



Built Environment Committee

Corrected oral evidence: Public transport in towns and cities

Tuesday 1 February 2022

10 am

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Members present: Baroness Neville-Rolfe (The Chair); Baroness Bakewell; Lord Berkeley; Lord Best; Lord Carrington of Fulham; Baroness Cohen of Pimlico; Lord Grocott; Lord Haselhurst; The Earl of Lytton; Lord Moylan; Lord Stunell; Baroness Thornhill.

Evidence Session No. 1

Virtual Proceeding

Questions 1 – 10

Witnesses

I: Stephen Joseph OBE, Visiting Professor at the University of Hertfordshire and independent transport policy consultant; Professor Greg Marsden, Professor of Transport Governance, Institute for Transport Studies, University of Leeds.

Examination of witnesses

Professor Stephen Joseph OBE and Professor Greg Marsden.

Q1 The Chair: Welcome to the House of Lords Built Environment Committee's first public evidence session as part of our inquiry into public transport in towns and cities. Our inquiry will consider the impact of technological and digital developments on travel behaviours, future trends in public transport innovation, and how public policy should be shaped in the light of these trends, including the recovery from Covid. We are also interested in connectivity across types of transport, and better integration through data and innovation. We will make recommendations to the Government later this year.

Our witnesses this morning are Stephen Joseph OBE, visiting professor at the University of Hertfordshire and independent transport policy consultant, and Professor Greg Marsden, professor of transport governance, Institute for Transport Studies, University of Leeds. You are most welcome.

Our session is being broadcast on parliamentlive.tv. A full transcript is being taken and it will be made available to you to make any corrections to shortly after the session. Please could Members and witnesses keep their answers and responses brief, as we have a lot to cover this morning?

I would like to kick off with the first question, which is a general one, to Professor Joseph. What influences public transport travel patterns in towns and cities?

Professor Stephen Joseph: We could miss this, so it is worth saying first that public transport has wider benefits in cities and generally than just for users. We need good public transport to help congestion, to widen labour markets, to reduce air pollution, and to address safety and other issues. These wider benefits are not sometimes recognised in government as they are in other countries. It is worth saying that, because it means that we end up with higher costs and worse services than we find in cities in other countries.

What influences public transport patterns? I would say, first, land use patterns. Denser cities or denser urban form tend to have better public transport because it makes it more commercial as opposed to more car-based, lower-density development. I should also mention at this point that I am an adviser to a group called Transport for New Homes, which has looked at urban extensions and found that, in practice, a lot of new urban housing—and obviously this relates to the Committee's last inquiry—has been built in ways that are very car dependent. In fact, the project has another report coming out next week that has gone back to look at some of those extensions.

Land use patterns are critical, as is the cost of public transport, particularly versus the cost of cars and car parking. There is the frequency and quality of public transport, journey times, and reliability of

public transport, particularly as opposed to cars. A lot of this is dependent on action by local and central government, especially funding and investment.

The Chair: Excellent, thank you.

Professor Greg Marsden: Stephen has covered a lot of the relevant points there. I would like to underline the fact that we often get drawn into thinking about how public transport is performing, but, as Stephen said, it is its relative position compared to using the car or using the bike, for example, that really matters—in particular, journey time and cost. We have seen over the last decade a continued widening of the gap between the cost of driving and the cost of bus travel, with bus travel going up above the cost of living, while the cost of motoring has been below it. As we look ahead to electrification of the car fleet, we know that, unless there is a change to the tax regime, it is going to get cheaper and cheaper to drive a car. This widening cost gap is a real risk to all forms of public transport.

The only thing I would add to Stephen's list is safety. Some work done by London TravelWatch was published recently, which showed that almost 40% of disabled transport users have experienced a hate crime or harassment over the last three years, and nearly one in four women has experienced unwanted sexual behaviour in the past three years. Its data suggests that over 70% of people who have felt unsafe have stopped travelling at certain times of the day, so we still do not have an inclusive and safe network for everyone.

The Chair: Is that truer in some cities than others, as a general conclusion?

Professor Greg Marsden: It is not well researched. More evidence is required to know how that varies from place to place. I am sure there will be police statistics on that. It is not my specialist area.

Lord Grocott: On the evidence on commuting patterns, I have seen various different estimates, but the figures I have in front of me show commuting patterns of roughly 68% by car, 10% by rail or light rail, 7% by bus, 10% walking, and presumably the remainder cycle or use scooters, or whatever else. Although it is not universally supported, given that most Governments have wanted to see people use the car less and use public transport more, I would like to know, first, whether the balance that I have just described is not a good balance and what a realistic balance is between the various forms of commuting that our experts think is feasible. Secondly, what success or otherwise have cities and towns had in what seems to be this common objective of reducing overall car use in cities and increasing public transport? I would also like examples of success.

Professor Stephen Joseph: First, those are national averages. This committee is looking at towns and cities. In some towns and cities the figure for public transport is much higher. We will have to use pre-Covid

figures for at least some of the answers to these questions, simply because a lot of the stats are not available yet, but we can come to the Covid issue later.

For example, for trips going into Birmingham in the peak hour in 2019, rail was outperforming car on its own and public transport was way outperforming car. As Lord Moylan will know, in London we have seen a complete turnaround in use, from a position where overall car trips were something of the order of 60% in 1992, and pre-Covid public transport overall trips, not just commuting, were around 60%. There have been other smaller cities where we have seen significant success in public transport. Nottingham, which has a tram system and a workplace parking levy that has funded high-quality public transport, has some of the highest public transport use outside London, and there have been other cities such as Brighton and Edinburgh where there has been high public transport use.

I would return to what my fellow witness said. Some of this is down to what you do with cars. Manchester, for example, because it has had relatively plentiful and free or cheap city centre parking, has struggled to get its public transport mode share increased. Until recently it has not had significant bus priority, although it has had trams of course. It depends on what else you do. It is not just what you do with buses and so on. There are examples of successful cities, but you could argue that it is partly what else is done. Oxford and Cambridge have always had high cycling and public transport use as well, Oxford particularly. It has had what is called a balanced transport policy since the 1970s and that has led to significant bus use.

Lord Grocott: A lot of those statistics would be very helpful to the committee, I am sure. If you have some more detail that you can supply to us of the balance in different towns and cities for which the information is available, that would be very helpful to the committee.

Professor Stephen Joseph: Certainly.

Professor Greg Marsden: Just to add to that, in many European cities you would expect a car mode share of around one-third perhaps, certainly for the central city rather than the wider city region. It becomes more difficult to service as many commute trips by public transport further out from the city centres.

