



**Cynulliad Cenedlaethol Cymru
The National Assembly for Wales**

**Y Pwyllgor Cynaliadwyedd
The Sustainability Committee**

**Dydd Iau, 22 Tachwedd 2007
Thursday, 22 November 2007**

Cynnwys
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Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynndi yn y pwyllgor. Yn ogystal,
cynhwysir cyfieithiad Saesneg o gyfraniadau yn y Gymraeg.

These proceedings are reported in the language in which they were spoken in the committee.
In addition, an English translation of Welsh speeches is included.

Aelodau'r pwyllgor yn bresennol
Committee members in attendance

Lorraine Barrett	Llafur Labour
Mick Bates	Democratiaid Rhyddfrydol Cymru (Cadeirydd y Pwyllgor) Welsh Liberal Democrats (Committee Chair)
Alun Davies	Llafur Labour
Lesley Griffiths	Llafur Labour
Alun Ffred Jones	Plaid Cymru The Party of Wales
Darren Millar	Ceidwadwyr Cymreig Welsh Conservatives
Karen Sinclair	Llafur Labour
Brynle Williams	Ceidwadwyr Cymreig Welsh Conservatives
Leanne Wood	Plaid Cymru The Party of Wales

Eraill yn bresennol
Others in attendance

Yr Athro/Professor Stuart Cole	Canolfan Ymchwil Trafnidiaeth Cymru Wales Transport Research Centre
Peter Lipman	Cyfarwyddwr Teithio Carbon Isel, Sustrans Director of Low Carbon Travel, Sustrans
Lynn Sloman	Is-gadeirydd y Comisiwn Trafnidiaeth Integredig Vice-chair, Commission for Integrated Transport
Lee Waters	Cyfarwyddwr Cenedlaethol Cymru, Sustrans National Director for Wales, Sustrans

Swyddogion Gwasanaeth Seneddol y Cynulliad yn bresennol
Assembly Parliamentary Service officials in attendance

Joanne Clinton	Dirprwy Glerc Deputy Clerk
Dr Virginia Hawkins	Clerc Clerk

Dechreuodd y cyfarfod am 9.30 a.m.
The meeting began at 9.30 a.m.

Cyflwyniad, Ymddiheuriadau a Dirprwyon
Introduction, Apologies and Substitutions

[1] **Mick Bates:** Good morning. I have to make some housekeeping announcements. In the event of a fire alarm, you should leave the room by the marked exits and follow instructions from the ushers and staff. There is no test of the alarms planned for today. Please ensure that mobile phones, BlackBerrys and any other pieces of electronic equipment are switched off. If anyone forgets to turn them off, there will be a fine of £25 that will be given

to my favourite charity. The National Assembly for Wales operates through the medium of both Welsh and English. Headphones are provided, through which you can hear a simultaneous translation. For those who are hard of hearing, they can also be used to amplify the sound. Translation is available on channel 1 of the headsets, and channel 0 is for amplification of the verbatim. Please do not touch any of the buttons on the microphones.

Ymchwiliad i Leihau Gollyngiadau Carbon yng Nghymru Inquiry into Carbon Reduction in Wales

[2] **Mick Bates:** This is the second scrutiny session on carbon reduction in Wales. Committee members will now be familiar with the process. We move further into our inquiry into carbon reduction in Wales to look at how it is possible for the Welsh Government to reduce carbon emissions in the transport sector. We have four witnesses this morning. It is my great pleasure to welcome Lynn Sloman, the vice-chair of the Commission for Integrated Transport, to the meeting. I invite you to give a brief overview of your submission. Thank you for your submission; Members are familiar with, and very impressed with, the information therein. There is also a set of slides, I believe.

[3] **Ms Sloman:** I am aware that you would like quite a short presentation, so I am not proposing to go through all the slides, but we can refer to some of the graphs if that would be helpful. Thank you for inviting me to your meeting. I will begin by explaining that the Commission for Integrated Transport advises the Government in Westminster on transport policy. Our role is to identify emerging issues, to provide advice to Ministers in Westminster based on evidence on those issues, and to spark debate on those topics. CfIT's strength lies in the breadth of expertise of its members who are drawn from a wide range of backgrounds. My expertise is in the interplay between transport policy and the environment. In my day job, I work as an independent consultant, specialising in policy and practice on how to make people's travel behaviour more sustainable.

[4] The context for CfIT's work on transport and climate change is that, across the UK, transport is responsible for around 33 per cent of emissions. That is if you measure emissions by end user rather than by source, and if you include international aviation and shipping as well as land transport. That makes it the biggest single sector in carbon emission terms. Within transport, the biggest contribution is from road transport—cars, lorries, buses and vans—although the fastest growing source of emissions is from air travel. It is fair to say that the view until recently was that it would be quite difficult to achieve large reductions in carbon emissions from transport until about 2030, when it is hoped, but not guaranteed, that emerging technologies might deliver quite large cuts in carbon emissions from transport.

[5] The CfIT study focused on the period to 2020, which is the short term. We wanted to test whether there might be cost-effective measures that could deliver substantial carbon savings over that short-term period, because carbon savings now are particularly valuable—I feel that they are worth more than later carbon savings.

[6] The conclusion from the research was that we can deliver more short-term carbon savings than was previously believed. We identified five packages of measures which, if put together, would cut surface transport emissions by about seven megatonnes of carbon in 2020, which is a reduction from 36 megatonnes of carbon today to about 29 megatonnes of carbon. That contrasts with the view held until recently that the best that we could hope for would be for carbon emissions from transport to 2020 to stay about level with gains in terms of efficiency savings being offset by traffic growth. So, we are talking about delivering real cuts in carbon emissions.

[7] The five packages covered vehicle efficiency, driver behaviour, changes to travel

mode through smarter choice measures, the freight sector and aviation. The paper that we sent to you summarises the main measures within each of those five packages, and there is more detail in our full report. However, I thought that it might be worth highlighting three of those measures, which are within the remit of the Welsh Assembly Government.

[8] On our vehicle efficiency package, that includes mandatory emissions targets and changes to the vehicle excise duty to incentivise purchasers to buy the most fuel-efficient cars. It also recommends that all public agencies, including local authorities, should achieve a target for new car emissions in terms of their vehicle purchase of no more than 130g of carbon dioxide per kilometre by 2010. That is something that could be actioned in Wales among local authorities and Government agencies.

[9] Our driver behaviour package includes steady and sustained increases in fuel prices to lock in the gains from more fuel-efficient cars in the first package. It also recommends an eco-driving programme and action to enforce the 70 mph speed limit. The Welsh Assembly Government could pursue the eco-driving issue by establishing a driver training programme targeting learners or existing drivers. The Netherlands has established an eco-driving programme, and it is aiming for all licence holders to have received eco-driving training by 2010.

[10] Our third recommendation was for wider implementation of smarter choice measures to change adult behaviour. By ‘smarter choice measures’ I mean things like workplace and school travel plans, public transport marketing, personal travel planning, car clubs, car sharing and teleworking. A previous study for the Department for Transport with which I was involved concluded that an intensive programme of those measures, built up over a period of 10 years, could reduce national traffic levels by around 11 per cent. These are the types of measures that are being implemented in the sustainable travel towns; I believe that you are receiving evidence by video link from Darlington later this morning. Delivering those on a large scale could be done in Wales, but they would require significant revenue funding because these types of interventions tend to be staff intensive and revenue intensive.

[11] Our five packages focus on quick wins to achieve change in carbon emissions between now and 2020 and to make significant savings in that period. However, it is worth stressing that we also need to act now to put in place measures to achieve profound change in the medium term. For example, that would include a better understanding of the technology pathways towards very low or zero carbon emissions from transport, designing road pricing so that it acts to reduce carbon emissions—although it is not a given that road pricing would reduce carbon emissions—and planning new development and transport infrastructure around the needs of public transport users, pedestrians and cyclists, rather than what we have done historically, which is to plan that infrastructure and the layout of our towns and cities around car drivers. Thank you very much.

9.40 a.m.

[12] **Mick Bates:** Thank you very much, Lynn, for that overview of your paper. You mentioned some very interesting propositions. I am particularly taken by two concepts, one of which is the quick win, and I hope that, through this scrutiny on transport, we can find ways in which we can implement measures in Wales that will help us to reduce carbon emissions in the short term. However, I think that we are also aware of the difficulties of bringing about profound change that could possibly lead us to the concept of transport with zero carbon emissions. What is the commission’s role, if any, in advising the Welsh Assembly Government on transport policy?

[13] **Ms Sloman:** Our primary role is in advising the Westminster Government on transport policy. However, the Commission for Integrated Transport does undertake meetings

with the devolved administrations, so, for example, we met in Cardiff in May earlier this year. Before that, we held a meeting in Scotland, and we will be meeting in Northern Ireland in May next year. Primarily, our responsibility is to the Department for Transport in Westminster.

[14] **Mick Bates:** When you say that you have met with people, were they Government officials, Ministers or representatives of the Welsh Local Government Association?

[15] **Ms Sloman:** We met with Government officials.

[16] **Mick Bates:** Was that specifically about transport and carbon reduction?

[17] **Ms Sloman:** No, it was in relation to transport policy in the round, so we discussed quite a wide range of issues that were of interest to us and Welsh Assembly Government officials.

[18] **Karen Sinclair:** Welcome, Lynn; it is nice to see you. Which transport modes contribute the most carbon emissions in the UK? I would also be interested to know if you have any separate figures for Wales.

[19] **Ms Sloman:** I do not have any separate figures for Wales. The main contribution is from cars. If you imagine the pie chart for transport, just over half of the emissions will be from cars and a third from lorries and vans. It is a slightly complicated picture because the data tends to be reported for land-based travel only and we tend not to talk about international aviation in the same breath. One of the concerns is that, looking forward, aviation is likely to account for a much more significant proportion of our carbon emissions.

[20] **Lorraine Barrett:** What are the commission's views on the Department for Transport's proposals for reducing carbon, as set out in the department's document, 'Towards a Sustainable Transport System: Supporting Economic Growth in a Low Carbon World'? Do you think that the proposals go far enough in tackling emissions and is enough planned for the period leading up to 2014?

[21] **Ms Sloman:** I think that one of the promising things in the new document, 'Towards a Sustainable Transport System', is that the Department for Transport has taken on board some of the findings from our 'Transport and Climate Change' report. It says, in 'Towards a Sustainable Transport System', that it intends to undertake a review of some of the gains that it might be possible to achieve in the shorter term. I think that things have moved on since the last update of the climate change programme was published, when the discussion was very much about savings from transport being in the long term. I think that the Department for Transport recognises that this is a key issue. I do not think that it has all the answers yet and I do not think that its staff would say that they have all the answers by any means.

[22] **Lorraine Barrett:** Looking at the Local Transport Bill, what are your views on the proposals in that Bill and the contribution that they can make to reducing carbon emissions? You refer in your submission to road pricing and bus quality contracts, so I just wondered if you would say a bit about the contribution of the Local Transport Bill.

[23] **Ms Sloman:** I think that the moves that are trailed in the Local Transport Bill towards more integrated public transport at a local level are a necessary prerequisite to setting up public transport systems that offer a viable alternative to the car. So, the move away from passenger transport authorities in England, towards integrated transport authorities, and the idea that those should be extended to areas other than the existing conurbations is very positive.

[24] Of course, in Wales, it is somewhat different, as you have regional transport consortia and, in a sense, there is already the potential for integrated planning here in a way that there was not in England outside London. So, that step in the local transport Bill is very positive. We would see the encouragement to introduce road pricing, and the incentives for local authorities to introduce it, as a good thing. The view of the Commission for Integrated Transport continues to be that we should have a national road pricing scheme and, at the moment, the Government finds that difficult to take forward.

[25] **Lorraine Barrett:** I will just throw this in while we have you here. Have you had any thoughts or seen any data on the scheme entitling everyone aged over 60 in Wales to a free bus pass for the last however many years, and the impact that that has had on reducing people's use of cars?

[26] **Ms Sloman:** I am afraid that I have not seen data on the effect of concessionary passes. It has clearly had an enormous social benefit. I take your point and it would be interesting to understand how many people—the 'young' old, the recently retired—use their bus pass rather than drive into town. I am sure that that will have an effect, but whether it is the most cost-effective way to achieve those carbon reductions is another question.

[27] **Mick Bates:** Thank you for those interesting points. Darren has a question and he will be followed by Leanne.

[28] **Darren Millar:** You touched on road pricing earlier in your opening remarks. One thing that you said is that it is not a given that road pricing will reduce carbon. Can you give us further information on why that is your view?

