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Reference: Investment of Commonwealth and state funds in public passenger transport

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SENATE STANDING COMMITTEE ON

RURAL AND REGIONAL AFFAIRS AND TRANSPORT

Monday, 23 March 2009

Members: Senator Sterle *(Chair)*, Senator Milne *(Deputy Chair)*, Senators Farrell, Heffernan, Hutchins, McGauran, O'Brien and Williams

Participating members: Senators Abetz, Adams, Arbib, Barnett, Bernardi, Bilyk, Birmingham, Mark Bishop, Boswell, Boyce, Brandis, Bob Brown, Carol Brown, Bushby, Cameron, Cash, Colbeck, Jacinta Collins, Coonan, Cormann, Crossin, Eggleston, Feeney, Fielding, Fierravanti-Wells, Fifield, Fisher, Forshaw, Furner, Hanson-Young, Heffernan, Humphries, Hurley, Johnston, Joyce, Kroger, Ludlam, Lundy, Ian Macdonald, McEwen, McLucas, Marshall, Mason, Minchin, Moore, Parry, Payne, Polley, Pratt, Ronaldson, Ryan, Scullion, Siewert, Stephens, Troeth, Trood, Wortley and Xenophon

Senators in attendance: Senators Farrell, Fisher, Heffernan, Macdonald, Milne, Nash, O'Brien, Sterle

Terms of reference for the inquiry:

To inquire into and report on:

The investment of Commonwealth and State funds in public passenger transport infrastructure and services, with reference to the August 2005 report of the House of Representatives Standing Committee on Environment and Heritage, Sustainable Cities, and the February 2007 report of the Senate Standing Committee on Rural and Regional Affairs and Transport Committee, Australia's future oil supply and alternative transport fuels, including:

a. an audit of the state of public passenger transport in Australia;

b. current and historical levels of public investment in private vehicle and public passenger transport services and infrastructure;

c. an assessment of the benefits of public passenger transport, including integration with bicycle and pedestrian initiatives;

d. measures by which the Commonwealth Government could facilitate improvement in public passenger transport services and infrastructure;

e. the role of Commonwealth Government legislation, taxation, subsidies, policies and other mechanisms that either discourage or encourage public passenger transport; and

f. best practice international examples of public passenger transport services and infrastructure.

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Committee met at 9.03 am

CHAIR (Senator Sterle)—I declare open this public hearing of the Senate Standing Committee on Rural and Regional Affairs and Transport. The committee is hearing evidence on the committee's inquiry into investment of Commonwealth and state funds in public passenger transport infrastructure and services, and I welcome you all here today. This is a public hearing and a *Hansard* transcript of the proceedings is being made.

Before the committee starts taking advice, I remind all witnesses that, in giving evidence to the committee, they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee, and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence to a committee. The committee prefers all evidence to be given in public, but under the Senate's resolutions witnesses have the right to request to be heard in private session. It is important that witnesses give the committee notice if they intend to ask to give evidence in camera.

If a witness objects to answering a question, the witness should state the ground upon which the objection is taken and the committee will determine whether it will insist on an answer, having regard to the ground which is claimed. If the committee determines to insist on an answer, a witness may request that the answer be given in camera. Such a request may of course also be made at any other time. Finally, on behalf of the committee, I would like to thank all those who have made submissions and sent representatives here today for their cooperation in this inquiry.

[9.05 am]

IGGLESDEN, Mr David Edward, Acting Director, Urban Transport Systems, Department for Planning and Infrastructure, Western Australia

WYATT, Mr Timothy, Team Leader, Policy and Precincts, Department for Planning and Infrastructure, Western Australia

WALDOCK, Mr Reece, Chief Executive Officer, Public Transport Authority of Western Australia

CHAIR—I welcome officers from the Western Australian Department for Planning and Infrastructure and the Public Transport Authority of Western Australia. I remind senators that the Senate has resolved that an officer of a department of the Commonwealth or of a state shall not be asked to give opinions on matters of policy and shall be given reasonable opportunity to refer questions asked of the officer to superior officers or to a minister. This resolution prohibits only questions asking for opinions on matters of policy and does not preclude questions asking for explanations of policies or factual questions about when and how policies are adopted. Officers of the department are also reminded that any claim that it would be contrary to the public interest to answer a question must be made by a minister and should be accompanied by a statement setting out the basis for the claim.