Before Covid, we saw 10% to 20% increases in bus use in networks such as Reading and Bristol, so we know that delivering growth in buses can be done, even though, as I said before, car driving is getting relatively cheaper. What goes on in the town centre and how free and easy parking is, as Stephen said, really matters.

One question is what we need public transport to be doing for us. If you look at the climate emergency analysis, a city such as Leeds is still falling well short of what it needs to do, but it is anticipating a growth of 130% in bus use, so more than a doubling against the declining trend, and it

still does not meet its climate objectives with that kind of level of shift. As the carbon constraint becomes more apparent, it is clear that we will need to do something very different to support growth in public transport. The kinds of numbers that we have seen for Reading and Bristol are great, but we need to go much faster than that in many more places if we are to be on track.

Lord Grocott: A similar call for more evidence would be any international comparisons in the light of what we have just heard. It would be helpful to the committee, I am sure, if you have those statistics.

Professor Greg Marsden: I will be able to send some through.

Lord Grocott: Thank you very much.

The Chair: That will be very helpful. We are also interested in what the consumer—the traveller and driver—thinks. Clearly climate change is important, but so are the attitudes of citizens.

Q2 Baroness Bakewell: I am interested, first, in the relationship between the cost of living and public transport use. How much are you able to say that taxation policy and things like the congestion charge shape the use of public transport?

I am also interested in the demographics and whether the policies of cities with an ageing population, retirement cities such as Cheltenham and Bath, are adapted for old people to use public transport, which is often difficult. Even reaching a bus stop can take some doing if you are quite creaky.

Professor Stephen Joseph: First, you asked about the cost of living and public transport and taxation. Greg Marsden has already outlined the national trends on that, and we can send you those. Broadly speaking, the cost of bus travel has gone above the cost of living, which has made it expensive.

There is one other factor that makes it expensive. Multi-operator tickets are treated outside London as a premium product because of the way bus deregulation and the Competition Acts work. That is not because the bus operators are being wicked or mean. It is because, if they agree to have a reduced fare across different operators, that is treated as a cartel by the Competition Acts. It is difficult for cities with more than one bus operator to have a multi-operator ticket, yet for poorer people, who may want to get from a housing estate on one side of the city to a business park on the other, it is precisely being able to get on different buses run by different operators that matters, so they are, in effect, being charged more for those kinds of journeys. The multi-operator ticket, and multi-modal ticket, really matters here.

You asked about the congestion charge. There is good evidence, and international evidence, that where charges have been introduced it leads to higher use of public transport, but it also depends on what the revenue from those charges goes into. I mentioned Nottingham. The way in which

the congestion charge and the workplace parking levy legislation has been set up means that the money is hypothecated to transport. It has to be. Nottingham had to put the money into transport and, as I said, it put it into extra extensions to its tram network and extensions to its bus network. That, I think, matters.

The demographics point is really interesting. It is partly skewed by the existence of the free bus pass, which means that it is free for older people to use the bus, and that means that there is more use of public transport than there otherwise would be.

Your point about access to bus stops is well made, and the general accessibility of public transport. Buses have improved. They are now flat floor and there are requirements that make it easier, but it is not universally the case, and getting to the bus stop and getting from the bus stop on to the bus is sometimes difficult.

The point to make about all this, and about rail services, is that it really is not rocket science to make public transport much more accessible and easier to use by people with any kind of mobility difficulty.

Baroness Bakewell: I have a bus pass and I have seen people with pushchairs wrangling with people in wheelchairs for the small amount of space allowed for such accommodation. It is just not enough sometimes.

Professor Stephen Joseph: That is true. That argument went as far as the Supreme Court when somebody in a wheelchair was denied entrance to a bus because the pushchairs were already taking up the space. It is a really important issue and it depends on how you design the buses and trains.

One other point worth making, which I am sure you will come to in the rest of your inquiry, is about the involvement of local authorities in local rail services. We have seen good evidence—Lord Moylan will definitely know about this—of a transfer of local rail services from the national government to local authorities, notably the London Overground service in London and Merseyrail services in Merseyside. In both those cases there has been a push by the relevant transport authorities—Transport for London in London and Merseytravel in Merseyside—to promote accessibility and to put in access to old Victorian railway stations. That has not happened as much where they are still run by central government through franchises and so on. Merseytravel, in particular, has done an enormous amount in that area.

I think there is a case about the devolution of local rail services. I have been advising the Urban Transport Group and others on this, and there is good evidence that where there is local transport involvement in local rail services you get better outcomes. Members who remember the North London line when it was run as part of Silverlink—now it is part of London Overground—will know just how big a difference having local involvement makes. It is not just about money; it is about actually having somebody paying attention to those services, accessibility and having staff on

stations. Both those networks have station staff from first to last train, which is not the case in a lot of other National Rail services, and that has made the services and the stations feel safer too.

Baroness Bakewell: Professor Marsden, do you think we are in for a lot of adjustments of the finances to shape the use of public transport by the public such as the use of things like congestion charges?

Professor Greg Marsden: It depends whether we decide to address the falling fuel duty revenue. There are other ways of filling that shortfall through other changes in the taxation system. It does not have to be done through the transport system, but if we decide not to do it through the transport system, any discussion about a long-term large shift towards public transport is pie in the sky. Why would people who invest in an electric vehicle that is getting cheaper decide that suddenly they want to make more journeys by public transport? It would be hugely expensive to the taxpayer to try to redress that balance by making public transport fares cheap while also allowing the cost of motoring to fall. It is about finding the right balance between what we expect motorists to pay and how much we think a reasonable public transport service costs to operate.

Those things are quite different as between bus and rail. If you look at the target market, three times as many trips are made by the worst-off group in society. The poorest 20% of households make three times as many trips on bus as the richest 20% of households, but on rail it is completely flipped. If you are in the richest income group, you make five times as many trips by rail as you do if you are in the poorest income group. They are very different price point questions that we are addressing. At the moment we are just allowing those trends to continue to diverge without any form of intervention. I find it very difficult to see how we will deliver significant public transport growth at scale across the country.

Baroness Bakewell: What about lifting the freeze on fuel duty to drive car drivers on to public transport?

Professor Greg Marsden: That might be useful in the short run, but we also have to remember that the people who are most likely to be adopting electric vehicles will again be the people who are purchasing new cars, so they are more likely to be in the higher-income groups. They will be the ones who benefit from the lower costs of motoring and, over time, the group that is left paying ever-higher fuel duty will again be those who are worst off. In the short run it is potentially helpful, but there is a need for a bigger and wider solution to it.

Professor Stephen Joseph: If the Government's target of phasing out internal combustion engines is met, the Treasury is looking at a £28 billion hole in its finances that it gets from fuel and vehicle duties. There are weasel words in things like the transport decarbonisation plan and the net-zero plan that say the Treasury will seek to make up this revenue, which I think is code for some kind of pay-per-mile road charging system,

but no Government have yet come forward and said that that is what they want to do.