[29] **Ms Sloman:** The debate around road pricing is sometimes in the context of its being revenue neutral. To say that road pricing would be revenue neutral might imply that it would be balanced by a reduction in fuel taxes, for example. If one were to do that, it would lead to a reduction in congestion in city centres but, in rural areas, where there is very little congestion but where fuel prices would still be lower, the effect would be to encourage more driving. If you look at the sums of the net effects of carbon emissions, you might find that the increased driving in rural areas would more than offset the reduction in driving in urban areas, and that would mean an increase in carbon emissions. So, we would be concerned that any road pricing scheme be designed in such a way as not to lead to more carbon emissions arising from more driving in rural areas.

[30] **Darren Millar:** Would you agree that there would be a desperate need to ensure that there were adequate alternatives to using a car on a trunk road, in north Wales, for example, along the A55?

[31] **Ms Sloman:** I completely agree that, in any package of road pricing, one needs to design in the alternatives so that people have a satisfactory choice. CfIT is currently undertaking a study into the role of taxis in rural public transport, and one thing that we are interested in is whether it is possible to provide much more cost effective and better quality public transport in rural areas through the large-scale use of demand-responsive taxis. That happens in the Netherlands, Switzerland and Germany on a much bigger scale than anything that happens at present in the UK, and we think that it might be a way of delivering a viable alternative to the car in areas outside big cities, and that we really ought to understand it better.

[32] **Mick Bates:** I think that our next witness will give us some information on that.

[33] **Ms Sloman:** I think that he might.

[34] **Mick Bates:** It is a very interesting area. When people look at all these issues in transport terms, do they measure them against the carbon reduction that would be achieved by whatever is being implemented? Is carbon reduction high up on the agenda of transport issues?

[35] **Ms Sloman:** I do not think that it is yet sufficiently high up the agenda. The Department for Transport is currently carrying out what it calls a 'refresh' of the new approach to appraisal, and it will be interesting to see how much it manages to build carbon considerations into that appraisal process for evaluating road schemes, rail schemes and so on. My personal perception would be that when people think about which schemes to back, the carbon contribution of a scheme is very much secondary to perceptions of economic impact, for example.

9.50 a.m.

[36] **Leanne Wood:** Going back to road pricing, do you know whether London's congestion charge has reduced carbon emissions? Does the London congestion charge work well because the public transport alternatives are already so well advanced?

[37] **Ms Sloman:** Yes. The London congestion charge has reduced traffic in the central area by about 14 per cent. Obviously, that is quite a small part of London but, in achieving that, it has had a small effect on carbon emissions in London. I think that people in London support congestion charging, partly because there are very good public transport alternatives, and partly because the investment in cycling over the past seven years has been very effective, and has led to an 80 per cent increase in the number of cycle trips on the main-road network in London.

[38] People in London can see that the environment has got nicer as a result of congestion charging. The centre of London is a more pleasant place to be: it is less polluted; there is less traffic, if you are a pedestrian, to battle with; and it has become a better environment. Although by no means everybody would support the congestion charge, I think that people can understand the settlement that you pay if you really need to drive into the centre. However, much of the time, you do not need to drive, and there are good alternatives. When you get to the centre, it is a better place for everybody because of the congestion charge.

[39] **Karen Sinclair:** What steps could the Welsh Assembly Government take, especially to promote eco-driving and a greater adherence to speed limits?

[40] **Ms Sloman:** Eco-driving is quite a new concept. We know from various studies that, typically, quite short eco-driving programmes reduce drivers' carbon emissions by between 5 and 10 per cent, so it seems to be effective, as well as comparatively low cost. At this stage in this country, we do not run large-scale eco-driving programmes, but we could. In the context of new drivers, it would be interesting if people had to demonstrate as part of the practical test that their driving was ecologically efficient, in that they do not accelerate too fast or brake fiercely, and that they knew about things like tyre pressures, and so on. However, there is also the matter of whether the Welsh Assembly Government could fund or sponsor a programme of eco-driving training that could be subsidised and available to any driver, coupled with a promotion programme to encourage people to take up that opportunity. We know that many people are concerned about their carbon footprint, so something that offered them the opportunity to find out how to drive in a more efficient way might encourage a lot of take-up and interest.

[41] On speed limit enforcement, driving over the 70 mph speed limit on the motorway, at 80 mph, say, has the effect of a large increase in one's carbon emissions. So it seems to us to be sensible to enforce what is, after all, the law with regard to the 70 mph speed limit on

motorways.

[42] Where speed limits are actively enforced through traffic management programmes on the motorway network, it proves quite popular with drivers. When people are on congested sections of the motorway, and the speed limit is reduced to 50 mph, people can see that they travel more smoothly, that you do not get into stop-start conditions, and that feels safer and probably less stressful. So, we want to see a very active traffic management approach spread across more roads than those where it is currently used. It could have a gain in carbon emissions terms, and it would go with the grain of the sorts of things that people want, and would be quite popular.

[43] **Mick Bates:** Is there any evidence from the eco-driving that has been undertaken in Holland?

[44] **Ms Sloman:** Yes, there is. I am afraid that I cannot tell you the effects of the eco-driving programme in Holland, but in our report we identify about six different places where studies have been done of eco-driving. Typically, the results are a reduction in carbon emissions of around 10 per cent or a little less.

[45] **Mick Bates:** That is quite significant.

[46] **Lesley Griffiths:** I wanted to pick up on the eco-driving programme in the Netherlands that you talked about. You said that they were hopeful that most drivers would have undertaken the programme by 2010. Do they give incentives to drivers, and how is that funded? Does the Government fund that programme?

[47] **Ms Sloman:** I am afraid that I cannot tell you any more about how the eco-driving training programme in the Netherlands works. We did not look in great depth at a series of programmes, and it is just one example among quite a number that we picked up. I know that the programme has started fairly recently and, so far, only quite a small proportion of drivers has taken it up, so it is still early days at the moment. I am afraid that I do not know the cost of that programme. It seems that we ought to investigate it further, and it would be an interesting thing for the Welsh Assembly Government to explore.

[48] **Alun Ffred Jones:** I have two points. Did I hear you correctly when you said something about aiming at zero carbon emissions from transport? How can that be possibly achieved?

[49] **Ms Sloman:** It was regarding zero emissions from vehicles. In the long term, the hope is that, through the use of fuel cell technology or hydrogen, we might be able to develop cars that are zero emission at least at the point of use, but there are always questions about where the electricity used to power the generation of the hydrogen will be derived from, and whether it is from a renewable source. My view is that those hopes about high-tech solutions to zero carbon emissions from transport are just that: at the moment, they are just hopes. It is not clear that there is a technology pathway towards achieving it within the next 30 or 40 years, which is the period over which we need action. So, my view is that far greater use of highly fuel-efficient vehicles using hybrid technology, coupled with changes in travel behaviour, is the path to focus on, rather than our hoping for a magic bullet.

[50] **Alun Ffred Jones:** Some of us heard a presentation recently, called 'Drinking in the Last Chance Saloon', which painted a very grim picture of the future in carbon emissions terms. Do you think that this gradualist approach will have any significant effect on that grim picture, or do we need to do something far more drastic?

[51] **Ms Sloman:** We will need to do something far more drastic, as you put it, within the

coming period.

[52] **Alun Ffred Jones:** What is that period?

[53] **Ms Sloman:** The measures that we have identified are worth having, because reductions in carbon emissions achieved now are worth more than those achieved in 2040. The CfIT work did not look at how we might achieve more substantial reductions in carbon emissions. Arguably, we should have done that, but it seemed to us that working out what one can do in the short term was a worthwhile first step. That does not take away from the recognition that we may need to move towards systems of carbon trading and carbon permits in the medium term, which are relevant not only to transport but also to the whole economy. We recognise that that economy-wide approach to achieving very large cuts in our carbon emissions is likely to be necessary. The measures that I have identified to you and that our paper identifies are the practical things that we can do within the transport world, while a wider discussion takes place about how to achieve those much more drastic cuts, whether it is through carbon trading or carbon permits.

10.00 a.m.

[54] **Alun Ffred Jones:** I have just one small point to make. From your paper, it seems that public transport, which is sometimes touted as the answer to our woes, really does not figure that highly in your list of solutions. Am I right about that?

[55] **Ms Sloman:** Public transport does figure in our list of solutions—

[56] **Alun Ffred Jones:** Yes, it does, but it does not figure very prominently. Am I right about that?

[57] **Ms Sloman:** No, I think that that is wrong. I think that we would see improvements in public transport—both in the sense of making public transport highly carbon efficient and in developing a high-quality integrated network that enables people to make short journeys by public transport—and walking and cycling, as being a crucial part of the mix. It is no good marketing alternatives to people, if the alternatives are not available when somebody comes to use them. So, we would see the development of a non-car network, which enables people to make, principally and very importantly, short journeys without using their car, as being an absolutely crucial part of the mix.

[58] **Brynle Williams:** I am fascinated by this and you touched on a subject that is very dear to me. While listening to you and Alun Ffred, I was thinking that until we really get to grips with this overall or find a global method of trying to reduce carbon, we are only tinkering around the outside of it. Everything is around the freight industry. One of the questions that I will ask in a few minutes is: of your five recommendations, what do you think that we can do in Wales? Going on from that, my particular interest is in freight and so on, and 80 per cent of the trucks that are on the road today carry food-related products. If we are really serious about looking at carbon, we must go back to local production and sourcing, and we must be serious about it. Regrettably, big business and the supermarkets have too much influence over Government. I find it rather hideous, and I do not apologise for using that word, that lambs are brought down from Scotland to Anglesey to be slaughtered, taken across the country to be processed, brought back to Lancashire to be packaged, and then distributed across the whole country, when, 40 years ago, we had a fantastic local network. It comes back to the Stern review on the economics of climate change: we have to look at the overall picture. I feel quite frustrated. I hear what you are saying, and I am most certainly not criticising your work, but I feel that if we are serious about doing something about carbon reduction, this is one of the things that we have to do and we have to do it now. Going back to my original question, of your five recommendations, which one of those do you think that the

Welsh Assembly Government could do something about to make a marked difference to this issue?

[59] **Ms Sloman:** I agree with you about freight. We all look at the current dependence on long-distance transport and think that this cannot be right. Unfortunately, to know that it is wrong is not the same as having a solution to it at the moment. I wish I could offer you a package that was going to deal with that problem, but I cannot. Just on freight, we did conclude in the work that we did on transport and climate change that there is a lot of potential, even within the current illogical freight movements in this country, to achieve much greater vehicle efficiency. Although some freight vehicles operate in a way that is carbon efficient, there is a very long tail of operators who operate in a way that is much less carbon efficient and so there is a lot of, if you like, learning from good practice, which is very dull, but which might well deliver quite significant benefits.

[60] You asked which of our packages seemed to offer the most potential for action here in Wales. It is my area of expertise, but that is not the only reason why I think the use of travel behaviour change methods—the smarter choice measures, workplace travel plans, school travel plans, and personal travel planning—would make it possible to achieve quite significant changes in people’s travel behaviour, of the order of a reduction in car travel of about 10 per cent. The other great advantage of engaging with people through their workplaces, or on the doorstep, marketing public transport as an alternative, offering car clubs, and so on, is that it prepares people, and encourages them to engage with what they can do in their own life. There is no doubt that many trips are made by car when there is already a perfectly good alternative, whether it is walking, cycling, or public transport. If we can encourage people to engage with that, one of the benefits will be that people will become more receptive to more radical action by Government in five or 10 years’ time. So, it both encourages behavioural change now, and, by changing people’s behaviour, stimulates a change in attitudes to transport, and maybe more support for action to reduce carbon emissions in more radical ways.

[61] **Brynle Williams:** There is a local incident that I find rather sad, and, hopefully, with the influence of people like you, we can reverse this. We had a small 15-seater minibus in a rural area, which used to run two or three routes around some villages on two or three days per week. That was an example of fitting the transport to the requirements of the community. Then, all of a sudden, somebody decided that it was not efficient, and started using a 52-seater bus instead. Now we have a 52-seater than runs every hour, and nobody uses it. Should we break down contracts for public services, particularly in rural areas? You have emphasised car sharing, dial-a-cab, and so on. In rural areas, we could make far better use of these things, but regrettably, big is supposed to be beautiful, and it is not working in this particular case.

[62] **Ms Sloman:** Systems that make extensive use of shared taxis are perhaps the way to go—that is one of the things that we should explore. Certainly, if you look at the Netherlands, or Switzerland, or Germany, there are services that only run if someone phones to request them, but are available every hour through till 1 a.m.. In Germany, there are taxis linked to the public transport service, so that you can go out for the night in a town, take your bus home at midnight, for example, to your nearest market town, and, at the end of the bus journey, there is a taxi waiting for the last leg of the journey home to your village. It seems to me that the integration of buses and taxis is something that we do not do at all, at the moment. It might be a way of providing services that would be a viable alternative to the car for people in rural areas.

[63] **Mick Bates:** That is a very interesting point, and I am sure that we will return to this issue—it is critical for us. Karen is next, and then Leslie.

