiguity (e.g. two different rankings written) or incomplete rankings.

N.B. These are low base sizes. The intention was to force participants to make a ranking in order to qualitatively understand how they traded-off options and made decisions, as well as provide an indication of overall aggregated preferences.

9.6.2. Detailed scoring of Making More Effective Use of Space policies

No. of participants giving each policy each score /10 (Nottingham and Bristol)				
	Reducing the cost of public transport	Providing new/more public transport	Allocating road space to public transport / walking / cycling	Actively encouraging cycling / walking
<i>Participants who allocated a score</i>	44	44	44	41
0/10	1	0	2	1
1/10	0	0	0	1
2/10	0	0	1	2
3/10	0	0	4	1
4/10	0	2	7	2
5/10	5	6	12	9
6/10	4	2	2	8
7/10	5	8	3	3
8/10	9	9	6	8
9/10	4	4	3	3
10/10	16	13	4	3
Av. score	8	7.8	5.7	6.3

Table 19: Total number of participants allocating each policy each score in Nottingham and Bristol. N.B. after Manchester we combined some of the policy options and tweaked the process from ranking to scoring out of 10.

9.6.3. Detailed scoring of Charging Drivers policies

No. of participants giving each policy each score /10 (Nottingham and Bristol)			
	Area-based charging	Cordon-based charging	Time-distance-place based charging
<i>Participants who allocated a score</i>	41	40	41
0/10	3	5	7
1/10	0	1	1
2/10	1	2	1
3/10	3	3	6
4/10	4	7	13
5/10	12	10	6
6/10	2	1	2
7/10	6	5	1
8/10	5	4	4
9/10	2	1	0
10/10	3	1	0
Av. score	5.6	4.6	3.8

Table 20: Total number of participants allocating each policy each score in Nottingham and Bristol. N.B. after Manchester we combined some of the policy options and tweaked the process from ranking to scoring out of 10.

9.6.4. Detailed scoring of Discouraging Driving policies

No. of participants giving each policy each score /10 (Nottingham and Bristol)				
	Reducing road space	Reducing car parking options	High-occupancy lanes	Access restrictions
<i>Participants who allocated a score</i>	44	45	44	44
0/10	8	6	9	3
1/10	1	0	2	4
2/10	5	5	4	2
3/10	2	7	4	2
4/10	6	8	4	4
5/10	2	9	8	13
6/10	7	4	5	4
7/10	3	1	3	7
8/10	6	5	4	3
9/10	2	0	0	1
10/10	2	0	1	1
Av. score	4.5	4.0	3.9	4.8

Table 21: Total number of participants allocating each policy each score in Nottingham and Bristol. N.B. after Manchester we combined some of the policy options and tweaked the process from ranking to scoring out of 10.

9.6.5. Detailed scoring of Accepting Congestion

No. of participants giving each policy each score /10 (Nottingham and Bristol)	
	Reducing road space
<i>Participants who allocated a score</i>	37
0/10	18
1/10	2
2/10	3
3/10	1
4/10	1
5/10	5
6/10	1
7/10	3
8/10	0
9/10	1
10/10	2
Av. score	2.6

Table 22: Total number of participants allocating each policy each score in Nottingham and Bristol. N.B. after Manchester we combined some of the policy options and tweaked the process from ranking to scoring out of 10.