Q3 **Baroness Cohen of Pimlico:** I will ask about a third of this question, because other people wish to address different bits of it. I am very interested in the idea of how public transport travel patterns might shift in the next 10 years. What impact could digitalisation and the Covid-19 pandemic have in the long term? I do not know if anybody has any futuristic work on that, but it is interesting.

Professor Greg Marsden: I have been working with colleagues at the University of Leeds and the University of Stirling. We have been doing a longitudinal tracking of how people have been adapting their travel patterns during the pandemic. This is a significant issue for public transport, and, again, it is quite different if we look at bus and rail. Pre-pandemic about a quarter of bus use was commuting, whereas on rail it is almost a half. Then you have a lot of business journeys also on rail. That is why we have seen so much more of an impact on rail patronage than we have on bus patronage.

About 45% of people were able to work from home some or all of the time. A lot of those roles were roles that people had been told could not be worked from home, and then they were told they had to be worked from home. I do not think we can put the genie back in the bottle on this and that it is a permanent shift to the way in which work is organised.

The question is about the blend of home working and office working. For very few of the people who have been working from home is it completely one or the other. We know that 55% of the population never worked from home at all.

For people who could work from home, the question is what that blend will be in the future and how that is managed. If we imagine that people would go back to work perhaps half the time that they have been working from home, will they do that evenly spread across the week, in which case the public transport system can adapt its scale and still provide services that work under the financial model and assumptions we have had to date, or will it be quite peaky?

What if there is a big peak on a Wednesday and a Thursday, but we have lower demand at other times during the week? We will struggle to be able to afford to provide the level of service for that peak. There is a question to be worked through between local governments, businesses and national government about what we want the future shape of work to look like. It all feels like a very black and white debate to me at the moment: let us get people back into the office or back into cities. That will not happen and we need to think about how we will manage that.

As I say, it will be much more of a significant issue for rail than it is for bus, because the commute market is that much smaller for bus, and fewer of the bus commuters are in the kinds of jobs that are likely to

continue to be worked from home more. It is definitely a more significant issue for rail.

There is also shopping, which has changed, and that is not going back. That is more significant for bus. Around a quarter of trips on the bus are for shopping. People have been shopping less frequently and the city centre itself is changing, so that is a risk.

There are those behavioural questions, but how is supply going to adjust? That is a massive question for next year, which will actually define how this will play out over time. At the moment we are back to about 75% of bus use. We had just over 65%, I think, of rail use back in October/November. Offices were not fully open then. But even a 10% or 20% dip below pre-pandemic levels come March, as the funding support begins to be withdrawn, could lead to quite significant rounds of service cuts. Stephen has some early estimates of what that might be. Once we start taking services away, we will end up in a negative spiral, where it will become more difficult to attract people back to public transport, so we could end up very quickly with a much smaller network than we have had before. The impacts of Covid on travel behaviour will be a downward spiral that will be hard to work our way out of.

Professor Stephen Joseph: I would echo what Greg has just said. The problem is that, although patronage has not come back for either bus or rail to pre-pandemic levels, Covid funding for bus and rail is being withdrawn. As a result, there are estimates of anything between 15% and 20% cuts in commercial services in places such as Newcastle, Leeds and Sheffield. When I say estimates, these are the operators saying that without further support they will just have to cut back on services, and because they have to give notice of service cuts they cannot rely on a last-minute change of heart by the Treasury with more money coming their way. They have to give notice now for March. We are seeing this in local papers. The Go-Ahead operation in Newcastle was talking about a 17% cut. We have seen estimates from elsewhere in local papers that local transport authorities will find it difficult to find the funding to support commercial services that have been withdrawn.

On the railways, Greg is right. There is a problem with the loss to commuting. I was talking to somebody yesterday in the rail freight world—Lord Berkeley will know about this—who likened the disappearance of five-day-a-week season ticket holders to the disappearance of coal from the rail freight world. That was the core market for rail freight, and the rail freight operators have had to find other markets, which they have been able to do. In the same way, the railways will have to find other markets.

What we are seeing at the moment, which is quite interesting, is a leisure-led recovery on road and on public transport, and some public transport is busy at off-peak times. I am told that the Tyne and Wear Metro is at well over 100% of its pre-Covid levels at weekends. Some bus operators with promotions such as £1 travel after 7 pm have been able to

grow public transport patronage in off-peak times back to nearly pre-pandemic levels at those times, but peak travel is disappearing.

The Treasury, I believe, is demanding 10% cuts in rail budgets in the year after April. One seasoned rail operator was quoted at the weekend as saying this means that whole fleets of trains will have to be withdrawn, because that is where you can get the economies quickly. He also made the point that, once those have gone, it is much more difficult if patronage does come back to provide the trains to service it. That is a long way of saying, in answer to how public transport patterns might shift in the next 10 years, that some of it depends on what we do in the next year.

The longer-term trends are, as I have said, about land use planning. If we end up with what Transport for New Homes is calling “cowpat” developments plopped in the middle of the countryside, which have to be driven to and cannot be served easily by public transport, we will have much less public transport use.

With regard to funding for transport, a lot of money is going on intra-urban roads. Bus services and rail are getting less funding, which will change the balance again. Transport outside London has not had long-term funding. Leeds is on its fourth or fifth attempt to get a light rail network. Cities like that have not had long-term certainty. Long-term funding, land use planning, co-ordinated urban networks and response to wider societal changes such as ageing population and e-commerce will determine what happens to public transport over the next 10 years.

Q4 Lord Stunell: This is fascinating. Are we just trying to pump life into a completely dead body? Public transport outside London has been under pressure for many years, and we have seen an accelerated version of the trends that were already in place. You have painted an extremely bleak picture. You have really described ways in which the old body might be brought back to life. Should we be looking at a completely different or quite a transformed pattern, where perhaps a few Turkish dolmuses come into use or Uberisation is given more of a leg forward, or scooterisation? Are we pursuing the wrong sort of public transport or the wrong sort of support to get people around the country in the ways they want to go? Maybe I could come to Professor Marsden, because you seem to present the most apocalyptic picture of where we are at the moment.

Professor Greg Marsden: I just think it is important to be realistic. Maybe it is the diet we are feeding our public transport system. I see much stronger and more vibrant public transport systems in other cities in Europe, so I do not think you can simply say that the model is dead. One reason why mass public transport is so important is because it would be very difficult to service the demand. Even with a 10% reduced level, if you took that out of mass transit and tried to put it in any other form of car or minivan-based system, you would find it very difficult.