[64] **Karen Sinclair:** I think that the hub-and-spoke concept of ensuring easy travel for

people, especially from more rural areas, into a central point where there are much better transport links is something that we need to take seriously, especially given that we have a large amount of rural land in Wales. However, I want to ask you about speed limits. Obviously, we have no powers over the 70 mph limit on motorways, but we may be able to do something with A-roads and U-roads that is not to do with safety, which we are always vigilant about, but to do with carbon emissions and eco-driving, which you mentioned. I was wondering if you have any thoughts about U-roads, which were not built for speed—they were mainly built for horses and carriages, were they not? So, when people try to travel along them too fast, it is all brake and accelerator. Whether reducing significantly traffic speed probably particularly on U-roads, could make a significant difference to carbon emissions from cars, because more and more cars travel on those roads for tourism reasons.

10.10 a.m.

[65] **Ms Sloman:** I do not know how the figures would work out for those specific roads, but more effective speed management is an obvious area to look at, because it has benefits for carbon savings and safety. One interesting area that we at CfIT, together with the Motorists' Forum, are starting to look at is intelligent speed adaptation. The idea is that people—you would obviously know the speed limit of a particular road—would have a black box in their cars that would tell them what speed to drive at. It could work in such a way that they could choose to override that, or it could be a mandatory system whereby they could go above the speed limit only by pushing the accelerator. London is at the stage of having mapped almost the entire road network, so it is known exactly what the speed limit is at every point. One can then combine that with the black box in the car and, by use of satellite systems, ensure that there is no excuse for anyone to break the speed limit at any point, or make it very difficult for anyone to break the speed limit. That would do away with the need for extensive traffic calming measures, for example. Potentially, that approach could be applied to rural areas just as well as to a conurbation.

[66] **Karen Sinclair:** In the past, there were speed limiters on vehicles, certainly on civil service vehicles. My husband worked for BT for years and the old vans had speed limiters so that they could not travel above certain speed limits. Those could be quite beneficial these days, especially for young people who think that they are immortal and drive as though there is no tomorrow because, for them, tomorrow never comes.

[67] **Ms Sloman:** There are two ways, potentially, to stimulate wider take-up of voluntary speed limiters. One is to offer people gains in insurance premiums, which is what Norwich Union is now doing. If you have a black box in your car you pay a lower premium to the company. The second option is for all employers to say that when their staff are driving on company business they will have speed limiters in their cars. That would have terrific safety benefits, and possibly carbon benefits too.

[68] **Mick Bates:** Lesley, do you wish to come in on smarter choices?

[69] **Lesley Griffiths:** Yes. One of your recommendations is that there should be more intensive promotion to encourage take-up of public transport, and you mentioned car sharing in your presentation. What steps could the Welsh Assembly Government take to promote this?

[70] **Ms Sloman:** The commitment to four sustainable travel towns across Wales is a very good first step. It will be interesting to see how that develops, with regard to which towns are chosen and what sorts of achievements are made in those towns. The experience in England is that it takes time to work out how to put in place all of the marketing programmes, the car-sharing schemes, the workplace travel plans and so on. It is not something that you can make happen with the flick of a switch. Perhaps there will be a need to move on from those four

demonstrations quite quickly in order to spread that experience from the four sustainable travel towns within the next three to five years across all of the regional transport consortia.

[71] It will be important for the sustainable travel towns to include a range from larger urban areas to smaller market towns and their rural hinterlands. There is very little experience on that in England, and Wales could really lead the way in demonstrating what rural smarter choice strategies might look like. That is a key area for a first-mover advantage, if you like, in terms of doing something in Wales that has not been done anywhere else and coming to really understand how combined taxi and car-sharing schemes, integrated public transport, cycling on the main corridors into a market town, public transport marketing, and workplace and school travel plans can all work together in a rural area.

[72] **Mick Bates:** On that note, I thank you for your answers and presentation, which have given us incredible insight into the methods that can be used to reduced carbon in transport, and the final challenge of ensuring that Wales leads the way, particularly in terms of work in rural areas. Coffee will be provided during the break.

[73] **Ms Sloman:** Thank you.

[74] **Mick Bates:** Quite aptly, we now move to take evidence from Professor Stuart Cole, who is a professor of transport and runs the Wales Transport Research Centre at the University of Glamorgan. It gives me great pleasure to welcome you to the meeting, Professor Cole. We look forward to hearing what you have to say about the BWCABUS scheme. Please give us a brief overview of your paper, which we have received, before we move to questions from committee members.

[75] **Professor Cole:** I will briefly tell you where BWCABUS came from. It is called BWCABUS because you book the bus by telephone, but it also stands for ‘bysiau wledig Caerfyrddin ac Aberteifi’, because the experiment is being held in the area between Carmarthen and Aberteifi. It took around four bottles of Claret to come up with it, but that is cheaper than going to a firm of consultants. [*Laughter.*]

[76] **Mick Bates:** Does all research work require four bottles of Claret?

[77] **Professor Cole:** Yes, in my view. Some people drink gin, but Claret makes me much more productive.

[78] **Mick Bates:** We will bear that in mind when we hear your answers to the questions.

[79] **Professor Cole:** I am professor of transport at the University of Glamorgan. I have happily handed over the administrative responsibilities to someone else recently, so I am now responsible for the research side of the centre, as project leader, and I also provide evidence to the outside world, as it were, which I hope that I will be able to do today. As some of you will know, for many years I sat in meetings, like Graham Winter, who is sitting in the corner of the room, in my role as a specialist adviser in the House of Commons. So, it is something of a new experience, although not entirely, to be sitting on this side of the table.

[80] Transport is a derived demand. Very few of us actually make journeys for the sake of it; we make them for another purpose. Without transport, we would have great difficulties in making the economy work and conducting our general lives. Most governments will accept that in terms of social, economic and environmental objectives. Transport links our sources of raw materials and the points of origin of personal travel with destinations. Whether it is moving people to work, moving goods around to market, or providing for our leisure activities, transport is the oiling mechanism, if you like, in the machinery of the economy.

[81] As Lynn has just said, transport is a significant contributor to carbon emissions. I will not be dealing with the technical aspects of this issue, as that is not my area; I have come to explain the primary policy and output headings. I have taken, as the theme of the paper that I sent you, the three key areas that are identified in the Wales transport strategy, the draft of which came out at the end of last year—I understand that the final version will be out in the next few months—which cover social, environmental and economic issues. There are two ways in which to consider these; one is to consider the issues and the other is to consider steps to delivery, and, in particular, the delivery that the Assembly and the Assembly Government can provide. There are much wider implications, some of which Lynn has already mentioned, but, essentially, there are things that the Assembly and the Assembly Government are able to do in terms of reducing pollution, which will have an impact on our lifestyles, but will hopefully also have a positive impact that people will identify with. That is my introduction.

[82] **Mick Bates:** We will now move to questions.

10.20 a.m.

[83] **Brynle Williams:** Good morning. Does the Assembly Government have sufficient powers over transport matters to achieve a sustainable transport system in Wales? If not, what additional powers are needed, do you believe?

[84] **Professor Cole:** We have, within Wales, a certain number of powers that were devolved initially and subsequently by the Railways Act 2005 and the Transport (Wales) Act 2006. Those powers cover part of the transport business, that is, part of the railway network and the whole of the road network—I include the local authorities in that as well as the Assembly. We can make policy decisions in terms of things like speed limits and the way in which people might travel.

[85] A certain number of options are available to the Assembly Government. It can, for example, have an impact on rail fares because of the Wales and borders franchise, which is operated by Arriva Trans Wales, but it has no impact on the fares' policy of the West Coast main-line franchise, run by Virgin, or the Great Western franchise, which is run by First. Those decisions are made by the Department for Transport. Yet, interestingly, the biggest area of congestion in Wales, and, therefore, one of our biggest generators of pollution through car traffic, is in south-east Wales, where something like 60 per cent of the services along the south Wales main line are provided by the Great Western franchise, over which we have little or no control, as it is one of the Department for Transport's operations.

[86] We do have the opportunity, and I think that those opportunities have been taken, in the Valleys to influence the way in which people travel. The Assembly Government pushed forward on the original plan for the Valleys lines trains, which had been agreed between Arriva and the Department for Transport, and which had in it no extra trains, no longer trains, no extended platforms and, in fact, nothing other than what was there for the moment, for the next 15 years. That was the deal that the DfT provided Wales with at the beginning of the new franchise. The Assembly Government stepped in when it took over the franchise and—quite rightly, in my view—moved to enhance the service initially in the Valleys, where the biggest problems arose, and it has had a substantial success. We are now carrying, in the Valleys, something like 10 per cent more passengers every year, which means that we double the number of passengers every seven years. That has happened over the last seven years.

[87] The Department for Transport still refuses to accept that more trains are needed and what is called the high-level output study—a study of rail requirements throughout Great Britain, but specifically the one for Wales—does not see any substantial increase in provision from the Department for Transport. It is prepared to give £20 million to a scheme that has already been identified as costing £50 million and there are other parts to the scheme that

were not included in the study. So, we do not have complete control over the railways, neither in terms of operations nor in terms of the fiscal arrangements.

[88] In terms of bus operations, there was a significant step forward with the Transport (Wales) Act 2006 and the Assembly Government is now able to franchise services that do not make a profit. We look to the point, quite soon—having listened to what the Deputy First Minister and Minister for the Economy and Transport, Ieuan Wyn Jones, has said over the last few months—when there will be a change in the structure of the TrawsCambria network, which is currently operated by a series of local authorities, and it will be brought in-house, to hopefully be branded alongside the Wales and borders franchise as a single, national operation within Wales. That is a first step in a franchising operation that will enable us to integrate trains and buses. There are many issues to do with local bus operations, which are all in the hands of the private sector. Some of them are run commercially and some are run as a result of subsidies that are required to run services in rural areas or elsewhere. So, we have a degree of power, but other powers need to be brought in. On top of that, we have no powers over civil aviation—air transport—and no powers over sea transport.

[89] **Alun Davies:** Diolch yn fawr, Stuart, am eich cyflwyniad. Fel yr ydych yn ymwybodol, mae Deddf Trafnidiaeth (Cymru) 2006 yn gosod cyfrifoldeb a dyletswydd newydd ar y Llywodraeth hon. Un o'r dyletswyddau newydd hyn yw creu strategaeth ar gyfer trafndiaeth yng Nghymru. Mae'r meini prawf y mae deddfwriaeth yn eu gosod ar gyfer y strategaeth hon yn cynnwys strategaeth gynaliadwy mewn rhyw ffordd. A gredwch fod y strategaeth drafnidiaeth ddrafft sydd gennym ar hyn o bryd yn gosod digon o bwysau ar strategaeth gynaliadwy?

Alun Davies: Thank you, Stuart, for your presentation. As you are aware, the Transport (Wales) Act 2006 transfers new responsibilities and duties on this Government. One of these new duties is to create a transport strategy in Wales. The criteria set out by the legislation for this strategy includes a sustainable strategy of some sort. Do you believe that the draft transport strategy that we have at present puts adequate emphasis on a sustainable strategy?

[90] **Yr Athro Cole:** Mae'n mynd beth o'r ffordd. Os edrychwn ar beth y gallwn ei wneud, ni allwn gael unrhyw effaith ar ollyngiadau, er enghraifft—nid ydynt o fewn pwerau'r Llywodraeth na'r Cynulliad. Fodd bynnag, dylem geisio dod o hyd i ffordd o leihau faint yr ydym yn defnyddio ceir, er enghraifft.

Professor Cole: It goes some of the way. If we look at what we could do, we cannot have any impact on emissions, for example—they are not within the current powers of the Government or the Assembly. However, we could try to find a way of reducing how much we use cars, for example.

[91] Un o'r enghreifftiau gorau sydd gennym yw canolfannau siopa y tu allan i drefi. Maent yn boblogaidd, ac mae'r cwmnïau mawr eu heisiau, gan ei bod yn costio llawer llai iddynt ddanfôn nwyddau i'r canolfannau hyn nag i ganol trefi. I lawer o bobl sy'n defnyddio car, mae'n bosibl mynd i'r holl siopau mawr, megis Marks and Spencer, ASDA, Tesco, British Home Stores, ac yn y blaen. Os yw un neu ddau o'r cwmnïau mawr yn mynd i un o'r canolfannau hyn, gall y datblygwyr gael pawb arall i mewn, ac wedyn maent yn symud allan o ganol y dref.

One of the best examples that we have are out-of-town shopping centres. They are popular, and the larger companies want them, because it costs them much less money to deliver goods to these centres than to town centres. To many people who use cars, it is possible to go to all the large shops, such as Marks and Spencer, ASDA, Tesco, British Home Stores, and so on. If one or two of these companies move to one of these centres, the developers can get all the others there too, and then they move out of the town centre.

[92] Mae'r rhan fwyaf o systemau bysiau a threnau yn rhedeg i ganol trefi, nid y tu allan. Felly, mae'n amhosibl cael mwy o gludiant cyhoeddus i'r lleoedd hyn, gan nad dyna lle mae busnes wedi'i ganoli.