9.7. Examples of stimulus materials by scenario

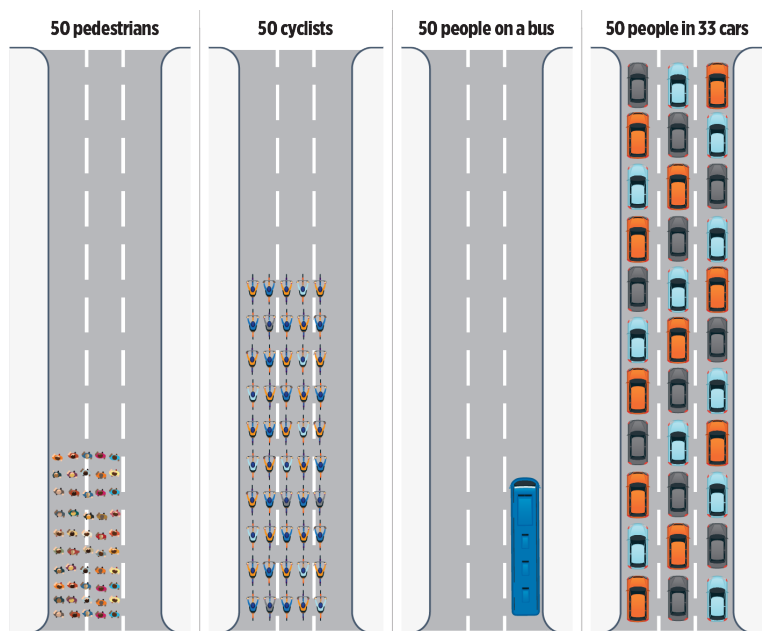
9.7.1. Making more effective use of space

9.7.1.1. High-level scenario

Making more effective use of space

The main idea

Creating space or using space in cities more efficiently, to be able to move more people at peak times



What it looks like

- Reducing the cost of public transport
- Providing new/more public transport
- Reallocating road space currently available to cars to other methods of transport (e.g. bus lanes, cycle lanes, etc.)
 - Actively encouraging walking/cycling

9.7.1.2. Policy areas

Encouraging people to take public transport

Reducing the cost of public transport



How does it work?

- Fares are reduced, to encourage more people to make journeys by public transport instead of driving
- Fare reduction can be across all public transport (e.g. reducing the price of the annual travel card) or can be targeted (e.g. just reducing bus fares)

Costs

Government: £££

- *Reduced fares may have low impact on income as people take more journeys*
- *Yet lower fares can increase the cost of public transport, as more people use the services, they require investment*

Encouraging people to take public transport

Providing new or improved public transport



How does it work?

- Improved services could encourage more people to travel by public transport. Many measures to reduce congestion only work if people have viable alternatives to driving.
- New public transport is a significant investment and is time consuming to develop and implement

Costs

Government: £££ / £££

- *New underground, overground and tram lines are expensive to build, as are extending platforms to accommodate more carriages*
- *Improving existing public transport is less expensive (e.g. adding new bus routes / converting existing rail routes)*

Encouraging walking and cycling

Actively encouraging walking and cycling



How does it work?

- Government invests in advertising campaigns to encourage people to swap shorter journeys to walking or cycling
- Other campaigns could include cycle to work schemes, subsidising individuals buying bikes

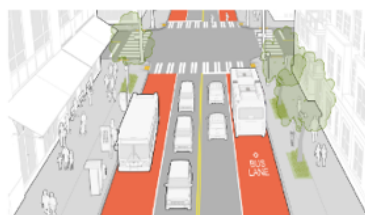
Costs

Government: £££

- *Public campaigns and cycle schemes will cost money*
- *If more people travel by walking or bike, there are long-term health savings for the NHS*

Re-allocating road space

Allocating road space for other types of travel



How does it work?

- Lanes previously used by cars are allocated for walking, buses, trams, bicycles, and/or taxis
- Investment in cycle and pedestrian infrastructure, such as: new cycle paths along busy commuter routes, clearer signage and road marking, and better integration between road users
- There is less road space for drivers – meaning congestion for drivers gets worse – theoretically making public transport or cycling faster than driving
- Fewer cars makes the environment nicer to be in, and makes the roads safer as motorists adapt their behaviour in response to the presence of cyclists and pedestrians

Costs

Government: £££

- *It is low cost to re-allocate the existing road space (though any new tram lines would cost more)*
- *Some cost to build any new cycling or walking infrastructure or plan new routes*
- *If more people travel by walking or bike, there are long-term health savings for the NHS*

9.7.1.3. Example case study

Vienna's 'euro-a-day' scheme

What's the idea?

In 2013, Vienna **reduced the cost of an annual travel pass** (by €84) to €365 – working out to 1€ per day

The idea is that **more people will choose to travel by public transport**

How does it work in practice?

The scheme is **relatively expensive**, with government subsidy at €700m a year.