Senator HEFFERNAN—Mr Chairman, could I just flag before we start my horror—and I think this is appropriate—

CHAIR—Senator Heffernan, we are just focused—

Senator HEFFERNAN—that you can be bashed to death in—

CHAIR—Senator Heffernan, we just spoke about this. We will have a private meeting, because it is a concern not just to you but to every member of this committee and every elected member of parliament.

Senator HEFFERNAN—I think we ought to recognise that—

CHAIR—Thank you, gentlemen. Before we go to questions, I will invite you to make a brief opening statement.

Mr Igglesden—Thank you. I have some supporting documentation. Basically, I want to take the paper as read and underline the measures that the Commonwealth government could facilitate to improve public transport: first of all, by mandating the new Major Cities Unit to improve the land use and transport planning integration; secondly, by developing and implementing a national public transport infrastructure and investment program, which is something that we think the Commonwealth can contribute to very appropriately; and, thirdly, by investing in the TravelSmart program, which is something we will be addressing in the next session with Colin Ashton-Graham.

The role of the Commonwealth is particularly important in a couple of areas: one is reform of taxes and charges and enforcement of taxes and charges, which is largely outside the states' responsibility. We acknowledge the Henry review into that. But the issue that comes up with us very frequently is fringe benefits tax and how that distorts the transport decisions that people make: first of all, fringe benefits tax for purchasing and running a car, which is detailed in the paper there, and Treasury estimates talk about $2 billion being the sort of sum involved with that. There are also fringe benefits tax effects on bus tickets and other sustainable transport initiatives that could affect that. But one of the new points that I want to bring up is fringe benefits tax on parking, which is certainly a very major thing. We will talk about that in a minute.

Coming to best practice, Tim Wyatt is going to talk shortly about the best practice of Perth's central area transport—the CAT and the Free Transit Zone and the incomes generated from that—but I would like to speak to our best practice of integrating transport and land use planning for major precincts like universities and hospitals et cetera. A key example here is with the Queen Elizabeth II Medical Centre. That is located here, along with the University of Western Australia, on the river and well removed from any of the railway lines and, just while we are looking, other major centres of universities, and tech parks like Bentley, are also well removed from the railway system. Murdoch, fortunately, is much closer.

What the health department did in 2004 was a review of their capital needs and the like and made some major investment decisions. One was to double the size of the Queen Elizabeth II Medical Centre. It is already highly constrained from a transport and land use viewpoint, so we are working in partnership with the department to work through all the transport issues, and the difference here was that we did it holistically and cooperatively between the agencies.

The first thing we did was to assess the road capacity into that precinct and we determined that there was not very much road capacity and we could not just widen roads through inner urban areas, so we set a car-parking limit on the hospital precinct and said, 'That's it. You can build your hospital as big as you like. That's as much parking as you're going to get—for the staff, particularly. Everything else must go into public transport.' They came back and said to us, 'Okay, we can do this. Help us generate that public transport. Put that public transport in place and all the supporting mechanisms.'

We undertook a public transport master plan. In the attachments here there is a summary of that—the second one—which talks about the process. We went through assessing what the demand for public transport is with the university and the hospital and, essentially, 100 per cent of the growth of those two institutions has to be served by public transport, walking and cycling. Car parking is limited and so, although public transport may be a fairly minor component at the moment, it will be scaling up very rapidly. The plan was about how to cope with that scaling up. That includes bus priority lanes that we are planning on Mounts Bay Road and it includes a funding plan: when do we need to buy buses? How much does it cost?

CHAIR—Mr Igglesden, I am sorry. It is all very important, but we are going to run out of time. I do not wish to be rude and cut you short, but you did say Mr Wyatt had something to say, and I have no doubt Mr Waldock too, as the PTA, would like to add some commentary before we get to the pointy end of asking questions. If you have something to table, please feel free to table that for the committee, but otherwise we do want to get to questions.

Mr Igglesden—Okay. To get to the final point, our reforms are being compromised by the fact that employers heavily subsidise their staff parking on this and various other occasions, where it is $1.50 or less than $2 a day, and therefore the cost of public transport is a lot higher to the user than parking. Where the Commonwealth can come in here is perhaps through enforcement of conditions of fringe benefits tax relating to car-parking. The point is that it will be in the order of $6.50 a day per employee that the employer may be liable for and, once the employer is liable for that, they are going to start charging for parking for their staff and it is going to help us to balance out all the issues.

CHAIR—Thank you, Mr Igglesden. Mr Wyatt.