The OECD International Transport Forum has looked at different combinations of public transport systems, including on-demand services

at the door or at the end of your street, and so on. It thinks that if we were able to deliver that kind of service, we could get similar levels of accessibility to the car, but it comes back to the fact that the service works better if you have mainline public transport that those services can connect to.

You are right to ask whether we are simply trying to put back what we have now, which has been on a slightly declining trend in most places for some time, or should we be re-thinking it? Re-thinking it means looking at how we can get more people to access and interchange more easily with public transport. They are definitely things like e-scooters and what are called mobility hubs, where you have the opportunity to pick up and drop off car club vehicles, park your bike safely and securely, or access e-scooters. There are facilities there. There are shops and other things that you can do at these hubs. There are some really terrible, bleak bus stop interchanges that I can think of in Leeds, where lots of this could go on but does not because we have never planned for it. There are some really exciting opportunities to enable more people to access public transport easily that would deliver really good journey times for them. You are right that we have to look at slightly different models, but we cannot do that without a strong core mainline public transport network.

Professor Stephen Joseph: Before Covid, rail patronage had been going up. It definitely was not a declining industry. We need that.

I would echo Greg's point that we can go down the American route of having very low-density developments, places that are very difficult to serve by public transport, only with demand-responsive services. I do think there is a role for demand-responsive services. Baroness Thornhill will know that in Watford she and her successor have made a demand-responsive service work, but it is as an adjunct and supplement to fixed-route services and not a replacement for it. That is the kind of thing we need to be looking at.

The land use planning point is really important. It depends on what kind of housing and commercial development we have. If we go down the route of the past few years of low-density, car-based development, it will be much more difficult to serve by public transport. If we have the kinds of things that the Office for Place and Create Streets are talking about—a gentle density around high-quality public transport—it is not a dead body.

It is worth looking at international comparisons. Switzerland, one of the richest countries on earth, has very high public transport use because it has made it possible to do, because it planned around it, and because it all interconnects. Other countries are making public transport cheaper, or in some cities and countries free, as a way of tackling the climate emergency and attracting people out of cars.

Lord Stunell: Your point about rising rail patronage will be more or less completely neutralised by what has been described by both our witnesses as the change in work style with people working from home. The peak commuter business in the south-east will never go back to what it has

been or was in 2019, or am I missing something?

Professor Stephen Joseph: You are right, but that does not mean that we give it up, concrete over the railways and replace them with Ubers. We cannot do that. London will not survive if we do not get a lot of fixed-route public transport back.

We are also seeing the opportunity to strengthen suburban centres in London and other cities, and provide good public transport to those, because if people are going to be working from home they will be able to access their more local town centres. So providing more services—more orbital bus services in London, for example—will help that. I agree with Greg that we need to re-think public transport, but I do not think we need to get rid of it. There have been North American models where whole bus networks have been replaced with Ubers and it fundamentally has not worked, and it has not worked in financial terms either.

Professor Greg Marsden: To provide for the peak, for example in Southeastern, it is hugely expensive to add an additional train into already crowded networks. One thing we ought to do with Covid is look at the extent to which we can manage the peak in different ways. We have just found that people are more flexible. We could have different ticketing and different pricing to move people out of the peak. Can we run the rail service in a way that supports people's commuting patterns but without having the same cost base that we have had before? There are opportunities to use the flexibility in how people can travel to re-think how we provide services, and I hope the whole industry strategic review that is going on really takes that on board.

Professor Stephen Joseph: I should have said that the one thing the entire rail industry is absolutely united on, and which the Government, and particularly the Treasury, have refused to do anything about seriously, is flexible season tickets, so that people can travel cheaply three days a week rather than five days a week.

The Chair: Thank you for that. We have written to the transport department on that very point, you will be glad to know.

Lord Haselhurst: I have always believed that the invention of the motor car was the great liberator for many people, and for many people it still is, in the sense that you can respond very quickly to the demands of your family—"Can we go to the zoo today, daddy?", or whatever it may be. There is the ability to do that without thinking that you need to plan an overnight stay somewhere because the public transport links are not convenient for that activity, and many others.

I am also a firm believer that human beings are gregarious animals and that although some things can be done from home, the interaction with colleagues and their ideas, and so on, depends on the fact that you can be in their company and create relationships of that kind that perhaps in the end are more productive.

The other problem, as I see it, is that if we are going to have efficient public transport that really serves its purpose, it has to be linked to housing development and to the local government structure. If you build a new city or new town or develop a city region, you will pack people in there, hopefully in decent housing and so on, but then you need and can afford certain links to other places. We have to face up to the fact that the idea that fuel duty must be controlled very severely goes against the need to see a shift between the private ability to get into your car and go somewhere spontaneously and the fact that you really want people to travel by public transport.

Crossrail, which I strongly believe in, is costing a heck of a lot of money, but Crossrail 2, which is also important to the development of a city region like London, is judged too expensive. We do not have the money for that, but we are still making it easy for people to get into their motor cars. We must not charge them more and we must not deter them from that. We ought to make it more difficult for people to afford to be making lots and lots of car journeys, but it is very difficult politically to do so.

We should also remember that older people are using their cars or maintaining the use of a car much longer than they used to—75 is the new 65, or whatever it may be—although there is some counterbalancing at the moment in that young people are not obtaining licences. They still somehow manage to get themselves into large, crowded place for raves and big concerts and so on, so you would think that this requires a public transport system the use of which should be encouraged as much as we can.

Are there any other developments that we can look ahead 10 years to see for making journeys between A and B faster by new inventions that can achieve that? Is that the way our thinking should turn, so as to plan housing development in a way that underpins transport policy? At the moment the two things seem to be very separate.

Professor Stephen Joseph: I have already mentioned the link to Transport for New Homes. That is a research project that has done what nobody else has done, in or out of government, which is to look at what is being built out there and see what the transport consequences are. In 2018 it looked at 20 urban extensions and found that, in many cases, they were being built completely without any link to transport. One of the people involved in Transport for New Homes said that she went to a public inquiry where the issue of transport was raised and the inspector said, “Well, I think we’ll consider that along with bats right at the end”.

There is a disconnect, and it is a disconnect in government, between transport and planning. In practice, that means that, although you see garden communities with lovely master plans, you actually end up with bypasses and road connections. The problem is that, although they might work in a transport impact assessment to deal with the immediate traffic that is forecast to come off a very car-based development, all it does is congest the surrounding road network.

This is an English issue, because Wales and Scotland now have different transport planning policies that are locating development around railway stations, in the way that your committee's previous report talked about. If you go on the Borders Railway, you will see a station called Shawfair, which was built to allow for a new community to be built—to allow for commuting into Edinburgh, for example. There is an issue about the integration of planning and transport. The National Planning Policy Framework does not cover that adequately, and it needs to be revised.