Most of the bus and train systems operate to town centres, not its outskirts. Therefore, it is impossible to have more public transport to these places, because that is not the business centre.

[93] Un enghraifft yw Llanelli. Yn hen ganol y dref, mae'r orsaf fysiau ger y siopau. Yn awr, mae canolfan siopa newydd wedi datblygu y tu allan i'r dref-mae'r holl gwmnïau mawr wedi mynd yno-ac mae llawer mwy o geir. Mae'r rheoliadau ar y ffordd sy'n mynd i'r ganolfan honno yn nodi na chaniateir cerdded yno-mae'n erbyn y gyfraith gwneud hynny. Felly, yr unig ffordd i fynd yno yw yn y car. Mae'r cwmni bysus yn dweud y gallai redeg gwasanaeth i'r ganolfan, ond nid yw'n gwneud hynny gan ei bod yn amhosibl gyrru'r bysiau allan oddi yno gan fod cymaint o geir ar y gylchfan wrth y fynedfa.

One example is Llanelli. In the old town centre, the bus station is near the shops. A new shopping centre has now been developed out of town—all the big companies have gone there—and there are many more cars. The regulations on the approach road to that centre note that you cannot walk there—it is illegal for you to do so. Therefore, the only way of getting there is by car. The bus company says that it could operate a service to the centre, but it does not do so as it is impossible to get buses out of the centre as there are so many cars on the exit roundabout.

[94] Nid wyf yn pigo ar Lanelli yn arbennig—enghraifft yw honno. Gallwn edrych ar draws Cymru i weld yn union yr un peth. Yn Aberystwyth, er enghraifft, mae'r un peth wedi dechrau digwydd y tu allan i ganol y dref.

I am not picking on Llanelli particularly—it is just an example. We can look all over Wales to find similar examples. In Aberystwyth, for example, the same thing has started to happen outside the town centre.

[95] Felly, gallai hynny fod yn y strategaeth newydd. Byddai hynny'n cael effaith ar faint o bobl sy'n teithio mewn car, gan fod ganddynt opsiwn wedyn, fel y dywedodd Lynn. Mae'n rhaid i ni roi opsiynau i bobl, ac opsiynau sydd yn haws ac yn atyniadaol iddynt, fel eu bod yn gallu defnyddio trafnidiaeth gyhoeddus fwy neu lai fel car. Mae ffyrdd eraill wedyn i ddatblygu'r gwasanaethau bysiau a threnau y tu mewn i ganol trefi. Gellid dechrau yn rhywle fel Caerdydd, gan mai dyna lle mae'r broblem fwyaf, ac wedyn mynd allan i Abertawe, Wrecsam, ac yn y blaen.

Therefore, that could be included in the new strategy. That would have an impact on how many people travel by car, because they then have an option, as Lynn said. We have to give people options, and options that are easier and are attractive to them, so that they can use public transport almost as they would a car. There are other ways then to develop the bus and train services within town centres. You could start with somewhere like Cardiff, because that is where the greatest problem lies, and then move out to Swansea, Wrexham, and so on.

[96] **Alun Davies:** A gredwch felly fod pwysau polisi presennol y Llywodraeth yn ddigonol i sicrhau bod gennym strategaeth drafnidiaeth yn y dyfodol sy'n lleihau gollyngiadau carbon, o lle yr ydym heddiw i lle yr ydym eisiau bod yn y dyfodol?

Alun Davies: Therefore, do you believe that the Government's current policy emphasis is sufficient to ensure that we have a transport strategy in the future that will reduce carbon emissions, from where we are today to where we want to be in the future?

[97] **Yr Athro Cole:** Dyna oedd yr amcan fwyaf yn y strategaeth ddrafft. Fel y deallaf, mae'r Llywodraeth yn gweithio ar hynny ar

Professor Cole: That was the main objective in the draft strategy. As I understand it, the Government is working on that at present. I

hyn o bryd. Nid wyf yn gweld yr amcanion neu'r themâu—yr economi, y gymdeithas a'r amgylchedd—yn newid; os y byddant, bydd rhaid cael yr hyn a elwir yn arfarniad amgylcheddol eto. Felly, yr wyf yn sicr na fydd hynny'n newid.

do not foresee that the objectives or the themes—the economy, society and the environment—will change; if they do, we would have to have another environmental appraisal. Therefore, I am sure that that will not change.

10.30 a.m.

[98] Cwestiynau i'r pedwar consortia lleol yw'r strategaeth. Byddant yn datblygu eu cynlluniau trafniadaeth rhanbarthol i gyd-fynd â'r strategaeth. Mae'n rhaid i'r strategaeth ofyn iddynt sut y byddant yn darganfod faint o geir sydd ar y ffyrdd ar hyn o bryd a beth yw eu cynlluniau.

The strategy is made up of questions for the four local consortia. They will develop their strategies in line with the strategy. The strategy must ask them how they will identify how many cars use the roads at the moment, and what their plans are.

[99] Yr ail fater yw beth wnawn ni am bobl sy'n teithio i mewn i lefydd fel Caerdydd bob dydd. Mae honno'n broblem wahanol i SEWTA yn y de-ddwyrain. Wrth gwrs, mae problemau Meirionnydd yn hollol wahanol i rai Caerdydd ynghylch symud pobl o gwmpas. Felly, nid yw'n achos o un ceffyl ar gyfer bob cwrs. Mae ffyrdd gwahanol o edrych ar bethau. Mae'n bwysig inni ddod o hyd i ffordd o ddatblygu'r economi a cheisio gostwng nifer y bobl sy'n gorfod teithio mewn ceir. Yr unig ffordd i wneud hynny yw drwy greu ffordd arall iddynt deithio. Nid oes pwynt codi tâl ar ffyrdd yng Nghaerdydd heb ddarparu opsiwn arall i bobl; er enghraifft, trenau. I wneud hyn, mae angen gwasanaeth gwell ar y trenau ac arian i ddarparu hynny. Yn y diwedd, mae popeth yn dod i lawr at arian a faint o fuddsoddiad a wneir.

The second issue is what we can do about people who commute to places like Cardiff every day. That is a different problem for SEWTA in the south-east. Naturally, the problems in Meirionnydd are completely different to those in Cardiff with regard to moving people around. Therefore, it is a case of horses for courses. There are different ways of looking at things. It is important that we identify a way of developing the economy and trying to reduce the number of people who have to travel in cars. The only way to do that is by offering them another form of transport. There is no point charging to use roads in Cardiff without giving people another option; for example, trains. To do this, there needs to be a better service on the trains and more money is needed to provide that. In the end, everything comes down to money and the level of investment that will be made.

[100] **Alun Davies:** Yr wyf yn falch fod y papur wedi tynnu sylw at y tagfeydd yn Aberystwyth. Yr wyf yn sôn amdano yn ddigon aml. A ydych yn credu bod y cynlluniau rhanbarthol sydd gennym yn rhoi'r un pwyslais ar leihau carbon â pholisi Llywodraeth y Cynulliad?

Alun Davies: I am pleased that the paper draws attention to the congestion in Aberystwyth. I mention it often enough. Do you believe that the regional plans that we have put the same emphasis on reducing carbon as the policy of the Welsh Assembly Government?

[101] **Yr Athro Cole:** Mae'r cynlluniau rhanbarthol yn cael eu paratoi ar hyn o bryd. Fel y dywedais yn y papur, mewn rhai manau yng Nghymru, mae'n rhaid i ni edrych ar beth sy'n digwydd yng nghyswllt manau twristaidd. Yr ydym yn sôn gan fwyaf am broblemau yn ymwneud â'r amgylchedd mewn manau fel Caerdydd.

Professor Cole: The regional plans are being prepared at the moment. As I said in the paper, in some parts of Wales, we have to look at what is happening in the tourist areas. We most often speak of the problems relating to the environment in places such as Cardiff. However, Betws-y-coed is not much better in the summer as it is full of cars. Therefore, it

Fodd bynnag, nid yw Betws-y-coed yn yr haf yn llawer gwell gan fod y dref yn llawn ceir. Felly, nid yw'n hollol effeithlon. Nid wyf am ddweud fod yr amgylchedd yn wael ym Metws-y-coed, ond byddai'n well pe bai ffordd arall o ddatblygu'r diwydiant twristiaeth. Fodd bynnag, mae'n rhaid i ni ddatblygu'r diwydiant twristiaeth gan fod nifer o swyddi yng Nghymru yn dibynnu arno. Felly, mae'n rhaid i ni edrych ar sut y gallwn ostwng nifer y ceir mewn mannau twristiaid yng Nghymru ac, ar yr un pryd, mae'n rhaid i ni osgoi rhoi rhesymau i bobl beidio â dod ar eu gwyliau i Gymru.

[102] Mae canol dinasoedd yn fater gwahanol o ran nifer y milltiroedd y mae pobl yn eu teithio er mwyn cyrraedd y gwaith. Yr ydym yn gyfarwydd â'r straeon o Lundain am bobl yn cymryd awr neu awr a hanner i deithio i'r gwaith. Fodd bynnag, ymddengys bod pobl yng Nghaerdydd yn cymryd awr i deithio achos datblygiadau tai mewn mannau fel Llantrisant. Yng ngogledd-orllewin Caerdydd, tuag at Creigiau a thu allan i Gaerdydd yn Llantrisant, mae rhyw 2,000 o dai wedi cael eu hadeiladu dros y 10 mlynedd diwethaf. Golyga hynny 2,000 o geir oherwydd nid oes gwasanaeth trên. Mae pobl yn teithio nid yn unig i ganol Caerdydd, ond i'r bae ac i fannau eraill ar hyd yr M4. Rhyw dair blynedd yn ôl, bu'n rhaid i'r Llywodraeth ychwanegu lôn rhwng cyffordd 33 a chyffordd 34 er mwyn cadw'r ceir i symud ar y draffordd. Mae tair lôn ar gael o hyd, ac un lôn sydd yn faes parcio mwy neu lai sydd yn symud yn araf tuag at y gylchfan. Felly, sut mae modd symud y bobl hynny o'u ceir os nad oes gwasanaeth trên ar gael iddynt?

[103] Mae ffordd, neu *line of route*, yn yr ardal honno o Creigiau i Danescourt ar linell y Ddinas i lawr i Gaerdydd. Mae *track bed* ar gael yr holl ffordd. Os oes rhywun wedi adeiladu arno, maent wedi gwneud rhywbeth sydd yn erbyn y gyfraith. Felly, mae'r llinell ar gael a dim ond cwestiwn o'i hailagor ydyw. Fodd bynnag, nid oes gan y Cynulliad bwerau i ofyn am yr hyn a elwir yn '*development gain*' neu dreth ar ddatblygiad oddi wrth y bobl sy'n adeiladu'r tai hyn—neu beth bynnag y maent yn eu hadeiladu—er mwyn rhoi'r arian hwnnw tuag at y rheilffordd.

is not completely efficient. I would not say that the environment is poor in Betws-y-coed, but it would be better if there was another way of developing the tourism industry. However, we have to develop the tourism industry because a number of jobs in Wales are dependent upon it. Therefore, we have to look at how we can reduce the number of cars in tourist areas in Wales and, at the same time, we must not give people reasons for not coming to Wales on their holidays.

City centres are a different issue in terms of the number of miles that people travel in order to reach work. We are familiar with stories from London about people taking an hour or an hour and a half to travel into work. However, it now appears that people in Cardiff take an hour to travel in because of housing developments in places like Llantrisant. In north-west Cardiff, towards Creigiau, and outside Cardiff in Llantrisant, around 2,000 houses have been built over the last 10 years. This means 2,000 cars because there are no train services. People are not only travelling to the centre of Cardiff, but to the bay and to other areas along the M4. Some three years ago, the Government had to add a lane between junction 33 and junction 34 in order to keep the cars moving on the motorway. There are still three lanes available, and one lane that is a more or less a car park that moves slowly to the roundabout. Therefore, how can you move those people from their cars if no train service is available for them?

There is a line of route in that area from Creigiau to Danescourt on the City line down to Cardiff. The track bed takes you all the way. If someone has built on that, then they have done so illegally. So, that line is available and it is only a question of reopening it. However, the Assembly does not have the powers to ask for what is called a '*development gain*' or a tax on development from the people who build the houses—or whatever they may be building—in order to put that money towards the railway.