Mr Wyatt—Thanks, Chair. I will try and make it brief. I just want to recap on one particular aspect of our submission and that is relating to best practice public passenger transport and, as David mentioned, the Perth Central Area Transit or CAT system and Free Transit Zone system. The reason I want to do this is that these two initiatives wrap up a lot of the matters and issues that we have talked about in our submission and the broader benefits to the whole community that public transport provides.

They are both examples which highlight how high-quality public transport can contribute to a raft of other social, economic and environmental benefits, such as strengthening the overall vitality and livability of the city. Many people are familiar with the conventional concept of mass transit which runs typically between centres. However, the concept of providing these high-frequency shuttle style buses which typically run in a loop, including their own unique identification and stops, is an approach which is being adopted in many cities across the world as a means to tackle traffic congestion and accessibility matters.

As we have said in our submission, Perth has three such specific CAT routes that it is serviced by, and these have gained widespread public acceptance. They have become an iconic part of the city's transport system and are really the fabric of the whole Perth city centre and, as you will see outlined in our submission, they now carry 7.6 million people annually.

Central Perth is also serviced by what is called the Perth Free Transit Zone and the CAT is a key component of that. Any person who starts and completes their journey within this zone may travel free on scheduled public bus and train services. This service moves 4.6 million people annually. I should state that they are free services in that the users are not charged, but they are both paid for by revenue from the Perth parking licence, which is a levy or tax, if you like. To briefly expand upon this, since 1999 the Perth Parking Management Act has given the state government this ability to control the growth and location of parking within central Perth, and there is a requirement under that act to license all tenant and public parking, except private residential, and new developments must conform to the Perth parking policy. Importantly, by licensing parking under that act, those revenues are raised only to be spent within that area; therefore, this is the funding source for both the CAT and the Free Transit Zone.

Anecdotally, it is clear that these transport initiatives have contributed to lower levels of traffic congestion than would have been the case without their influence. At the same time, they have certainly strengthened the connectivity and sense of place which is central Perth, and the beneficiaries are residents, employers, employees, shoppers, business, visitors, and simply those accessing the city for recreational or entertainment purposes.

The point I want to make here is that the full value of this benefit has only just started to be understood. This is because even those who do not directly use the CAT bus system and the Free Transit Zone derive an indirect benefit because of more free-flowing traffic or uncongested streets when they are using their cars for travel, or greater ease of access to their business for employees and customers. I conclude by saying that this is a scheme which warrants further consideration—perhaps in other cities—and warrants further support and ongoing understanding of the benefits that it is generating.

CHAIR—Thank you, Mr Wyatt. And it would be remiss of me to leave the main man out, when it comes to the PTA. Mr Waldock.

Mr Waldock—Thank you. I come from a slightly different perspective, as I am an operator rather than a policy person, and, if you understand the Public Transport Authority, you probably realise we are the only agency, the only jurisdiction, in Australia that has all public transport in the one body. I think there are major benefits in terms of integration, coordination, not being mode-biased in terms of choice with public transport, and having a total and single point of accountability both to government and to the travelling public. There are many advantages and we have been, by and large, a success story over the last five years, which is since we have been in business.

The only way I believe you grow public transport is through four areas. One is services. There is lots of information on elasticities of demand and how you grow business and that, I think, will continue to be mainly state government. Infrastructure, which we will talk about, certainly is critical. Every time WA has had major growth in its transport system, it has always been through major infrastructure investment. Land transport planning is clearly the role of local and state government, but we might pick up national government's role in that.

Demand management is one of the key areas, I believe, particularly if we look at the pricing signal side of demand management; issues such as road pricing, parking fees, taxation, which are all imposed. But I think we need to get an agenda that is consistent and drives people to make the right decisions. I think it is inconsistent at the moment. You will hear later about the education side of demand management, such as TravelSmart, which I will not talk to.

I do not want to spend too long, other than to talk about some measures which I think are critical, and I certainly think national planning coordination is one of those. In relation to investment, it is interesting that, whilst the Infrastructure Australia Fund now is looking at transport infrastructure, it certainly is not picking up the issue of land transport infrastructure, so I hope that the Building Australia Fund will pick that up. Certainly at this stage that is a hole.

I want to talk to questions about reduced oil dependency. We have done a major bit of work and, whilst the world has changed a little bit in the last eight months, we did demonstrate that if we, as every other jurisdiction in Australia, have $4 a litre petrol in 2016, no state would be prepared to meet not just the issues of the normal sort of replacement of assets but rolling stock. We would need a 40 per cent increase in buses and trains. So there are huge issues facing Australia if in fact we see oil dependence become the issue that we think it will become.