Professor Greg Marsden: I would take a slightly different point from Stephen. As regards new infrastructure systems, if we do not already have it in the advanced planning stage, it is very unlikely that we will see it delivered in our cities in the next decade. We could do worse than funding the things that are already out there and under discussion.

There are some new technological developments. Whether every corridor will have a tram, or whether there are some new light electric or light tram-type vehicles, those technologies could come along in the next decade, and we could see a lowering of the cost of providing new high-quality public transport corridors. But what we have in front of us is a situation where local authorities, in order to get close to their climate objectives, need to see an increase in public transport against the difficult trends that I have pointed to before. The things that we can do quickly are to reallocate road space, to both public transport and cycling, and to deal with fares and the relative cost of driving.

Stephen mentioned Switzerland. Another interesting example is that what started in Vienna as a €365 all-year-round public transport pass is now valid for the whole of Austria, which is €1 a day. It becomes more affordable as a policy if so many more people take it up. There is a trade-off between bringing down the cost of access to public transport and more people getting involved in the system, and therefore that makes the services more supportable. My point is that there are not so many levers that we can pull quickly in the next decade. Road space reallocation, fares and the relative costs of driving into city centres are three that I think we can.

Q5 Lord Moylan: It is very interesting evidence, although I must say it is very focused on an assumption that public transport is a public good that needs to be promoted and forced on people. I will come back to that later when we have our discussions.

In that regard, I fully appreciate the advantages of building new homes near existing public transport infrastructure. Personally, I am a great supporter of gentle—or, even occasionally, ungente—density, but the fact is that people do not want to live in flats. I live perfectly happily in a flat in Kensington, but most people want to have a house, and they want to have a house in what is a recognisably suburban context. That is what drives the market and is what people generally go for.

We all know, and I think Stephen would agree with this, that for a public transport service to be attractive, and to be the first choice, it needs to

offer something close to a 10-minute service. If you have to start looking at timetables, or if you have to wait much longer than 10 minutes, using public transport is an act of last resort rather than first resort, if you see what I mean. Providing that sort of service to suburban developments is difficult and expensive. I am on the board of the Ebbsfleet Development Corporation where homes are being built, essentially suburban in character, and a fast-track bus service is being provided by Kent County Council as the local transport authority, but it is expensive and, of course, it only links certain places.

In that context, I want to come back to this whole assumption that public transport is so special a public good that not only do people need to be forced on to it but it also merits very large amounts of subsidy; that it is justified to say that the user does not need to pay or does not need to pay very much; that fares should go down, which is what I am hearing, or be held steady, or whatever; and that subsidies should therefore rise. Where is the equity in this? Why should people who do not use or do not have access to public transport, or people in rural areas who probably get very little, be subsidising through their taxes people, say, in London, or even other cities, who are using public transport and getting great personal benefits from it but are not paying anything close to the cost?

I will just clarify that this is as far as London is concerned, and I am talking about pre-Covid of course. It is generally not the case for the Underground, which sort of washes its face, but buses have been very heavily subsidised, and the subsidy has gone up and up precisely as the current mayor has held fares flat. Where is the equity in that, and where is the political justification?

Professor Stephen Joseph: First, you asked whether public transport is a public good. My argument is that there are various ways in which it is, as I started this session by saying, and it is a public good for non-users as well as for users.

Lord Moylan: That is true of lots of activities that are not subsidised.

Professor Stephen Joseph: Of course it is.

Lord Moylan: It is a public good for me that people are running businesses out there that I might never actually interact with but which are creating jobs and prosperity and so on.

Professor Stephen Joseph: The problem with transport is that, because we do not charge for road space by the mile so it is not a proper business, it does not work like that. Transport has so many externalities—things that are not counted in what the user pays for road use. It is particularly to do with congestion. We can come back to other things that Lord Moylan might not want us to talk about. I do not know what he thinks about air pollution or climate change. These are externalities that are not paid for at the moment, but congestion is something that affects people, and if we decide not to subsidise public transport in cities, and leave it to whatever the market can afford to

provide, we will be condemning these cities to jamming up. It is not possible to provide enough road space for everybody to drive where they like, when they like, as fast as they like, at American or below levels of motoring taxation. The Americans have tried this, but some cities, even Los Angeles, are moving away from this because they have discovered that it does not work.

Lord Moylan: Stephen, that is not quite what I am suggesting.

Professor Stephen Joseph: Right.

Lord Moylan: Take London as an example. I am not saying abolish TfL or change the system. I fully accept that London is wholly dependent on and has been built around its fixed transport infrastructure; it needs that to work. I am simply asking why the fares should be subsidised. I am making an assumption about climate change and air pollution. I am assuming for this purpose that air pollution will vanish as a result of electric cars and so on over a 10-year period. That is a heroic assumption perhaps, but let us make that assumption and deal with it. The question is: why the subsidy? Why should people not pay their way?

Professor Stephen Joseph: If you apply that to roads as well I would not object to that. At the moment we provide subsidy to motorists. I mentioned free or cheap parking in the centre of Manchester. We provide a lot of funding where parking is very cheap or free and the road space is not. If it were occupied by a building, it would cost a lot more. You have to look at these things. When you talk about forcing people to use public transport, I feel that what we are doing is—

Lord Moylan: You are taking road space away. Not you but your colleagues are explicitly calling for road space to be taken away.

Professor Stephen Joseph: You cannot provide an attractive bus service unless it has some priority over the rest of the traffic. It is worth moving this away. The point about public transport as a public good, as I said earlier and as my colleague has said, is accepted in other countries and other cities that work well.

May I just make a point about the economy? One reason for having high-quality bus services in particular is that it widens labour markets and promotes what economists call agglomeration—people getting together. There was some recent work done on improving public transport. I do not think we disagree about some of this. I am just saying that there is an issue going forward about the relative costs of public and private transport. If we are going to take the climate emergency seriously, we will need to address both sides of that equation. My colleague has already mentioned what some other countries are already doing in that respect, and that is about making it more attractive for people to use public transport relative to private transport.

Professor Greg Marsden: Obviously the issue of road space reallocations has taken your interest. The arguments here are about how

we can move people more efficiently into our towns and city. I would not advance an argument for bus lanes that are used by buses with no one on them. Allocating road space to cyclists and public transport makes sense, because in those corridors you can get more people into your city centres as a result. You have to look at those sorts of things on a case-by-case basis.