[104] Er enghraifft, yr ydym yn gwneud ymchwil yn Bordeaux ar hyn o bryd—gwn ei fod yn rhan o ardal Claret [*Chwerthin.*]—lle mae'r system dramiau newydd wedi costio tua €1 biliwn, sef £700 miliwn. Daeth yr arian hwnnw o *war chest*. Casglwyd yr arian o ddatblygiadau yn yr ardal. Fe'i rhoddwyd mewn cyfrif ac fe'i defnyddiwyd ynghyd ag arian o Lywodraeth Ffrainc i ddatblygu'r ardal. Buddsoddiwyd yr arian yn y system hon. Mae ganddynt bedair llinell â thramiau newydd sy'n rhedeg bob pum munud ar bob llinell. Mae 40 y cant o gymudwyr Bordeaux yn defnyddio'r gwasanaeth hwnnw. Pe bai modd gwneud hynny yng Nghaerdydd, byddem yn datrys rhan fawr o'r broblem. Ni fyddwn byth yn perswadio pawb i ddefnyddio'r math hwnnw o drafnidiaeth, ond gallem berswadio rhai ohonynt i ddefnyddio trafnidiaeth o'r fath, sydd yn gyfleus, yn hawdd i'w ddefnyddio ac yn rhad.

[105] Mae'n bosibl gwneud hyn yng Nghaerdydd ac nid oes rhaid iddo gostio £700 miliwn. Mae gennym system reilffordd, ond mae hefyd angen systemau parcio a theithio fel rhan o hynny, ac mae angen meysydd parcio diogel fel bod pobl yn gallu bod yn siŵr na fydd eu ceir yn cael eu dwyn. Mae angen mwy o safleoedd parcio a theithio. Mae'n rhaid perswadio pobl i ddefnyddio'r car i deithio o'r tŷ ar hyd ffyrdd lle nad oes tagfeydd ac felly effaith fawr ar yr amgylchedd i safle parcio a theithio ac i deithio ymlaen i ddinasoedd fel Caerdydd ac Abertawe ar drên neu ar fws, Mae system o'r fath yn cael ei datblygu yn Abertawe gyda'r metro.

[106] **Mick Bates:** Diolch am eich ateb.

For example, we are undertaking research in Bordeaux at the moment—and I know that it is part of the Claret region [*Laughter.*]—where the new tram system cost around €1 billion, or £700 million. That funding came from a war chest. That money was collected from developments in the area. It was put in an account and was used along with money from the French Government to develop the area. It was invested into this system. They have four tram lines with brand new trams, which run every five minutes on every line. Forty per cent of commuters into Bordeaux use that service. If that could be achieved in Cardiff, we would solve a large part of the problem. We will never persuade everyone to use that type of transport, but we could persuade some of them to use this kind of transport, which is convenient, easy to use and cheap.

It is possible to do this in Cardiff and it does not have to cost £700 million. We have a railway system, but we need park-and-ride schemes as part of this, and we also need secure car parks so that people can be sure that their cars will not be stolen. We need more park-and-ride schemes. We need to persuade people to use the car to travel from the house along roads where there are no traffic jams and therefore huge effects on the environment to a park-and-ride site and to then travel on to cities such as Cardiff and Swansea by train or bus. This type of system is now being developed in Swansea with the metro.

Mick Bates: Thank you for your response.

[107] There are more questions to be asked and we have the video conference at 11 a.m., so could you keep your questions and answers brief?

[108] **Alun Ffred Jones:** Credaf eich bod wedi ateb y cwestiwn hwn i raddau, ond yr oeddwn am ofyn beth ydych chi'n meddwl y dylai Llywodraeth y Cynulliad ei wneud i newid canfyddiad pobl o drafnidiaeth gyhoeddus. Efallai fod pobl yn gweld trafnidiaeth gyhoeddus yn anghyfleus, anghyfforddus ac efallai'n anniogel hyd yn oed. Felly, a oes rhywbeth ymarferol y gellir

Alun Ffred Jones: I think that you have answered this question to some extent, but I wanted to ask what you thought the Assembly Government should do to change people's perception of public transport. Perhaps they view it as inconvenient, uncomfortable and perhaps even unsafe. Therefore, can something practical be done?

ei wneud?

[109] **Yr Athro Cole:** Gallaf grynhoi'r peth mewn pedwar gair, sef yr hyn a elwir yn Saesneg yn *'the four I's': information, interchange, investment equals integration*. Os ydym yn hysbysu pobl am yr hyn sydd ar gael, efallai y bydd mwy o bobl yn defnyddio'r systemau. Mae llawer o bobl nad ydynt yn gwybod bod trê'n yn mynd o Gaerdydd i Lundain bob hanner awr, er enghraifft, nac ychwaith bod trê'n bob 10 munud rhwng Pontypridd a Chaerdydd. Mae'n rhaid hysbysu pobl o'r hyn sydd ar gael. Soniais am *interchange* sef cynlluniau parcio a theithio, ac yn y blaen. Mae buddsoddiad yn bwysig a bydd rhan o hwnnw'n dod o'r Llywodraeth a rhan yn dod o'r sector preifat. Bydd angen integreiddio hyn i gyd yn y cynllun y gofynnodd Alun gwestiwn amdano, ac yn y strategaeth genedlaethol.

Professor Cole: I could summarise it in four words, namely 'the four I's': information, interchange, investment equals integration. If we inform people of what is available, perhaps more people will use the systems. There are many people who do not know that there is a half-hourly train service from Cardiff to London, for example, or that there is a train every 10 minutes between Pontypridd and Cardiff. We must inform people of what is available. I spoke about interchange, which means park-and-ride schemes and so on. Investment is important and part of that will come from the Government and part from the private sector. All of this will need to be integrated into the scheme about which Alun asked a question, and into the national strategy.

10.40 a.m.

[110] **Leanne Wood:** You talk in your report about the low usage of conventional public transport in rural Wales and about the BWCABUS and taxi-sharing schemes. Why is there low usage? What are the barriers to increased take-up there?

[111] **Professor Cole:** It has largely been historic. There was a very comprehensive set of bus services in rural areas 50 years ago; car ownership was very low. As car ownership increased, so bus companies and local authorities found that they could not afford to provide the level of bus service needed. Where, for example, there used to be buses every half hour, it went down to every hour, and then to five times a day, and that is in quite large settlements, such as Llandysul. So, people said, 'We'll get a car.'. Of course, as more people buy cars, fewer people use public transport, and it becomes a vicious circle.

[112] The public transport system has now reached the point where, except in a few localised areas, there is a good inter-town service that serves the rural area. For example, the X40 from Carmarthen to Aberystwyth is an hourly service provided with new vehicles and it is an inter-town service that just happens to be a rural service too. However, the days of serving all the villages in an area have, for the moment, gone. In some villages, you now only get a bus service perhaps twice a week. Llandysul, which is a sizeable rural settlement, only has five buses a day. We have a scheme, which, if the Chair wishes, I will explain.

[113] **Mick Bates:** Please explain very briefly.

[114] **Professor Cole:** We are about to conduct an experiment in Carmarthenshire and Ceredigion. The existing service is not terribly well used. It goes to all the villages and then diverts, and that goes back to Brynle's point about 53-seater buses going through small villages. The new proposal takes the big bus that runs from Carmarthen to Aberteifi every hour, between 7 a.m. and 7 p.m., Monday to Saturday—that can be extended but it depends on how much funding is available—and feeds into that with feeder buses. That bit is not new; what is new is that the whole system is controlled via satellite, via a scheduling system that has the Ordnance Survey map on it and a booking system, and a controller runs the whole

network. That controller can decide what those buses are going to do. The big bus will run to a traditional fixed timetable and the small buses will run on what is called an area licence from the traffic commissioner. This is not dissimilar from the kind of taxi system that Lynn was talking about a little earlier, but it is part of the public transport network and, very simply, if you live somewhere like Henllan, which is a small village on the main road between Carmarthen and Newcastle Emlyn, you telephone for the minibus, the controller will tell you when the next minibus will come along and it will be scheduled to meet the big bus. You may have to wait a couple of hours because a bus cannot do the journey to your house and get the next bus that is going through, or you may be lucky. The earlier you book, the more chance you have of getting exactly the service you want. You can also book your return journey, for which the minibus is the bus shelter. You sit in the minibus until the big bus turns up. The minibus will always be there before the big bus. That is the difference: the guarantee of connection, because the satellite controls every vehicle to the nearest centimetre. It is an amazing system. We bought in one or two bits but we developed most of it within the Wales Transport Research Centre at the university.

[115] **Karen Sinclair:** You did not mention the privatisation of bus services. I remember the good old days when it was public transport, subsidised and there for a purpose, and we could probably learn a lot from that. I have skipped off there to make a point that I hoped that you would make.

[116] The 'One Wales' document states:

[117] 'We will press ahead with improvements to major road links between the North, the West and the South of Wales, investing over £50 million for this purpose over the four year Assembly term'.

[118] What are your views about the Assembly Government's current trunk road forward programme and the commitment to improving major road links in the 'One Wales' document? My argument is that the north-south link is an administrative priority and the trains do very well, rather than an economic link that needs to be made. What do you think about that?

[119] **Professor Cole:** I have always advocated a figure of eight for the road network, with the A55 across the top, the M4 and its additions, the A48 and the A40, to the west across south Wales, with the A470 and the A483 to the east. The A470 is not just a north-south link; it is a link between the canolbarth to the south and the canolbarth to the north. If you want to shift stuff from Rhayader down to the home counties by road, the A470 is a key part of that, taking you down to the M4 and across. We need to look at that figure-of-eight set of corridors.

[120] There is also an argument, put very vociferously by people in Ceredigion, for a link from somewhere around St Clears on the A48 dual carriageway up into Ceredigion towards Aberaeron, which is a separate issue. That might or might not be part of the core network; it requires some looking at. The key part is the figure of eight, and perhaps a small bit of asterisk that links the Aberystwyth area to the M54 at Shrewsbury. It is not a matter of looking at it just as nation-building—and I cannot remember who talked about that, now—although that is an important part of it; there is also an economic issue here, which is to do with connecting the centre of Wales to the other bits of Wales, with connecting Holyhead to Ireland, and connecting the M4 and the A55 with the English and other European markets.

[121] I will go back to your bit about the buses, if I may. I have always been an exponent of franchising train and bus services, though not necessarily of state ownership. I support what is happening on the railways, and I like what will happen to TrawsCambria. There is nothing in the Local Transport Bill, unfortunately, that will give the Assembly powers to extend that to

local bus services, if it wants to.

[122] **Mick Bates:** Thank you for your evidence and for your obvious enthusiasm for the subject. My personal view is that I want to see carbon appraisal set against all these major road-building schemes. I am most certain that all the proposed expenditure on the M4 could be well spent on some of the issues that you raised about congestion and railways in south-east Wales.

[123] **Professor Cole:** May I just make one more point? A new appraisal system called WelTAG, or the Welsh transport appraisal guidance, which takes these into account, is currently being developed. The committee may want to ask the Assembly Government about that.

[124] **Mick Bates:** That will be useful. We have the Minister coming here in a couple of weeks' time. Thank you for your evidence and your paper. We will now break for coffee. I ask Members to return promptly at 11 a.m..

*Gohiriwyd y cyfarfod rhwng 10.47 a.m. a 11.01 a.m.
The meeting adjourned between 10.47 a.m. and 11.01 a.m.*

Ymchwiliad i Leihau Gollyngiadau Carbon yng Nghymru—Parhad Inquiry into Carbon Reduction in Wales—Continued

[125] **Mick Bates:** This evidence session is about how we can reduce carbon emissions from the transport sector. Before I move to the link with Darlington Borough Council, I remind Members that there is no translation service available with the video link. I apologise for that, but it is difficult. We have received the paper about the work. It has already been mentioned a couple of times that the work in Darlington is part of the process of looking at transport in particular towns. It seems that it also requires significant revenue funding. I am certain that members of the committee will have quite a few questions about the work in Darlington, so I welcome Owen Wilson, the project director of the Local Motion project at Darlington Borough Council. Thank you for your paper. If you would like to give a few introductory remarks, we will then move to questions from the committee. *[Interruption.]* I see that the videoconferencing screen has frozen. We have all this modern technology here, but we have lost two video links now; one with Italy, which was lost for just a while, and now this one with Owen. Could we please send someone to work on it?

[126] By the way, there was some interesting evidence in the session before the break. If you get a chance, you should look at the draft transport plan and the proposals to lobby for a carbon appraisal within it. Stuart Cole raised an interesting point that, while it is all about investment, none of the investment has been measured against carbon reduction.

[127] I ask members of the public to bear with us for a moment. I am sure that none of you ever has problems with modern technology. I can see them all shaking their heads. *[Laughter.]* This is always the most embarrassing moment of any committee.

[128] **Alun Ffred Jones:** Tell us a joke, Mick, or sing us a song.

[129] **Mick Bates:** The ones that I know are not appropriate. *[Laughter.]* It looks as though we have lost the link altogether now, so, given that the representatives of Sustrans are here, I will move on and change the agenda around. Can someone get in touch with Darlington by landline to confirm that we will delay the link for 30 minutes? Thank you. I really do wonder about all this, sometimes. We try to reduce our carbon emissions by using a video link, but this is the result.