I do not want to mention FBT any more. We will pick it up in questions, although I think the issue is very real. From an operator's point of view, when I go into the community to try and sell

product, if I could sell a product to the corporate sector, which is an underdone sector in WA, and offer them a corporate smartcard—again, we are pretty proud of our smartcards in WA—without an FBT attached to it, it would be a major winner. I think there are real issues there.

I do not want to talk too much about the Carbon Pollution Reduction Scheme, other than to say that, again, we are giving out different messages—whether electric rail will be more expensive and diesel buses will be more expensive vis-a-vis motor cars. I think we need consistent messages. We will have over half our fleet on CNG; I think there are inconsistent messages there. We have done it for stability of pricing, for assurance in the future—not just of pricing but supply—and when they remove nexus concessions on natural gas in the years to come, it will probably be seen in the short term as a lousy decision, which is somewhat disappointing.

Best practice I will pick up, if need be, in questions: the issue of public transport integration; the issue of busways and perhaps the way forward with rolling stock in terms of buses, in terms of fuels; and maybe we will pick up light rail as well. They are the areas that you are welcome to ask questions on.

CHAIR—Thank you very much, gentlemen. The spotlight is on you, gentlemen, because this is the fourth day of hearings around the country on this inquiry, and all points head west when we talk about who has got something that we should be looking at in terms of best practice. So we will be hanging on every word that you say today, because I have not been one to stand in the way of a good story and WA at the moment has been a good story with integration of buses and trains, smartcards as you were saying, Mr Waldock, park and ride and the like, and the integration of cycles. We are running out of time and on your line of reduced oil dependency, I will go to Senator Ludlam.

Senator LUDLAM—Thank you, gentlemen, for coming in this morning. I will pick up where you left off, Mr Waldock. I notice the map that you have tabled, 'Transfer strategic corridors', with the strategic bus corridors and the rail and so on, and pick up on your comment that light rail was being studied by the last government. What is the state of that now?

Mr Waldock—In fact, the study of the last government was being run out of DPI, but certainly I was part of it. I must say that in WA, whilst I think we do lots of things right, it is fair to say that light rail is an area that we are still coming to terms with. We see that there are enormous opportunities. But again I can talk, without being mode-biased, from the point of view of where we would use light rail. I think it is where you have got very clear plans, work with local government, where you want to have mixed use, and you want to have high levels of development.

You want to activate the streets. So there is certainly a role that we see for light rail, and the study you referred to was the study from Perth to Subiaco and then down to Sir Charles Gairdner and maybe UWA. There is also work that I am aware of at Technology Park. So you need clear plans, and I think you would see that the land use around it would make light rail very attractive.

But we should not forget that light rail is very expensive. It has got a role, but for many of our routes we are looking at perhaps a busway concept where we are moving people some distances from the outer suburbs. Time is critical and, again, there is a major demand issue between travel

time and transport. Light rail is certainly exciting in its place, and the two projects that I have mentioned I think may work, but we need to do further work on them. But it is horses for courses and we need to understand the nature of the transport task.

Senator LUDLAM—We have heard that from a few folk so far.

Senator HEFFERNAN—When you build that, in your financial plan what percentage of paying passengers do you allow for? Half?

Mr Waldock—When you say 'paying passengers', do you mean the subsidy that we would put on the—

Senator HEFFERNAN—For instance, in the New South Wales rail system about 50 per cent of the passengers pay.

Mr Waldock—All our passengers pay something. I am surprised that New South Wales have non-paying—

Senator HEFFERNAN—Pensioner stuff.

Mr Waldock—Pensioners still pay, but as of 4 April all seniors, pensioners and disabled pensioners will have free public transport in WA in non-peak times, between 9.30 and three o'clock, and also in the peaks—

Senator HEFFERNAN—That is built into the financial plan, is it?

Mr Waldock—That is built into the financial—

CHAIR—That was an election commitment from the incoming government.

Mr Waldock—And the previous government.

Senator LUDLAM—I am not sure who to direct this to. I am little bit concerned about a couple of the comments that you have made in your submission and your comments earlier that the CPRS will favour private transport over public transport for a period of a couple of years. You have also said here, under 'Reform of transport, taxes and charges', that the costs imposed by the ETS when it finally does kick in are likely to be insignificant in relation to other costs. We were told by the department of climate change last week in Canberra that the CPRS is their key strategy as far as transport goes, and here you are saying that it is not going to have much of a—

Mr Waldock—That was a DPI comment.