Lord Moylan: May I come to that? This is not a criticism, because this is exactly how the terms are framed, but we have spoken so far as if the solutions for cities are the same from one city to another. I happen to think that the solutions for London, or the way to deal with London, are potentially very different from how you deal with much smaller cities. Interestingly, when people ask why Leeds or Manchester, or wherever these comparisons are made, do not have the same transport services as London, the answer is that London is built differently; it is denser, it is a higher agglomeration and it has a pre-existing inherited network. There are all sorts of reasons why it has developed. Are you willing to accept that these solutions need to be differentiated according to location?

Professor Greg Marsden: I have never advanced an argument that that would not be the case. You have to look at the geography of different places to work out what makes sense. The structure of Greater Manchester compared to the structure of West Yorkshire is quite different. We will look at different kinds of solutions for different corridors. We probably will not have the same type of tram network in West Yorkshire as in Greater Manchester, because it has begun that work by converting rail lines. We would not start from that position in West Yorkshire, so we would build out a different kind of solution.

Every city has a different blend. Some cities might be better suited to cycling, for example. Some might be better suited to park-and-ride and services on the edge of the city with buses, so we should not think that we have to have high-cost infrastructure. But for corridors where there is a big demand, we will look more at a kind of tram solution. Those things ought to be looked at differently between different locations, for sure.

I start my policy analysis by saying, "What are we actually trying to achieve here with our transport system?" At the moment, the No. 1 issue that we are grappling with is how we will get to our decarbonisation targets. It is not what happens in 2050; it is the budget that we have between now and 2050. It means urgent action in the next five to 10 years at the very latest. If we have not made a big reduction in our emissions by then, we have already blown our budget.

There are very few tools that we can apply to deliver that. Technology is coming along, but it will happen as people replace their cars. We do not have enough electric car factories at the moment, but by the end of the decade, if 30% to 35% of cars on the road are all electric, that will have been a great achievement, but it will not have decarbonised the transport system. Unless there is an alternative solution out there, substantial behaviour change will be necessary. That falls into the category, and we might have a slight disagreement on how to frame it, essentially of

having to make some journeys that were made by car by other means—public transport or active travel—or we are not serious about our climate change targets. That is a perfectly valid policy position to take, but what I want to communicate to the committee is that you cannot have both things. You cannot have an ambitious climate target and then say, “But we’re not going to provide the support for the public transport services that are necessary to deliver that”.

Lord Moylan: I think public transport should be addressed in those terms—carbonisation.

Q6 Lord Best: Michael Gove has been telling us what some of the levelling-up agenda will look like. We will see billions of pounds spent on the development of big brownfield sites in urban areas, so there is a real opportunity to do something differently. These big sites will be developed. Professor Joseph has been talking around the edges of how important this link is between the housing we build and the transport that goes with it.

Drilling down to what that means for real, what three or four requirements should we place on the developers of these big sites, where we will be putting in some serious money in the future, so that we can have something better than we had in the past? If we are attracting Persimmon, Taylor Wimpey and Redrow—the usual gang—in with our levelling-up agenda to regenerate the city centres and city areas, what are the three or four requirements that we as planners, as local government, as combined authorities need to place on developers? What should we make developers do that they have the power and capacity to do that would make a significant difference in the developments on which we are now going to spend an awful lot of money?

Professor Stephen Joseph: A Transport for New Homes checklist sets out the sorts of things that they might want to put in. Location, as you have said, is key, but I think this is built around high-quality public transport. The Stagecoach Group has produced guidelines on urban development and how you build it around buses. You could follow that. If you have enough patronage, which gentle or even less gentle density gives you, you can build trams around that, but you should put in bus services and you should put in local facilities that people can walk and cycle to. It would be quite good in some of these developments if we put in pavements. One thing Transport for New Homes has found is that some developments are going ahead without any pavements at all, particularly those linking the development with the surrounding area.

Good practice looks like Poundbury. I know this is widely criticised in some quarters, but Poundbury works from a transport point of view. Something like 31% of people walk to work around Poundbury, because it has been linked well to Dorchester. Kidbrooke in south-east London also works well, because it has adjusted the railway station and so on. It is about high-quality public transport, good local facilities and good facilities for pedestrians and cyclists as a centrepiece for the development.

Professor Greg Marsden: I will pass on this one in the interests of time. Stephen is the expert here.

Lord Best: I did not quite extract from Stephen what the developer can be required to do. It is all very well saying, "Put in bus services", but Persimmon cannot put in bus services. What can the developer do? They are the people who will create these new settlements.

Professor Stephen Joseph: Developers can put in bus services—and they have, actually—and they have paid for this, but it has not worked as well as it might. In some cases, there are models in cities where the developer has contributed to what the Americans would call transit-oriented development. There is a development west of Leeds, the name of which has just gone out of my head but Greg may know it, where a new railway station has been the centrepiece for the new development and the developers contributed to it. I have forgotten the name of it.

Professor Greg Marsden: Kirkstall Forge.

Professor Stephen Joseph: That is the one. There is an opportunity to do land value capture. That is about getting the landowners as well as the developers to pay. That has now been worked through for the reopening of the railway line into Northumberland from Newcastle to Ashington where a land value capture scheme has been implemented, where it becomes a charge on the landowner rather than just expecting the developer to pay, on the grounds that the landowners are the people who benefit from having a high-quality rail service. There are examples there that are worth looking at. I think developers should contribute to public transport, as well as making sure that the local services and facilities are there and are there to start with, rather than in phase 4.

The Chair: I would add that when I was a developer at Tesco we provided a lot of bus services, funnily enough. It would be interesting to see if they still exist. That was part of the development plan that made the development, which was normally housing and supermarkets, more attractive to the local planning authority.

Lord Best: Well done, Tesco. Professor Marsden may know the development in York of Derwenthorpe, which is the Joseph Rowntree location. We have been building 550 new homes there. That makes quite a good case study for both of you, if you want to see people who are trying really hard to get it right but finding it pretty difficult.

Professor Stephen Joseph: Derwenthorpe is mentioned in the forthcoming Transport for New Homes report as an example of good practice.

The Chair: We like good practice and we have boxes in our report, so we would like some details of that, please.

Q7 **The Earl of Lytton:** In our paperwork for this meeting our attention was drawn to mobility as a service. I see this as part of optimising transport use of all sorts across many modes. Could both our expert professors tell

us a little bit about what they see as the technical and administrative barriers and the operational considerations to innovative things such as MaaS, and whether in fact you can superimpose this on an existing situation, or whether you almost have to be rather radical and start de novo? In particular, does it work for the public transport system, or does it have wider implications for all of us who use roads and services of one sort or another? Perhaps I could kick off with Professor Marsden, who is probably nearer this particular pitch.