[130] I notice that Lee Waters, the national director for Wales of Sustrans, and Peter Lipman, the director of low carbon travel, are both present and so I invite them to the table, and welcome them to this inquiry. As you are well aware, as a committee, we are looking at ways in which we can reduce carbon emissions in Wales, and we are taking evidence from people to see how we can do that from transport. I thank you very much for your submission to our consultation, and invite you to give a brief overview of your views on how we can reduce carbon emissions from transport in Wales.

[131] **Mr Waters:** Thank you, Chair. As Peter just said to me, it is just as well that we did not focus our evidence on the benefits of teleworking.

[132] **Mick Bates:** That is a very sensitive issue. [*Laughter.*]

[133] **Mr Waters:** Thank you very much for giving us the opportunity to give evidence to this important inquiry. Just last weekend, the United Nations warned us that we face abrupt and irreversible damage from climate change unless we act urgently, so we think that your inquiry could not be more timely. Sustrans is the UK's leading sustainable transport charity. We work on practical projects to enable people to travel in ways that benefit their health and the environment, and we were instrumental in securing the commitment for the sustainable travel demonstration towns in Wales. Drawing on our work in the English sustainable travel towns, we can point to proven ways of reducing car use and carbon emissions. In Worcester and Peterborough, where we worked closely, we helped to cut car journeys by at least 12 per cent as a result of increasing the number of people walking, cycling and using public transport. Simply by giving people personalised information about alternatives to the car, our TravelSmart programme has significantly reduced traffic without requiring a single new piece of infrastructure. We estimate that, rolled out across Wales's largest towns and cities, at a cost of about £15 million, or less than the cost of 0.5 mile of motorway, we can save some 22,000 tonnes of carbon a year in Wales, which is equivalent to 1 per cent of carbon emissions from all transport, which would be a significant contribution to the Assembly Government's target of making a 3 per cent annual carbon saving.

[134] We think that the Assembly Government deserves enormous praise for setting carbon reduction targets, but the challenge now is to turn that into practical action. The view from Whitehall is that tackling travel is too difficult a way of reducing carbon, and we think that your inquiry presents an opportunity to challenge that emerging orthodoxy. Too many decision makers are wedded to the idea that people have little choice other than to travel by car. Fortunately, a growing body of research evidence now shows that the existing transport system of bus routes, footpaths and cycle routes provides a decent alternative for a surprisingly high proportion of car trips. Our experience shows that slight changes in behaviour can have dramatic impacts. The impressive results that I mentioned that we achieved in Worcester and Peterborough of a 12 per cent fall in car journeys, when you break the figures down, actually equates to a change in individual journeys of about one a week, and so one car trip replaced by a walking trip or a public transport trip produces dramatic results. Given that a quarter of all car journeys are less than 2 miles, the potential for change in Wales is great.

[135] Last year alone, the national cycle network carried 31 million trips in Wales. A quarter of those trips was undertaken by people who could have used a car, but chose not to. Across the UK, we estimate that that saved about 437,000 tonnes of carbon, which is the equivalent of taking 180,000 cars off the road. These are active journeys: they reduce traffic, they make our streets safer and more civilised, and, crucially, they help to tackle obesity. The Government's Foresight project recently predicted that 60 per cent of us will be clinically obese within 40 years. When you break down those figures, you see that it amounts to a very small weight gain by each of us, each year, and that equates almost exactly to the weight that

we put on by travelling less actively and more by car. Those very small cumulative increases make a dramatic difference. The walking and cycling agenda can not only cut carbon emissions, but have positive effects on a whole range of areas.

11.10 a.m.

[136] We need to rethink the way that we travel. Our traditional attachment to building new roads as a way out of poverty is outdated. The threat of catastrophic climate change demands a new approach, and Wales can lead the way in re-ordering economic thinking to meet the needs of a low-carbon economy. Gordon Brown said this week that climate change is the product of many generations, and overcoming it must become the great project of this century. The Stern report told us that we have less than 10 years to avert catastrophic climate change; the clock is ticking.

[137] **Mick Bates:** Thank you for that presentation, which sets some interesting challenges for us. I love your analogy about expenditure—for half a mile of motorway, you can achieve so much. I am sure there are a great many questions. Leanne, would you like to start?

[138] **Leanne Wood:** Do you think that the Assembly has sufficient powers to achieve a sustainable transport system in Wales, and, if not, what additional powers do you think it needs?

[139] **Mr Waters:** The devolution settlement is untidy, and we are certainly supportive of further devolution to Wales. We are comfortable with the Assembly calling for further powers. However, in terms of road transport, the powers are already fully devolved. There is no excuse not to be acting more sustainably in transport policy because of a lack of powers.

[140] **Leanne Wood:** Can you tell us your views on the proposals for the Local Transport Bill in relation to road pricing and bus services and the contribution that they can make to reducing carbon emissions?

[141] **Mr Lipman:** We would argue that road pricing should be implemented from a carbon perspective, so long as it is not retrograde in terms of social equity. So, one of the concerns that we have is that, effectively, if you implement this without looking at how people with fewer resources will travel, you could end up saying that the rich can use the roads and the poor cannot. For us, sustainability has that crucial social element of trying to be progressive rather than regressive. However, if you have an adequate public transport infrastructure in place, and services in place, then there is no reason why road user charging need be regressive. So, the design needs to be looked at carefully, and we have been involved in helping some authorities in England look at that, but we would generally support it.

[142] **Leanne Wood:** So, you would say that road pricing should be considered only if there are adequate public transport links?

[143] **Mr Lipman:** There is often an assumption that the current transport links are inadequate as they stand. We think that they should be improved, but whether or not they are adequate needs to be looked at carefully. If you consider the work that Lee referred to earlier, particularly in Peterborough and Worcester, just giving people information results in about a 12 per cent reduction in car trips. That is giving people information about existing services. We did some interesting work in Bristol, where there was a new quality bus corridor being implemented, and we were able to do a comparison. In one area, it was implemented without individualised information being given to local users, and that resulted in an increase in bus patronage, but also an increase in driving and a decrease in walking and cycling. In the other area, where we did individualised marketing, the result was an overall doubling in bus use, an increase in walking and cycling, and a decrease in car journeys.

[144] The crucial factor is what people know, because it is perception that governs our behaviour, not reality. If we perceive that it is difficult or slow or expensive to use public transport, then we will not use it. Generally, people tend to assume that using the car is more convenient than it actually is. We have also done some interesting work in Bristol with shopkeepers on a busy high street, asking them how they thought their customers got to their shops. The shopkeepers doubled the importance of the car against reality; in other words, the shopkeepers thought that roughly 70 per cent of their customers got there by car, when in fact it was less than 35 per cent. It is this gap between perception and reality that comes out over and over again.

[145] **Mick Bates:** There were some interesting comments there. Changing behaviour patterns is emerging as a critical part of the process.

[146] **Alun Ffred Jones:** I fancy I know the answer that you will give to this question: does the draft Wales transport strategy place sufficient emphasis on reducing the need to travel?

[147] **Mr Waters:** No. [*Laughter.*]

[148] **Alun Ffred Jones:** I shall move on to the next question then. Does the Assembly Government's guidance on the preparation of regional transport plans place sufficient emphasis on reducing the need to travel?

[149] **Mr Waters:** The regional transport plans are a fairly tortured tale. They have been delayed and delayed because of revenue problems, and we now face the problem of not having them in place until 2009. So there is a great deal of wasted opportunity as we are now in a hiatus. As a consequence, proposals for walking and cycling, for example, are on hold. No new transport grant applications have been allowed for walking and cycling for a couple of years, and it is likely that there will be none until 2009. Therefore, from what Lynn Sloman was saying earlier about how we need to act now and how the savings that we are achieving in carbon now will be worth a lot more in future, we are missing a big trick.

[150] There is a tension in all the regional transport plans between the old predict-and-provide approach, which is highly prevalent among transport professionals, and the carbon and climate change objectives that they are increasingly alert to. The South East Wales Transport Alliance is a case in point. Its draft regional transport plan is very progressive, but it also faces a dilemma because it has signed up in principle to the new M4 lanes, which runs counter to that. Similarly, the Welsh Assembly Government makes very encouraging comments on carbon reduction, but officials in the Assembly Government are preparing and supporting proposals for a new international business park at the Cardiff west service station, which will have 1,500 car parking spaces and create an extra lane on the junction 33 roundabout. That runs counter to the principles that the Assembly Government and others are trying to promote.

[151] **Mr Lipman:** To add to that, Wales is not unique in this. There is a general tendency that the days of doubting human-caused climate change are pretty much over and rhetoric from Governments and other institutions around the world is very strong, but the gap between behaviour and rhetoric is even stronger, I am afraid. The figures out last week show that, yet again, emissions, from the industrialised world in particular and the industrialising world, were the highest ever. We see this year after year; just as we have the warmest year ever year after year, increases in emissions rise despite all the rhetoric that they should be falling. Very worryingly, what is called the airborne fraction—in other words the percentage of carbon emissions that stays in the atmosphere rather than being absorbed back into the various carbon sinks, primarily the oceans, but also the land and various other sinks—is rising. Whereas only 10 years ago you might have seen, as a result of a year's human activity, an

extra, say, one part per million of carbon in the atmosphere, over the past few years we have been seeing between two and three parts per million. In other words we are accelerating in the wrong direction, which is very worrying.

[152] What is desperately needed from an industrialised country such as Wales is some sort of global leadership on action rather than rhetoric. I attended a meeting of the newly-to-be-formed Transition Wales in Builth Wells on Saturday, and the person chairing it read out an article from *The Guardian* that said that Wales is the twelfth most polluting nation in the world. That astonished me, given Wales's population, although that was presumably on a per capita basis. So, there is a real chance for leadership here, and I would be personally delighted if the Welsh Assembly Government could show Whitehall what action means as opposed to rhetoric.

[153] **Alun Ffred Jones:** Is there a ready-reckoner available to calculate the carbon dioxide emissions from using a car or travelling by train or bus, so that we can understand how much we pollute in choosing one over the other?

[154] **Mr Lipman:** DEFRA has a ready-reckoner, which I think is called 'Act on CO2', which is reasonable. We are concerned that many of the available ready-reckoners are not fantastic for public transport. The simpler ones tend to show what emissions would be for travelling by car or for flying, but they do not want to go down to the level of looking at a combination of bus and train travel or whatever. So, when the Sustrans manager for Ireland asks, 'What are the relative carbon implications of flying directly to Bristol or getting the ferry and the train?', you cannot go on to the DEFRA or DfT websites to work that out. We are currently in negotiations with a carbon footprinting organisation that has developed that sort of reckoner, because we think that really needs to be available.

11.20 a.m.

[155] **Mick Bates:** I would suggest that that is urgently needed. Changing behaviour is critical in terms of this issue.

[156] **Alun Davies:** You are not a fan of the Government's commitments regarding trunk road improvement, are you?

[157] **Mr Waters:** It is an obvious answer, but, no.

[158] **Alun Davies:** You have said this morning and in your written submission that you see it as a titanic waste of money, essentially. You said that it is outdated.

[159] **Mr Waters:** It is repeating the mistakes of the past in the sense that it is following the predict-and-provide model, which is now largely discredited. It has been proven that new roads create new traffic. Clearly, there are other reasons for building roads, and we understand them, but this strategy is the equivalent of one-club golf.

[160] **Alun Davies:** Of course, buses run on roads, and one of the issues that affect us in delivering a public transport system, which goes beyond the major cities and settlements in Wales, is the ability of buses to compete, in terms of time and the ease of the journey, with private cars. It seems that we need to take cars and traffic out of our settlements and promote cycling and walking, while enabling people to travel long distances reasonably easily.

[161] **Mr Waters:** Buses would perform much better if there were less traffic on the road. The examples that we have given of reducing traffic in the sustainable towns show a huge increase in the patronage of buses, and, with less traffic on the roads, there are more efficient bus services.

[162] **Alun Davies:** Sure, but, of course, they need roads to run on.

[163] **Mr Waters:** We are not anti-road; we are just saying that the strategy is based on spending huge amounts of money on roads. I think that we refer in our evidence to research that is based on the budget share of roads versus smarter choices and walking and cycling. The 2005-06 figures show that 76 per cent of the budget was spent on roads, compared with 2 per cent on walking and cycling and 0.5 per cent on smarter choices. In Scotland, around 70 per cent is spent on sustainable transport. We are certainly not anti-road.

[164] **Mr Lipman:** I will just add to that very briefly. What you spend really does dictate what you get. In Copenhagen, where a third of the budget is spent on promoting cycling, more people cycle to work every day than drive to work, and everyone likes being in Copenhagen because it is such a pleasant and liveable city. What really concerns me about these plans to build roads or new airport runways is the total lack of what I would call an informed energy analysis. What is the embodied energy of this built infrastructure? If we are going to build a mile of motorway, are people thinking about the energy costs of mining 24,000 tonnes of aggregate and transporting it to the road and then building the road with asphalt, which is made from oil? None of those figures are included in the climate change impacts. When people talk about climate change impacts, they refer to the use of the infrastructure. If we are serious about reducing carbon, we must talk about the carbon implications of the infrastructure. If people did that sort of work, there would be an informed debate.