Mr Wyatt—I am happy to follow up further on that comment. I have been directly involved in lobbying the case for the current subsidy and imbalance that exists with the treatment of FBT on vehicles. We would have a source for those figures. That has gone, through recommendations, to the Australian Transport Council through the Climate Change, Environment and Energy Working Group. So there clearly would be some backing and support for that, but I would have to go away and find that evidence for the committee.

Senator LUDLAM—I would appreciate that because, as I say, it has been said by the department certainly that the CPRS is a key part of their transport planning strategy, and you are saying that it is not necessarily—

Mr Waldock—Can I just clarify that?

Senator LUDLAM—Sure.

Mr Waldock—When you say 'key part', in what respect—to promote public transport?

Senator LUDLAM—Essentially; that putting a price signal in through various kinds of fuels will change people's travel behaviour. I was trying to tease out whether there was anything else on the table, and there was not a great deal, so it is a bit alarming if you are saying that it is not going to have much of an impact.

Mr Wyatt—In relation to that particular reference, we do not all know exactly what fuel costs were factored into that study. That has probably been the critical issue.

Senator LUDLAM—A key theme that is emerging is the difference between public transport accessibility in inner metro areas as opposed to outer metro areas. There are buses running in middle ring and outer ring centres, I gather. Can you tell us what your strategy is for the peak oil scenario that you described before—$4 a litre petrol by 2016? What does outer metropolitan Perth look like?

Mr Wyatt—Do you want me to answer it?

Mr Waldock—Perhaps DPI in a policy sense and then I will respond in an operational sense.

Mr Wyatt—Certainly we recognise that the CAT model has possible application to other major centres, particularly in light of the other broader planning aims within Perth currently to build up major precincts and suburban central business districts. We need complementary accessibility and internal movement systems and that is exactly what we are looking at now. Certainly CAT has proven to be a very cost-effective way to move large volumes of people and provide a level of accessibility and internal connectivity in those centres.

Mr Waldock—Sure. It is fair to say that Perth in many respects is a bit city-centric, CBD-centric, but certainly the long-term plans are to get better activity centres, better work sustainability and the like, in those outer suburbs. Having said that, there is an enormous challenge ahead. Low-density cities always have enormous issues in terms of how to provide, with a wider and wider net, good public transport services. It is not easy. Public transport services really mean dollars. Every service kilometre costs you money, whether it is in the bus business, the rail business or whatever else. From our point of view, clearly there would have to be an investment in the future for additional services.

Also, right or wrong, we do attempt to provide major spines out of the city where we have park and ride. Whilst we acknowledge that that means we are still vulnerable to some degree of mobility through motor cars, all our stations in the outer suburbs—all our stations throughout the

system now—are being made very friendly to bicycles and pedestrians as well. We are doing what we can but, at the end of the day, service kilometres will be a key feature of that.

Senator MILNE—Mr Waldock, I am very interested in what you were saying about petrol potentially being $4 a litre—and higher, I would think—and I am also interested in trying to bring together the Carbon Pollution Reduction Scheme, the infrastructure needs, the jobs et cetera. You were saying that, in order to meet the transport effort that would be required in a peak oil scenario within a decade, we need a huge investment in buses, in rail carriages, in carriages that can take bicycles, and those sorts of things. Has anyone done an across-the-country estimation of what we would need to roll out in terms of that kind of infrastructure, what the cost would be and what the employment opportunities would be in Australia if we had a national plan for rolling out an adequate level of infrastructure, albeit with the basic capacity to run it?

Mr Waldock—Planning in public transport in Australia tends to be very jurisdictional.

Senator MILNE—Yes, I understand that.

Mr Waldock—And there is probably a need to look at it in a wider sense, but we have done major work on that, looking at the scenarios, and we would certainly make that work available to this committee. We look at a number of different scenarios with oil pricing and what it would mean to demand and to the amount of rolling stock required. We did the study nine or 10 months ago. We have seen a short-term dip, clearly, in oil pricing, which has in some respects meant the heat is off, but I do not think the heat is off if you are a true believer in what the future is going to hold and we should not get complacent about this. Four dollars a litre is probably middle ground. I do not think it is over the top for 2016 and, if that is the case, then we may be found wanting. But what if I make that study available. And, while we are making studies available, we have just finished a study on fuels for the bus fleets and I think it is showing exciting opportunities in the area of hybrid buses, certainly for the next 20 years, and hybrid buses have got great advantages in the future in terms of both energy and environment. We would certainly make that available as well.

Senator MILNE—We are particularly interested in employment opportunities, as you can appreciate.