Professor Greg Marsden: That is an excellent question. There are lots of different visions for what MaaS may be. At its broadest, it is definitely about all forms of transport, so you will have the ability to access car club vehicles, hire cars, bus, rail, e-scooters, and potentially other non-transport services that become part of the package. It is an appealing vision. In some senses, it is a bit like an Oyster card on steroids.

As you move outside London, and indeed aspects of the mobility system within London, the issue is the regulatory barriers. As Stephen mentioned earlier, multi-operator tickets are more expensive than those for individual operators. You still have to deal with the fact that we have a model where there is a Competition Act, and collaboration between operators is challenging. It is about who will broker a really good value offer for the users.

We have very different regulations for vehicles that carry fewer than nine people from those that carry more than nine people. We treat them differently in terms of how we regulate the services, and we do not typically get involved in subsidising taxis, except for things like access to school and so on, but what if we wanted more of those services to be feeder services into a MaaS system? Public authorities might have to start to move into spaces they have not previously operated in, in the interests of getting good value for the public purse as well as a better offer for the user. There are some old regulatory boundaries that sit there. I know the department has consulted on these challenges, but I do not think we have yet seen that move forward.

The places where we see this happening are places that are working round the problems. Birmingham has done some great work on providing an integrated payment platform that it allows other services to connect into. Companies such as Enterprise and Stagecoach are putting together packages. There is a rural one in the Highlands, for example, trying to put together these service offers for people. It is all bit more difficult than it needs to be. If we started with the idea of MaaS, we would not have the regulations in place that have built up over time for the different modes.

It is time for a revisit. If we want local governments to really take hold of managing an integrated, safe and affordable offer for all these different services, that is definitely a step beyond their role currently. I know from work with Swedish colleagues that a lot of the authorities have decided that that is beyond their public remit, so they are stepping back from it and, in that case, simply providing access to public transport tickets

through shared platforms. It could develop in a number of different ways, but if we want to be ambitious about it, we have to make some interventions.

Professor Stephen Joseph: I would simply suggest that the committee asks Transport for West Midlands to give evidence on its future mobility zone work around Warwick, because it has had some success in joining up a very wide range of existing forms of transport, including car clubs, demand-responsive transport, fixed-route transport, rail and e-scooters—they are part of that experiment as well—to see what happens if you give people access to a very wide range of different forms of transport. It would be worth looking at that.

One other technical development I would mention is very light rail. There is a lot of development of new technologies to make light rail cheaper and easier to install. Coventry is about to move in that direction, so that is another technical move in the right direction. Greg has already mentioned mobility hubs as a way of bringing these things together.

The Chair: Thank you for that. We will ask those people to give evidence of yet more good examples.

Q8 **Baroness Thornhill:** That segues beautifully into my question to both of you about mayoral leadership and more devolved powers, which I really want to get on the record. All these wonderful examples that you are giving us of things that are happening are about political will and political leadership. In my period of office, I felt that high density living was not popular—far from it; it is politically suicidal sometimes. We are, as Lord Moylan has said, wedded to our cars, so it takes a special political will.

In your opinion, is public policy going in the right direction for giving combined authorities, mayors, or local authorities in general, more of the right powers? Do you feel that we now have a critical mass of case studies to persuade government that this is the right way to go—as one of my colleagues said earlier, Leeds is not London—to allow difference and differentiation in responding to particular circumstances, but taking people with us?

Professor Stephen Joseph: I think there is good evidence of this. I have already mentioned some in relation to local rail. I hope the committee will ask the Urban Transport Group to give evidence, because it has stacks of evidence on transport initiatives taken by mayoral and combined authorities that have made a difference.

In answer to the question whether we are going in the right direction, we will have to wait to see what the levelling-up White Paper says, because that will set out some of this. I think there is good evidence that, where local authorities and combined authorities have done this, some say they often manage to do the right thing and make things work for public transport in towns and cities. We have a very centralised system in this country, and where it has been devolved it has worked.

Professor Greg Marsden: Another good example, which is not a mayoral combined authority, is Nottingham. That has had a stable political situation for a number of years, which has enabled it to deliver a workplace parking levy, the only place in the country that has that, plus the ability to connect that to its tram network. It also has a municipal bus company, so there are some circumstances there. It is a good example of a city-led transport strategy, which shows that cities can deliver high-quality services.

To me, funding is critical. For example, West Yorkshire Combined Authority has suffered terribly over the years from national winds of change about whether trams are popular or not popular. We have a commitment now to begin the development of a MaaS transit network, but it is £200 million-worth of commitment, which is not insignificant but is not going to build a huge network. The question is: what will happen in the long term? To build a network for a city region is a long-term commitment, and the stability of knowing that funding is coming would allow it to be done in a different way. I think the powers are encouraging, and the longer-term funding settlements that come with that have been welcome, but there is more still to do.

Professor Stephen Joseph: Cities in other countries have more local revenue-raising that they can do. There is an employers' payroll tax in France that can be activated by cities, which has paid for a lot of public transport improvements there. There are local sales taxes in German states that have paid for good public transport there. Apart from things such as the workplace parking levy, we do not have things like that here.

Baroness Thornhill: It is always a robust discussion when discussing any fiscal devolution. Thank you very much.

Q9 **Lord Carrington of Fulham:** It is a fascinating discussion. One thing that I find is missing from all this is the role of commercial traffic on the roads. We are talking about the use of public transport as though the only people who need to get about on roads are commuters, leisure people and people using their own types of vehicle, such as a car or a bicycle or whatever. As we constrain parking in city centres, and as we constrain the use of roads, we also constrain the ability of essential services, such as builders, decorators, plumbers, delivery people and so on, to get in and out of city centres. We run into the danger of doing what, sadly, a number of American cities did, which is completely hollow out their city centres altogether, because they made it impossible to get there, people stopped going there and the city centres just collapsed. How do we balance all this, given that we cannot build more roads in urban areas?

Professor Greg Marsden: You raise a really good point. Road space is a scarce asset, particularly in city centres. I do not think there is enough expertise in local government on freight movements, partly because they go over long distances and local authorities feel that they have limited tools to manage that. The provision of space is crucial. Increasingly, we can do that in intelligent ways. We can have sensors at the roadside that

can indicate whether spaces are available. Pre-booking schemes and trials are also available. We have to provide enough space for goods vehicles, deliveries and servicing—all the things you mention—because the consequence of not doing that is that we end up with people making their own solution, which tends to block the roads for the other users anyway and we end up losing the benefits of managing the system.

It is a really great point that we need to make sure we have adequate provision for the kinds of needs that we have in our city centres. Freight does not have a vote, but it should have an important voice in how that is all organised.

Professor Stephen Joseph: I would refer the committee to a report from the Urban Transport Group called *Delivering the Goods*, which has just come out as a revised edition. In fact, I took part in a webinar about it the other week. The recording is still up there.