[165] As set out in our submission, I would urge that it is not just about emissions from using energy; it is about whether we can access and afford the energy itself. In the UK, up until the 1960s, we made a lot of things and sold them to the rest of the world and we were able to buy in cheap energy to do that. We discovered North sea oil and gas and we started to outsource our manufacturing to the rest of the world. We sold North sea oil and gas to the rest of the world while it was cheap. We have pretty much used all that oil and gas, and, therefore, we will have to buy it when it is very expensive—it looks like oil is going to cost more than \$100 a barrel shortly. How are we going to afford that, because we do not sell things to the rest of the world anymore? If we are talking about these infrastructure decisions and building new roads, which cost a lot of money, and so on, what are the balance of payments implications? I would seriously commend that you all look at the research that it is now starting to be done on this.

[166] **Mick Bates:** I noted that your submission mentioned security—that is what you are building up to with that kind of argument. You referred, in one of your replies, to not having data on personal carbon journeys for multiple modes of transport, and yet, you stated early on in your submission that, for half a mile of motorway, you can reduce carbon emissions in Wales by 1 per cent. How did you arrive at that figure?

[167] **Mr Lipman:** What Lee was saying was that, for the cost of half a mile of motorway, we could roll out TravelSmart across the major towns and cities of Wales, and we know what the carbon implications are in reducing car trips. Does that answer your question?

[168] **Mick Bates:** It does, but we need references to the evidence to ensure that, when we make our recommendations, we are relying on robust data. That appears to be lacking.

[169] **Alun Davies:** What steps do you believe that the Assembly Government should take in order to create the sort of behavioural change among the population that you are suggesting is required to make this step change in how we arrange and use our transport infrastructure?

[170] **Mr Waters:** A whole range of changes are necessary. Peter referred to Copenhagen and the high levels of people who walk and cycle; 30 years ago, Copenhagen had similar

levels of walking and cycling to Cardiff today, and the topography of Cardiff and Copenhagen are not dissimilar. That goes to show what can happen when there is a determined effort by Government to invest and to change land-use planning policies—as Stuart Cole said in his evidence about out-of-town shopping developments, this is all part of the piece. You need to create a society where walking and cycling are desirable and obvious options rather than an inconvenience and a chore.

[171] **Mr Lipman:** Could I suggest one simple, if not necessarily attractive, step that could be taken? People could be made to accept sectoral budgets for carbon. For example, if you tell a regional authority that it will get x amount of money to spend on transport, I would argue that you should also tell it to show how it will reduce carbon from transport by at least 3 per cent each year in order to get that money. Unless people have a clear target, and a kind of stricture if they do not achieve that target, we will default to the behaviour of the past 20 or 30 years. If we are to make changes, we must give strong guidance that the money is dependent upon achieving targets.

[172] **Mr Waters:** Briefly, one of our other recommendations on Assembly powers, which the Assembly Government could consider in order to show international leadership, is to place a duty on local government, and on the Assembly itself, to develop a network of walking and cycling routes, which are just part of the armoury that you would deploy to reduce carbon emissions and increase levels of active travel. However, at the moment, if local authorities build a mile of road, they receive, via the revenue support grant, a set percentage for maintenance. If they build a walking and cycling path, to encourage people to use their cars less, they do not get anything. There is a disincentive to build them, and some of the smaller local authorities therefore refuse to build them. There are some, like Pembrokeshire County Council, that are very progressive, because of the tourism benefits, and build them anyway, but other, smaller authorities refuse to do so. There should be a level playing field, and there should be a duty on local authorities to see walking and cycling as a key part of their transport infrastructure, and to treat it equally. A pot of money should be provided that they can bid against in order to maintain cycling and walking paths. That is something that is well within the capability of the Assembly, and would provide international leadership, and which we will discuss further when we give evidence to the Petitions Committee in a few weeks' time.

[173] **Brynle Williams:** Good morning, gentlemen. I did not like the way that you were looking at me earlier while talking about obesity. [*Laughter.*]

[174] **Mick Bates:** It can be reversed.

[175] **Brynle Williams:** Seriously, following on from a question I asked earlier, how do you think the Assembly can address commercial interests and practices? I gave an example about a product being transported from Scotland down to Wales and then all round the country; I do not know if you heard it.

11.30 a.m.

[176] We have strong commercial interests in supermarkets, and obviously we are demanding cheaper food, but if we are serious about this, we have to reverse this system of transporting heavy goods on the roads. I believe that 80 per cent of those vehicles on roads are related to the food industry, and that, of that 80 per cent, about 50 or 60 per cent are loaded for a one-way journey only, so logistics come into it. If we are serious about this, how can we look at localising many goods and products, or carrying them by rail to specific rail heads? There is a raft of examples here—Stuart referred to out-of-town shopping centres earlier. Although we are speaking these fine words, and we want to do something, I am afraid that we are not doing anything about it—we are going the other way. I do not apologise for

saying that. People like you are doing your utmost to get through to us, but I am afraid that commercial interests have too strong a hold. How do we get to the bottom of this?

[177] **Mick Bates:** That is a challenging question.

[178] **Alun Davies:** You have 30 seconds to answer. [*Laughter.*]

[179] **Mr Lipman:** I need only 10 seconds. [*Laughter.*]

[180] I am delighted to hear you talking about re-localisation. That issue underlies energy production or supply, food production or supply, or how we travel; we have moved from a world in which what mattered was accessibility—being able to get to things—to a world where mobility is an assumed good, and people travel further and further; almost as importantly, things also travel further and further. There is an enormous switch coming, and I believe that it will come from a mixture of pull and push factors. The pull is climate change, if we are serious about avoiding cataclysmic climate change, as opposed to just dangerous climate change. The push comes from energy security, to which I referred earlier, more popularly known as ‘peak oil’.

[181] Let us start to factor in the costs. If you live in Carmarthen, for example, and everything is trucked in a long way, and oil, which for years and years has been \$20 or \$30 a barrel is well over \$150 a barrel, let us say in a year’s time, what does that do to the cost of your food, which is going up anyway, because of a range of other factors? It makes it unaffordable. However, if you are moving towards localism—saying that you will have local goods and that you will support them—then you start to see a more resilient way of living, which is not dependent on these incredibly fragile, long supply chains.

[182] That means that we must start practicing what we preach about joined-up policy; it is not just a matter of talking about these things. So, when I make submissions to the Department of Communities and Local Government in Whitehall about its proposals for eco-towns, I am not just talking about travel, or the act of travel, or children being able to play, or the effects on obesity; I am also talking about what this means regarding how you structure mixed-use settlements, and whether you are going to have large supermarkets on the edge of towns with enormous car parks. Supermarket car parks in Denmark are a third the size of ours. It is simple stuff, which must be brought in across the board.

[183] Therefore, if we are serious about climate change, we cannot look at things in their silos. We cannot look at transport on its own. We have to look at food, energy, and a range of things, including planning policy.

[184] **Darren Millar:** In answer to Alun Davies’s question on behavioural change, you referred to how you can change the behaviour of local government, or the Welsh Assembly Government, which needs to change its behaviour and its attitude towards walking and cycling. However, on the individual behavioural changes that we need to see—individuals making the choice to use public transport, to walk, or to cycle to wherever they want to go—you referred in your submission, and earlier, to the TravelSmart programme. That has had outstanding results in Worcester and Peterborough, but there were no examples from Wales. Have you rolled it out anywhere in Wales? Have you done any experiments in Wales, and have any of those been in rural areas, as Worcester and Peterborough are large urban areas? You said earlier, Peter, that many people have a perception of inadequate public transport facilities, but they are inadequate in many of our rural areas. I am not sure that people have the type of choice that people have in urban areas for getting about. Perhaps you could give us some information on that.

[185] **Mr Waters:** At the moment, there is no TravelSmart in Wales. We are discussing the

possibility of the Assembly Government's including it in the sustainable travel demonstration towns, because TravelSmart has had a significant impact with regard to changing behaviour in England. The Department for Transport has recently published some important research highlighting TravelSmart as the most effective smarter choice. At the moment, there are no pilot schemes in Wales, but we believe that it is crucial to have such a pilot scheme, and we are discussing with some partners the possibility of putting together a bid for convergence funding. It is relatively cost effective—approximately £10 or £20 per household. It addresses the difference between perception and reality, which Peter mentioned earlier.

[186] It is a one-on-one personalised service. We do a baseline assessment, where we assess how people travel. We then dismiss those who love their cars and who are not interested in doing anything else, and we target those who are persuadable. We go to their houses and speak to them individually. For roughly 30 per cent of journeys, there is an adequate alternative available. People do not use them, partly because they do not know that they exist. For example, how many of us know when buses stop at the bus stop around the corner from our house? I do not. So, we target people with that information and provide them with maps of the area for them to walk and cycle. We address the perception that it is quicker to get somewhere by car. Within towns, it is often not quicker to get from door to door by car. Once you challenge those prejudices and give people a means of doing it differently, you start to see people changing their behaviour. By doing this in Peterborough, they have increased the number of walking trips by a fifth, cycling trips by 25 per cent, and public transport by 13 per cent—simply by giving people information.

[187] So, the evidence base is robust. We do not need any test studies or pilot cases. That is our concern about sustainable towns, which we were keen to get into the party manifestos. We do not need pilot projects in Wales; the pilot projects have been done. What we need is to apply the lessons that have been learned. There is an opportunity in Wales to do it slightly differently. I know that Jane Davidson is interested in doing it differently and in trying to incorporate it as part of the transition towns and eco towns, and to combine it with the local foods initiative rather than simply have a transport initiative. However, unless we are careful, we could waste three to five years simply replicating what has been done elsewhere in the UK.

[188] **Mr Lipman:** I would like to pick up on your point about rural areas. This is something that I have been thinking about for quite a long time and have discussed with people who live more rurally. It is a different set of challenges. TravelSmart would have to be changed to some degree to work as effectively in rural areas. We have been trying to find partners to pilot a scheme to look at how insurance works. At the moment, if you are making a trip, your private car insurance says that you cannot charge someone else to come along. We think that there desperately needs to be a rural pilot scheme for some form of car-sharing, so that a person travelling 15 miles from Lampeter, for example, can have a website that shows when they are doing it and can invite people to come along, showing what it would cost, without their insurance being invalidated. There is some evidence from the US that what they call the 'smart jitney' scheme, which is effectively having informal taxi services, can make a big difference to rural trips.

[189] Work was done in Dorset on what it called 'the wiggly bus'. Instead of having an ordinary bus service that goes from A to B to C to D maybe once or twice a day—if you are lucky—it saw the need for a community-responsive bus service. It is like a bigger form of taxi, but, again, you are trying to aggregate people's trips and let people know roughly when it is available and that it will drop them off at home. In rural areas, although we have significant issues around the use of biodiesel and what that means, for a range of reasons, there is no doubt that biodiesel manufactured from waste is a carbon-effective way of doing things. In our rural communities, we have an enormous potential from anaerobic digestion from the farms.

11.40 a.m.

[190] You could be seeing an extra income stream for our farmers who are desperately strapped at the moment for a whole range of reasons that are wider than Wales. I would like to see an imaginative combination, including ways of making the use of private cars more effective because, at the moment, occupancy rates are on average under 1.6. That means the driver plus 0.6 of a person. It used to be over 2.5 20 years ago. We need to get those occupancy rates back up, so I think that we need to look at that kind of fiscal element. We desperately need one of those bendy bus services, but powered, I would hope, by biofuel from anaerobic digestion from our farms.

[191] **Darren Millar:** One thing that I am interested in is the TravelSmart programme and what the take-up has been across different age ranges. You mentioned the opportunities in rural areas perhaps through a web-based system where someone says that they are off to Chester from Denbigh or wherever and they could perhaps share a car journey. However, there will be barriers to the older generation accessing those sorts of services. Is it more difficult to change the behaviour of the older generation through TravelSmart? My constituency is the oldest, demographically, in Wales, so these sorts of things interest me. I accept that free bus passes have enabled older people to use buses more, but, in terms of walking, their mobility may be an issue.