To help with the cost, government raised **parking fines** by 60% and introduced a '**subway tax**' for employers (€2 a month per employee)

What else did they do?

It is hard to calculate the exact impact of the scheme, because Vienna also invested in **new metro lines, restricted driving and parking** and created **cycling routes**

What's the impact?

- The number of annual ticket holders more than doubled since the scheme was introduced – to almost half the city's population
- 38% of journeys in Vienna are made by public transport
- In the UK, in Birmingham and Coventry (which have a similar combined population size to Vienna) 15% of journeys are made by public transport

Sources: <https://www.theguardian.com/world/2019/jul/19/vienna-trials-perfumed-subway-trains-passengers-incensed-austria-u-bahn>
National Infrastructure Commission report | Congestion, Capacity, Carbon: Priorities for national infrastructure
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/852685/tsgb0109.ods

9.7.1.4. Example pen portrait

Gary, 53, Bedford



"I feel frustrated by the local bus lanes, but I'm excited about the prospect of using the trains...once they're built"

I'm self-employed and I have small offices in Bedford, Milton Keynes and Cambridge. I have always driven to work from my home in Bedford, and I frequently drive between the offices. Traffic is a real nuisance for me – if I have to go to one of the other offices, I'm always late home and my wife complains!

It's gotten worse recently because they've put some new bus lanes around the Bedford office, which means there is just one lane for cars a lot of the time, really slowing things down. I have got the bus to work a few times, but I don't like it, and if I need to go to the other office I can't get there easily. There isn't a direct train or bus, and I'd have to walk quite far, which is getting harder for me.

There is apparently a train line being built, connecting up Cambridge all the way through to Bedford and MK – this will be brilliant once it's finished, because I like getting the train, and I can have phone calls on the train that I'm not supposed to when I'm driving. But how long will it take? I might retire before it's finished!

9.7.2. Charging drivers

9.7.2.1. High-level scenario

Charging drivers

The main idea

Charging drivers money to discourage them from driving during the most congested times, in the most congested places



What it looks like

- Area-based charging
- Cordon-based charging
- Time-distance-place-based charging

9.7.2.2. Policy areas

Charging drivers for entering or driving within a specific congested area, at congested times

Cordon charging



How does it work?

- Drivers are charged every time they drive into a congested area, passing a 'cordon' (camera). I.e. if they leave and re-enter they are charged again.
- Fees usually have a daily maximum cap.

Costs

Government: £££

- *There is an initial infrastructure cost for cameras and ongoing processing costs, however these are covered by fees once set-up*

Drivers: £££

- *Individual charges are relatively low, although they build up for those leaving and re-entering multiple times in a day.*

Charging drivers for entering or driving within a specific congested area, at congested times

Area charging ('Congestion zones')



How does it work?

- Drivers are charged a daily fee if they enter or drive within a congested area.
- They can leave and re-enter and spend as much time within the area as they like, and just pay once per day.

Costs

Government: £££

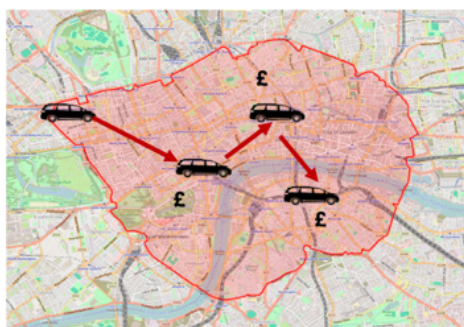
- *There is an initial infrastructure cost for cameras and ongoing processing costs, however these are covered by fees once set-up*

Drivers: £££

- *Drivers are charged once per day for driving within the congested area*

Charging drivers according to how long they spend driving within a congested area, at congested times

Time, distance, place



How does it work?

- Drivers are charged for the amount of time they spend and distance they drive in congested areas.
- This could be based on vehicle data or via road cameras.

Costs

Government: £££

- *There is significant infrastructure cost in roadside cameras, however these are covered by funds the scheme raises once set up.*

Drivers: £££

- *Driver charges vary according to their exact usage and time spent in congested areas, meaning it is more for some and less for others*

9.7.2.3. Example case study

London Congestion Zone

What's the idea?