What Lord Carrington is talking about is builders and essential services, which is different from other forms of goods traffic on the road such as deliveries and waste. Lord Moylan will know of an experiment done around, I think, Bond Street where they managed, just by co-operation between the people involved, to shrink the number of those providing waste collection services down to four and therefore reduce the number of goods movements. I know that has been talked about. It is in the Government's gear change document and might have wider impacts.

I should mention e-cargo bikes, which have taken off with very little public support but commercially have been very successful. I talked to a group in London, Pedal Me, that runs a cargo bike service. It would argue that it can deliver quite a lot of stuff, although it says that concrete and building materials would be outside its remit. That is about the sorts of things that can be done in London. We are moving away from public transport here, but I think it is a good supplement. Some cities have experimented with cargo trams where they put goods trams on their tram network. I think Amsterdam has that.

Lord Carrington of Fulham: My experience, I have to say, is very much London-oriented. One of the impacts of the push in London towards bicycle lanes, for instance, has been that it has congested the road network and made it very much more difficult for people in vehicles, whether it is public transport, builders, or whatever they are, to get from one place to another, with bicycle lanes, which are used very largely by commuters or for leisure purposes. Is there an issue here about the economic priority of getting economic regeneration in city centres as against people just being able to move around because they are commuting or because they are doing leisure activities?

Professor Greg Marsden: Probably the hardest thing about transport is that there are so many different reasons why people are travelling, and we are providing our services to a very diverse set of needs. It is extremely hard to get that balance right. I think that has to be done on a case-by-case basis, as we were talking about earlier, which fits with the

geography of the place and how the economy of the place works. It is a great question, but it is probably a several-hour debate.

The Chair: Any research findings you have on things like bike lanes would be helpful to the committee. I agree that cargo bikes are interesting, but bike lanes are quite underused in parts of London. If there is research on what is happening with these new forms, it would be very useful to know.

Lord Grocott: And the cost of their provision. I would like to have some answers to that in respect of bike lanes. This is just anecdotal as far as I am concerned, but they seem to be empty for large chunks of the day, and buses, cars, delivery vans and everything else are slowed down. It has not been cost-free. As far as I can make out, it has been a very expensive investment with public money to provide all these cycle lanes.

Professor Greg Marsden: I am certainly happy to provide some evidence on the use of cycle lanes and the benefits of networks of cycle lanes. We are still at an early stage in many of our cities of having a high-quality network. The first benefit you see might not be the usage you will get in five or eight years' time as you build up a wider network. There are some great examples in European cities that have high-quality networks. I will certainly find that evidence.

The Chair: We would like evidence from abroad; and, as things happen in the UK, it would be helpful to know how people are adapting, and whether they are adapting as we had hoped.

Q10 **Lord Berkeley:** Stephen and Greg, it is very interesting evidence, and thank you very much for that. It has been dominated, I think, by how we can carry on using our own personal cars and still vaguely comply with road space challenges and decarbonisation.

Greg, I have been in conversation with your colleague, Dr Jillian Anable, over the years, who has made some very interesting comments about widespread personal vehicle ownership not appearing to be compatible with significant decarbonisation. You may want to come back to the committee on that. I would like to hear from you about the demand for movement and how that might be reduced or provided in some other ways, be it the development you have talked about, fewer journeys, shorter journeys, car sharing—which we have not talked about—and, of course, how they all fit into a congested road space. Certainly, as a keen cyclist in London, I get frightened sometimes by the number of cyclists on the roads who are going two ways in different directions. It is a slightly different thing, but at least it is decarbonised, and I think we have to keep an eye on the decarbonisation agenda and how that is developed. It would be lovely to hear from both of you, if there is time.

Professor Greg Marsden: Thank you for that, Lord Berkeley. I will make one observation—and I will certainly pass the evidence forward to the committee—that, per head of population, people have been driving less since 2002 right the way through to at least 2018, when I last looked at the data. There are trends such as urbanisation and younger people

taking up cars less early in their lifetime. We have been on a trend of reducing driving over time. Obviously, the networks still look busy to everyone out there because we have had some areas of population growth, and they are really busy anyway, but the possibility of people driving less is a reality already.

You made the point about how much movement there is in cars. The average occupancy of a car in the morning peak is 1.2 and the average occupancy of a car across the whole day is 1.6. Again, if we want to do things quickly, there is an awful lot of mobility out there that we could use more efficiently, certainly with innovations in shared mobility or shared public transport. Whether they are organised by businesses that are interested in getting their workers to work or whether through social clubs or on platforms that people choose to share through, there is a massive opportunity to still have access to all the things that we need today but to do it in a very different way.

My view on the climate change agenda is that the science does the numbers about the scale of the challenge. The issue we then face is that, if we are intending to commit to that, we have some options. None of them is an easy choice. The question is: what balance, what package, are we going to put together? I certainly think there are opportunities in the shared mobility space that sit somewhere between public transport and private transport, so it is probably within the remit of this inquiry. There are huge opportunities there.

Professor Stephen Joseph: There are definitely opportunities in the shared transport space. I have mentioned the organisation Liftshare, which has done a lot on this, and particularly on the concept of mobility plans with Mobilityways, which, essentially, is working with employers to achieve zero-carbon commuting. Some of that is just about working out where employees are coming from into, say, hospitals, and reshaping bus services a bit to serve them. Some of it is about more car sharing and so on. There are opportunities to do this.

There is also a concept that we have not mentioned so far of 15-minute cities, which a number of European countries have adopted. The idea is that you are able to get to the things you need to get to within a 15-minute walk or cycle from your house. That goes back to the discussion we were having about land use. That concept of 15-minute cities, which the Government have mentioned in one or two documents, is worth thinking about because it will provide support for public transport.

We have talked about innovation and mobility as a service and so on, but as a final point I would comment that some of this is about getting the basics right, providing high-quality, high-frequency services, with attractive fares, good information and promotion to get people back into using them, allied with schemes that give buses and trams, in particular, priority over other forms of transport, and better bus stop infrastructure, as opposed to some of the rather windswept and poor services we have at the moment. Some of the things that are being funded through the transforming new cities fund and the city regions sustainable transport

funding will take us in that direction. Certainly I know that Liverpool and Leeds are working on what one might call super-bus networks on some of their routes to upgrade them significantly.

I return to the point we have made before, which is that the decisions that are made, particularly by the Treasury, in the next year or so will determine what happens here, and we need to make sure that we do not destroy the capacity for improving and increasing the use of public transport in the future.

The Chair: I think we are timed out. I would like to thank you, Professor Joseph and Professor Marsden, for your evidence. It is extremely interesting and has got us off on a very good footing. Thank you very much indeed.