[192] **Mr Lipman:** We have certainly done research on demographics and take-up in urban areas. We have not been able to do that in rural areas because we have not done the project there yet. I am not sure that there is a single, clear picture. TravelSmart works because of the offer of one-to-one advice. So, if you are nervous or confused about using your bus system, you can get a bus driver to visit you, chat for 30 minutes and explain it to you. That is perfect for older people, who do not want to stand at a bus stop and wait or get on a bus and feel confused. They need one-to-one human contact far more than younger people who are happy to go on Facebook and live their lives electronically. I would say that there is almost a pre-built bias towards older people in TravelSmart. A behavioural change at an individual level is also needed. I think that older people will respond far better to the need for community-based initiatives. They lived through the war and saw what happened when a community gets together and responds to an enormous crisis. We need to learn from them because they are the generation that changed their behaviour, for example, during the war with regard to food production. Everyone went out and grew their own food; they just did it. I do not think that that is a bad analogy because what we are faced with as a species is an equivalent to the level of threat that Great Britain faced during the war, and it needs that degree of change from everyone. So, I hope that we will honour the elders in our society and learn from what they did before.

[193] **Mr Waters:** Also, on the elderly, the Assembly Measure that we are promoting refers to traffic-free walking and cycling paths, like the Taff Trail and Lôn Eifion. These paths have been successful ways for elderly people to get out and about and to take exercise and access the countryside free from cars, which they find intimidating. These traffic-free paths are used at different times of the day by different people. So, in the morning and late afternoon, they are heavily used by commuters, but in mid morning and early afternoon, they are heavily used by disabled people and by the elderly. So, there is a great social inclusion element to the paths that we build.

[194] **Lesley Griffiths:** You said earlier, Lee, that Wales has a lot to learn from England in relation to the sustainable travel demonstration towns. One of the recommendations in your paper states that we should have a steering group to advise towns more in the style of cycling demonstration towns. Could you give us a bit more information on the cycling demonstration towns?

[195] **Mr Waters:** Peter may be able to say something more useful on this, but the evolution of this in England was started with Cycling England—of which Lynn Sloman, whom you heard from earlier, is a board member—which came up with cycling demonstration towns. Then, when it gained the fresh wave of funding, it broadened it to sustainable travel demonstration towns. So, effectively, the difference is that one involves public transport and one does not.

[196] **Mr Lipman:** The crucial difference between the two was what they were set up to achieve. In the genesis of the sustainable travel demonstration towns, the Department for Transport was very clear that it wanted carrot but not stick. It wanted all the soft measures, as it would call them, and as a result, the people who were involved in making them work started from what to us is a narrower perspective of looking at how you can persuade people to change, but without making any infrastructure changes, such as road user charging and reallocating road space. The cycling demonstration towns had a broader remit, although they were limited to cycling and did not look at walking and public transport too. So, there was also an emphasis on what we need to change on the ground physically to make this change. The steering groups have a naturally broader ambit because they are involving this wider group of people.

[197] Picking up on the earlier question, if we are going to be serious about really sustainable travel towns in Wales, there needs to be that focus on, for example, land-use planning too. If we are doing it on the edge of a town where we are going to shut a couple of branch hospitals and have a brand-new hospital on a greenfield site, can that work? I would argue that we need to get away from distinct policies going in different directions and, therefore, I would hope that the steering group would have the power to say, ‘Hang on, we need to go across to these other issues too and really address everything’.

[198] **Mr Waters:** In fairness to the Welsh Assembly Government, its early thinking is that it is going to have a steering group. We made the recommendation not to have four sustainable travel towns but one that was properly resourced. Having chosen to have four, the key now—and we do not know the budgets for these—is the level of resources and, critically, that the resources that it puts into them do not replace the money that it is already spending on sustainable transport, and there are early signs that that may happen, namely that the money that had been going into walking and cycling transport grants will be frozen and the money put into the sustainable towns. It needs to be in addition to what is being done, not in place of it.

[199] **Mick Bates:** In England, it was additional revenue funding. Darlington Borough Council, whose evidence we have not been able to take today, was given £3.5 million over five years. Are you looking at comparable funding in this Welsh project?

[200] **Mr Waters:** We initially told the Welsh Assembly Government that, rather than spending £3 million, it needs to spend significantly more than that on one town to achieve those significant shifts, because, although this is welcome and innovative and lots of lessons have been learned from the pilot scheme in English towns, in order to make that quantum leap to the low-carbon transport system that we need to meet the threat of climate change, we need to take a step beyond it. Our initial concern is that although we can have an interesting and pleasant set of experiences in Wales, it will not take us that much further, given that we are facing urgency.

[201] **Alun Davies:** I will go back to something that you said, Peter, in reply to Brynle’s question. You spoke about localism and people being persuaded not to travel—or, in some of the language that you used, you seemed to be saying ‘coerced into not travelling’—outside of their locality. To what extent is that realistic or socially desirable? One of the great things that

travel has given us over the past half century is a broadening of horizons and learning through different experiences. I would not want to go down any path that restricts people's opportunities to learn new things, visit new places and experience alternative cultures and lifestyles. To what extent are some of your proposals realistic, Peter? We do not have a wartime population; we have a twenty-first century population. The wartime generation is not even a majority of old-age pensioners any more. Most old-age pensioners who experienced a war have only very early childhood memories of it. People's expectations and experience today are fundamentally different to those of our parents or grandparents.

11.50 a.m.

[202] **Mr Lipman:** 'Realistic' is an interesting expression. To what extent is current central Government planning realistic when the Department for Transport and the Department for Business, Enterprise and Regulatory Reform forecasts for future economic growth and infrastructure planning are all based on oil at \$25 a barrel? Realism demands careful analysis of, for example, the energy security issues that I raised. The coercion that is going to come will not come from Governments or individuals; it will come from geopolitical and physical realities about energy supply availability and what it will cost to travel. We are absolutely not about saying to anyone 'Thou shalt not.'. The reason that TravelSmart works so well is that we do not proselytise; we do not tell people that they should do certain things because it is better for the environment, their health and social cohesion. What we do is ask them whether they knew that a certain service or route was available or whether they knew that there was something that they could do. We leave it to them to make the decision.

[203] If you go back three years, modal shift figures were better, and TravelSmart works because we have not sought to coerce people. Localism will happen not because anyone is coercing but because of the realities that we will face. The realistic way forward is to ask how we can make it better and how we can enable people to travel, probably by train rather than plane, and still experience this wonderful broadening of perspectives. If someone tries to coerce me into doing something, I react by wanting to do the exact opposite. If, for example, I am driving and there is a sign that says 'Slow down', I may do it, but my feeling is, 'Why are they telling me to do that? I can make my own decisions.'

[204] **Mick Bates:** Do not go any further with that.

[205] **Alun Ffred Jones:** Do not try that in north Wales. *[Laughter.]*

[206] **Mr Lipman:** Richard Brunstrom is a lovely man. We need to avoid coercing people, but to raise awareness and say to people that they must make their own choices.

[207] **Mr Waters:** What you were saying about perception and reality is interesting. There was an interesting piece in the *Western Mail* on Saturday—which is not something that I say often—comparing journey times by train and plane between Cardiff and Paris and various international cities. I must say that I have flown to Paris because I have assumed that it would be quicker. However, door-to-door, the train journey from Cardiff compares very favourably. Where it does not compare favourably is on cost. That is a whole different issue with regard to subsidies and the true cost of travelling, but we should consider the perception and reality with regard to journey times. We are not about shutting down opportunities for anybody, but we need to think about the way in which we travel and its consequences.

[208] **Mick Bates:** Thank you. Are you happy with that, Alun?

[209] **Alun Davies:** Very happy.

[210] **Lorraine Barrett:** You have proposed a walking and cycling paths legislative

competence Order. What could be achieved with that that cannot be achieved with existing powers? Now that we have you around the table, once you have answered that, would you like to take the opportunity to tell us how your Connect2 bid is going? This is the exiting Sustrans project with lottery funding. Please tell us how it is going and encourage people to vote.

[211] **Mr Waters:** One of the problems with the Assembly's new powers, welcome as they are, is that there is insufficient advice available for voluntary organisations such as ours that have an idea on how to put it into a coherent form. However, we have been fortunate to receive free advice from Cardiff Law School and University College London's constitution unit. The view is that the existing powers would not allow the creation of a duty to create off-road paths, which is why we need the power to be devolved first and then the Measure to create the duty. What is unique about our proposal is that we have brought together a coalition of organisations not normally associated with walking and cycling. So, our proposal is backed by Royal Mail, British Telecom, the British Medical Association, Age Concern, the National Union of Teachers, the National Association of Head Teachers, Play Wales and a whole host of the sort of people who benefit from and use cycle paths, rather than cyclists. That is the key; people who already cycle, which is about 1 per cent of the population, are going to cycle anyway. It is not them we need to target, but people like me and you who are not cyclists and who need to change their behaviour. Until a year ago, I worked in this building, drove in every day and was stuck in traffic for most of the time. Now I take a fold-up bike on the train. It takes me the same amount of time, but I have lost a stone in weight, I read the newspaper, I arrive at work fresher, calmer and happier, and I have not contributed to carbon pollution.

[212] Small changes are possible and easily achieved—that is the key. Our Connect2 proposal is a key way of tackling blockages, because it is all targeted at urban blockages. In your constituency, Lorraine, as you well know, you cannot walk from Penarth to Cardiff bay, because it is illegal to walk across the Cogan spur; you would need to have your head examined if you cycled across it. We are proposing that a bridge be built over the river—a fairly simple intervention—so that, in your mental map of an area, it makes more sense to walk than to take a very circuitous route by car.

[213] Similarly, in Darren's constituency, we are proposing that a new cycle bridge be built between Rhyl and Kinmel Bay. We have nine such interventions across Wales, and 79 across Britain. Peter can elaborate on the European experience, but I think that the key is that we can, through planning, make it easier and more sensible to walk or cycle somewhere rather than to take the car. So, our project is up against the projects of three other serious and tough competitors. Ours is the only one of the four being put up for a public vote that does anything to tackle carbon issues or climate change, and it is important that we maximise the public support for it.

[214] **Mr Lipman:** It is also the only project in Wales.

[215] **Mick Bates:** We would like to learn a bit more about that.

[216] **Lorraine Barrett:** I took the opportunity yesterday, during our debate on seaside towns, to highlight the route between Penarth and the sports village—and I have always called it the bascule bridge, but it is actually called the Ely river bridge. Although you are supporting it, and the project is brilliant and is probably the best opportunity that we have of delivering the bridge, it was one of the visions of the former leader of Cardiff Council, councillor Russell Goodway—it was either going to be a bascule bridge or a chain-link ferry across the river. It is a good idea, and so more power to your elbow. Let us ensure that everyone has that information and the opportunity to vote. It is all online on Sustrans' website, so go for it, Wales.

[217] **Mr Waters:** Absolutely. I am grateful for your support, Lorraine, but I wish to make a political point. The situation causes us to ask why these developments need lottery funding and the support of a charity to take place? Why was the sports village planned for Cardiff bay without including any links for walkers and cyclists? In land-use planning, we need to rethink the way in which we operate, so that walking and cycling are built in from the beginning.

[218] **Mr Lipman:** I will give another good example—from the continent again, unfortunately—of intelligent land-use planning, if I may. In Groningen in north Holland, 60 per cent of trips are made by bike, which is a phenomenal proportion. The reason for that is they have adopted two separate systems, or what they call the ‘grain’, of how you access things. If you are driving, you have to use a coarse-grain system, which means, in other words, that you have fewer ways of getting to places. If you are walking, cycling or using public transport, you have a fine-grain system and you can get everywhere easily. This extraordinary place is the result of 20 years of setting out on this path. You would not believe that you are on the same latitude as Liverpool or Birmingham in northern Europe; you go there and it feels like being around the Mediterranean sea. Everyone is out, there is a cafe culture, everyone likes it and it is an incredibly nice place to be. That has happened because they have adopted this long-term land-use planning policy.

[219] **Lorraine Barrett:** I want to agree, not disagree, with what you said. My argument for years has been that all those developments in the sports village and Cardiff bay should pay for at least the majority of the funding for such links, to alleviate some of the traffic problems that we have in the bay and between the bay and Penarth in particular.

[220] **Mick Bates:** One of my concerns is that the word ‘integration’ has been around for a long time and yet we still have to put many of these ideals into practice. The one thing from your evidence today that has stayed in my mind is how much you can achieve with the cost of building half a mile of motorway. If you have more evidence on that, and the data and background information that has led to that comparison, please submit it to us. Achieving a 1 per cent reduction in carbon emissions for that kind of investment is very cost-effective.

[221] On behalf of the committee, I wish to thank you both for the written submission and the responses that you have given to Members’ questions. A copy of the Record will be sent to you for you to examine.

[222] Before I close the meeting, I just want to say that the problems with the video link were at the Darlington end. I have run this session a little bit longer than planned to give Members an opportunity to question Sustrans in more detail. I have just been told that the Darlington link is up again, but, in view of the time, I will bring the meeting to a close, unless there are any objections. We have already planned to rearrange the Darlington link for the meeting on 6 December. I see that there are no objections. I thank all committee members. The next meeting is on 29 November. I declare the meeting closed.

*Daeth y cyfarfod i ben am 12.01 p.m.
The meeting ended at 12.01 p.m.*