To reduce traffic congestion by **introducing a zone** in central London where **drivers are charged** for **driving during peak hours**.

How does it work in practice?

Introduced in 2003, those driving within the 21km² zone in the **centre of the city**, between **7am-6pm on a weekday** pay a **flat daily rate**. The charge has risen gradually from £5 in 2003 to **£11.50** today.

Residents get a 90% discount. Registered disabled people, emergency services, motorbikes and taxis are exempt.

What else did they do?

All money made by the scheme was legally required to be spent on **improving transport** in London. This would be less viable in **Bristol/Nottingham** due to lower funds being raised from this kind of scheme.

What's the impact?

- The number of vehicles driving in the zone decreased 15% by 2006, and is now down by nearly 25%. **Congestion has reduced by 30%.**
- Reductions in traffic and congestion have **enabled more road space to be given over to cyclists and pedestrians** (e.g. with the building of the cycle super highway).
- **29,000 more passengers** entered the charging zone **by bus** in the morning rush hour in 2004, compared to a year before.

Sources: <https://www.citymetric.com/transport/london-congestion-charge-has-been-huge-success-it-s-time-change-it-3751>
<https://tfl.gov.uk/corporate/publications-and-reports/congestion-charge>
<https://tfl.gov.uk/corporate/publications-and-reports/travel-in-london-reports>

9.7.2.4. Example pen portrait

Allison, 43, Stockholm



“ The introduction of the congestion charge was **unpopular**, but it has **greatly improved journey times** and **helped us fund public transport improvements**.
 We may need to go further though, to cope with **new pressures** faced by the city. ”

I work for Transport for London. While people didn't like the idea of the Congestion Charge at first, it has been very successful in practice. Our data shows that peak travel times have reduced by around 30%, so people are able to get to and from work quicker than before. The scheme has also more than paid for the initial set-up costs, meaning we can also improve public transport. For example, we've reinvested at least £120m into buses every year since 2003, with the money made by the scheme.

However, we are starting to see some limitations to its impact, due to lifestyle changes over the last 16 years. For example, we've seen a surge in private hire vehicles like Uber in the city. These vehicles were exempt from the charge initially, but this year we have started to charge them too. Also, the charge is only in effect during weekdays 7am-6pm – but now traffic levels are highest in the evening, and weekend levels are getting closer to weekday which means the city is still very congested and growing more so.

9.7.3. Discouraging driving

9.7.3.1. High-level scenario

Discouraging people from driving

The main idea

Making driving a less convenient option for people, to encourage other types of travel



What it looks like

- Reducing road space
- Reducing car parking options
- High-occupancy lanes
- Access restrictions

9.7.3.2. Policy areas

Making driving less convenient

Reducing road space



How does it work?

- By introducing physical barriers such as bollards to stop through-traffic, the space available to cars is reduced and journeys by car become a less convenient option
- In other words, congestion itself is used to discourage car use, particularly at peak times

Costs

Government: £££

- *There is a low infrastructure cost for any physical barriers and changes made*

Making driving less convenient

Reducing car parking options



How does it work?

- This could be direct or indirect:
 - Directly reducing the number of car parking spaces; or
 - Introducing charging to make parking more expensive and less convenient, such as a workplace parking levy, which charges employers for employees' parking spaces

Costs

Government: £££

- *There set-up costs are small, although it may require additional CCTV and staff to enforce*
- *However, the scheme also raises funds through fines for violations*

Controlling who can drive where / when

High-occupancy lanes



How does it work?

- 'Car pool' lanes are reserved for vehicles carrying a minimum number of people, to encourage ride-sharing
- In practice, take-up is often low and high-occupancy lanes end up being underused

Costs

Government: £££

- *There is an initial infrastructure cost for cameras and processing*
- *It can be expensive/difficult to enforce*

Drivers: £££

- *Low cost of car sharing*

Controlling who can drive where / when

Access restrictions



How does it work?

- Car access to certain areas or at certain times is restricted or 'rationed'. This could include:
 - a ban on school drop-offs
 - car-free days in city centres
 - 'rationing' who can drive on the city centre e.g. alternative day access (a more 'extreme' option)

Costs

Government: £££

- *Some set-up costs e.g. CCTV to enforce*
- *However, these schemes raise funds through fines for violations*

Drivers: £££

- *There are no direct costs to drivers but costs may occur as they adapt to the changes*

9.7.3.3. Example case studies

Nottingham Workplace Parking Levy (WPL)

What's the idea?

To reduce road congestion by **targeting commuting trips in low-occupancy vehicles**, while at the same time raising funds to improve public transport

How does it work in practice?

Introduced in 2012, the WPL is a **charge employers pay** on workplace parking places. Employers are responsible for paying the WPL charge (currently **£415** per parking place per year); however, they can choose to pass on part or all of the cost to their employees

What else did they do?

Nottingham introduced a **smart travel card** and invested in expanding **public transport**

What's the impact?

- Raised **£25 million** between 2012 and 2015
- Contributed to an extension of Nottingham's tram network (although only a small proportion of the overall £570 million cost of the extension)
- The city council reports that there has been a significant **increase in public transport usage**
- Evaluations show that the WPL has had a direct impact on congestion levels, but that this is not always felt (due to roadworks related to the improvements in public transport, and by a rise in car use linked to economic growth)

Athens: Daktylios – Alternate day access

What's the idea?

To reduce demand for road space in a cost-effective way by 'rationing' access to the city centre according to rules that determine who can drive when

How does it work in practice?

The Daktylios ('ring') was introduced in 1982. Permission to drive into the city centre is **based on a vehicle's licence plate** number – if yours ends in an even number, you can drive into the centre on even dates, if it ends in an uneven number, you can drive in on uneven dates

What's the impact?

Initially very successful at reducing congestion but has been undermined by a number of factors:

- If they can afford it, many residents of Athens now own two cars – one with an even and one with an uneven registration number
- There has been an increase in the use of taxis and motorcycles
- There are a number of exemptions
- Violations occur frequently

It is nonetheless a cost-effective scheme and similar restrictions are popular in lower-income countries where charging drivers would be harder for those less able to afford the fee

9.7.3.4. Example pen portrait

Naomi, 36, Nottingham



"I just don't think it's fair; I feel I don't have a choice but to drive to work and now I have to use expensive on-street parking – and so does everybody else!"

I have two children of school age and we live on the outskirts of Nottingham but I work in the city centre. Most days, I am responsible for the school run in the morning and it is often quite tight getting to work in time.

A few years ago, the city introduced a Workplace Parking Levy and my employer decided to get rid of staff parking spaces because we're only a small business and they didn't want to pass on the cost to us employees, which I can kind of understand. But now, finding somewhere to park in the city centre is difficult and expensive, as parking spaces are in short supply.

It's a problem for me because I feel like I don't really have a choice but to drive, since I have to drop off my kids. I've considered trying to reduce the cost by car-sharing, and giving someone at work a lift, but I don't think anyone would want to get up early and join us on the school run!

9.7.4. Accepting congestion

9.7.4.1. High-level scenario

Accepting congestion

The main idea

Accept that congestion is inevitable and giving drivers the freedom to choose to travel in very congested areas



What it looks like

- Congestion does not improve and, if demand grows, is likely to increase over time, resulting in longer journey times during peak periods

9.7.4.2. Policy areas

Accepting congestion

People continue to use the roads as they are



How does it work?

- No charging or restrictions are introduced for drivers so they are free to drive without these, and there is no increased investment in public transport, cycling and pedestrian routes.
- Congestion is likely to worsen over time, meaning all road users must bear the impacts of congestion.

Costs

Government: £££

- *No upfront costs to Government, however there may be economic losses in the longer term due to reduced productivity from congestion*

•

Drivers: £££

- *No financial cost to drivers upfront, but must face the costs of congestion e.g. lost time*

Accepting congestion

Build more roads?



How does it work?

- In theory, one option is to expand the network by building new roads.
- However, in most cities there is no room to build more roads. Even where there is space, new roads will fill up quickly with cars, meaning that congestion will not improve.

Costs

Government: £££

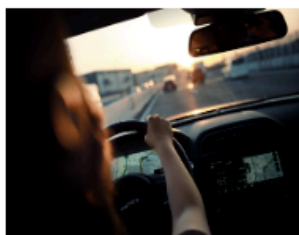
- *There is an infrastructure cost of expanding roads*

Drivers: £££

- *No immediate cost to drivers, except through increased taxation; they must face the costs of congestion e.g. lost time*

9.7.4.3. Example pen portrait

Sandra, 68, Leeds



*"I'm so happy I get to choose
how and when I travel –
there was talk of them
charging drivers which would
have been so dreadful!"*

Sandra is recently retired and spends most of her days at home, gardening.

During the week she drives to pick up her 10 year old granddaughter from her school on the other side of town. Often she finds the traffic is awful, because of all the people going on the school run. The journey takes much longer than it used to, and it seems to be getting worse. While it used to take 20 minutes when her granddaughter was first born, it now takes over 45 minutes each way.

Sandra has arthritis and hates taking the bus in case she has a flare up and has trouble standing up. A few years back, she heard there was talk of the council stopping people driving in town, or charging drivers. She is relieved that hasn't happened because of how much she prefers driving – while it is annoying to wait in traffic, she would rather wait than pay, and she's rarely in a rush.

9.8. Participant worksheets

Scenario booklet

As you are walking around the stations, please think about which policy areas you like and dislike and which you think would work or wouldn't work and why.

Please use this booklet to take notes and score the different policies out of 10, according to **how much you would like to see each measure used to tackle congestion:**

0 = I would definitely not like to see this measure used to tackle congestion

5 = I am neutral about whether I would like to see this measure being used to tackle congestion

10 = I would definitely like to see this measure used to tackle congestion

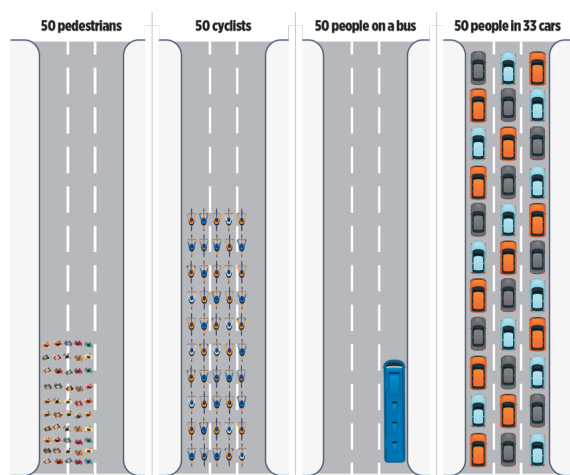
Name: _____

Location: _____

Making more effective use of space

The main idea

Creating space or using space in cities more efficiently, to be able to move more people at peak times



What it looks like

- Reducing the cost of public transport
- Providing new/more public transport
- Reallocating road space currently available to cars to other methods of transport (e.g. bus lanes, cycle lanes, etc.)
- Actively encouraging walking/cycling

Notes

Things to think about:

- Which policy areas do you like and dislike? Why?
- What do you think would and wouldn't work? Why?

Reducing the cost of public transport	Providing new/more public transport
Rating: ____ / 10	Rating: ____ / 10
Allocating road space to walking/cycling/public transport	Actively encouraging walking/cycling
Rating: ____ / 10	Rating: ____ / 10

Charging drivers

The main idea

Charging drivers money to discourage them from driving during the most congested times, in the most congested places



What it looks like

- Area-based charging
- Cordon-based charging
- Time-distance-place-based charging

Notes

Things to think about:

- Which policy areas do you like and dislike? Why?
- What do you think would and wouldn't work? Why?

Area based charging	Cordon based charging
Rating: ____ / 10	Rating: ____ / 10
Time-distance-place based charging	
Rating: ____ / 10	

Discouraging driving

The main idea

Making driving a less convenient or appealing option for people



What it looks like

- Reducing road space
- Reducing car parking options
- High-occupancy lanes
- Access restrictions

Notes

Things to think about:

- Which policy areas do you like and dislike? Why?
- What do you think would and wouldn't work? Why?

Reducing road space	Reducing car parking options
Rating: ____ / 10	Rating: ____ / 10
High-occupancy lanes	Access restrictions
Rating: ____ / 10	Rating: ____ / 10

Accepting congestion

The main idea

Accept that congestion is inevitable and giving drivers the freedom to choose to travel in very congested areas



What it looks like

- Congestion does not improve and, if demand grows, is likely to increase over time, resulting in longer journey times during peak periods

Notes

Things to think about:

- What do you like and/or dislike about this?
- What would the impact be?

Rating: ____ / 10

9.9. Solutions packages

Please think about which solution or package of solutions you would like to see being used to tackle congestion and complete the accompanying worksheet

1. Do nothing additional



Cost to taxpayer: None

Impact: Congestion is projected to increase, leading to more hours lost to congestion and higher costs to the economy.

In Bristol, the current impact of congestion is **149 hours** lost per driver waiting in traffic every year. This loss in time is equivalent in value to around **£212 million** per year.

2. Significantly improve public transport*



+10% capacity

Cost to taxpayer: On average approx. £300-400 per household, per year

Impact: May not reduce congestion on its own, because drivers may not switch modes if driving is not discouraged. Will increase number of people who can reach the city centre, **boosting the economy.**

Any **freed up road space may be filled by new drivers** as congestion reduction will make driving more convenient.

*A 10% improvement could be, for example, an increase in frequency and capacity on existing lines or a new tram line.

3. Discouraging driving



Cost to taxpayer: Minimal to none

Impact: Likely to **deter people from driving in the city centre**, though not as much as congestion charging. Without also improving public transport, drivers may be deterred from working in the city centre, **damaging the local economy.**

Drivers may experience more congestion as road space is given to public transport and cycle lanes, bus and bike travel may improve.

4. Congestion charge












Cost to taxpayer: None

Impact: Drivers would have to pay to go into the city centre.

This is likely to **reduce congestion in the city centre**, increasing journey speeds for bus users and drivers.

Without improving public transport options, drivers may be deterred from working in the city centre, **damaging the local economy.**

Please think about which solution or package of solutions you would like to see being used to tackle congestion and complete the accompanying worksheet

<p>5. Significantly improve public transport AND congestion charge</p> <p>+10% capacity  + </p> <p>Cost to taxpayer: On average approx. £250-350 per household, per year (for public transport improvements – revenue from congestion charge)</p> <p>Impact: Drivers would have to pay to go into the city centre. This is likely to reduce congestion in the city centre, increasing journey speeds for both bus users and drivers.</p> <p>Simultaneous improvement in public transport will increase the number of people who can reach the city centre, boosting the economy.</p>	
<p>6. Significantly improve public transport AND discouraging driving</p> <p>+10% capacity  + </p> <p>Cost to taxpayer: On average approx. £300-400 per household, per year (for public transport improvements)</p> <p>Impact: Likely to deter people from driving into the city centre as driving becomes less convenient and public transport is improved.</p> <p>As road space is given to public transport and cycle lanes, bus journey times may reduce and cycling may become safer.</p>	
<p>7. Congestion charge AND discouraging driving</p> <p> + </p> <p>Cost to taxpayer: None (as money raised by congestion charge could pay for other measures)</p> <p>Impact: Drivers would have to pay to go into the city centre and may experience more congestion as road space is reallocated. This is likely to deter traffic more than either measure on its own. Without also improving public transport, drivers may be deterred from working in the city centre, damaging the local economy. As road space is given to public transport and cycle lanes, bus journey times may reduce and cycling may become safer.</p>	
<p>8. Significantly improve public transport AND congestion charging AND discouraging driving</p> <p>+10% capacity  +  + </p> <p>Cost to taxpayer: On average approx. £300-400 per household, per year (for public transport improvements)</p> <p>Impact: Drivers would have to pay to go into the city centre and may experience more congestion as road space is reallocated. This is likely to deter traffic and increase use of new public transport options. As road space is given to public transport and cycle lanes, bus journey times may reduce and cycling may become safer.</p>	