Mr Waldock—Yes, I understand.

Senator MILNE—Now is the opportunity to generate new manufacturing opportunities in Australia and to employ people who might be losing their jobs in some traditional forms of manufacturing, so it would be good to get a handle on the scale of the rolling stock needs. We could extrapolate some of those figures. Anything that you have got on that would be really worthwhile.

While I am on that—if I might, Chair—I have a question for you, Mr Igglesden, in relation to Infrastructure Australia. It has been the tendency for state governments to put up infrastructure projects to the Commonwealth that are basically road oriented—overwhelmingly. Do you think there is a shift in the thinking of state governments in terms of opportunities with public transport? If the Commonwealth did make it clear that it was prepared to now fund public

transport, do you think that states would become much more focused on what is realistic, or have we got a culture in Australia that will just see more freeways and cross-city tunnels?

Mr Igglesden—We are probably just not prepared for the shift and, yes, I am sure we can reorientate, but we do not want to come up with plans that are not properly prepared and costed.

CHAIR—Probably the main plus, and the reason that others envy the Western Australian public transport system, is what you said, Mr Waldock, in your opening remarks: that you are the one main body. That is a great start and a great stepping stone. But what has been evident coming through these hearings—and I am looking at you, Mr Igglesden and Mr Wyatt—is that in the other states we have been to so far, when new suburbs pop up like mushrooms, there is absolutely no involvement with public transport in the early stages of planning. Tell us what happens in WA.

Mr Igglesden—We have a large set of guidelines, one of which is Liveable Neighbourhoods which sets up how you should set out a community, and that includes going back to the old grid pattern of roads that is the most robust for walking, cycling, car connections and the like. Each area, when it is being planned, has to be structure planned, and there are various structure planning processes that come through the Department for Planning and Infrastructure. We look at the issues of bus routes and intersuburban links et cetera. We have a lot of development areas that are single lot—half a suburb is one landowner sort of thing—so there is a lot of good practice over the years in that sort of planning that—

CHAIR—So you guys are involved from the very beginning?

Mr Igglesden—We are involved from the beginning.

CHAIR—As is the PTA. Is that right? It is very important. We need to get out this out for the benefit of the committee.

Mr Igglesden—Yes, we have the planning responsibilities, with specific applications that relate to PTA functions. They get referred to PTA and Main Roads and Environment and everyone else—the local governments et cetera.

CHAIR—Great.

Mr Igglesden—We believe that is pretty well down pat as far as the planning system is concerned, with good, sound, up-to-date planning.

CHAIR—Very good, because what has come out quite clearly in the other states is that those who should rely on public transport, who you would think should rely on public transport more than others, are those that go out to the further suburbs because land is cheaper, and there are two-car families—and there are socioeconomic reasons why—and what we see is that there has been absolutely no involvement on the ground at the beginning to talk about public transport. In fact, in New South Wales there was a southern metro or southern regional study done, there were eight or nine factors, and public transport was not even one of those considered.

Mr Waldock—David is quite right. Obviously, we can always do better, but we do not run a bad ship. The more important thing, though, is that we are just six months off finishing a 20-year plan for public transport, and this is the major plan in terms of where we roll out the future systems for public transport, and the types of systems they will be. Whilst it is hosted in my agency, it is a joint team. We are using all the system modelling from DPI. It is also based on the whole new centres policy.

I think that you do go forward as a state, and south-east Queensland is probably ahead of anybody. It has got fairly good infrastructure planning areas. When Infrastructure Australia comes along, you just raise the issue of public transport, and you are far stronger if you have done the benefit-cost and you understand what the priorities are, and this plan taps into that. It is far harder to ad hoc pick projects which you think are a good idea at the time, with no basis.

Senator O'BRIEN—The CAT and FTZ systems seem to be very cost effective from the figures in your submission. How do they compare to the rest of the Perth public transport zone in terms of cost of operation, the contribution of the fare structure compared to the public support?

Mr Waldock—Yes, it is cost effective because it pays its way through levies, as has been raised. It closes the loop so people that use it in fact at least feel that many of them are paying for it through parking levies. The CAT is an incredibly popular system, mainly because it is taking a lot of businesspeople who would not even think about driving their cars now, so it is a whole new untapped market, and pretty much a pleasurable experience for that untapped market.

In terms of the rest of the system, we run at about 25 per cent to 75—a 75 per cent subsidy. That is not atypical around Australia. Of course, every time we look at things like 50c fares for students or free public transport for seniors, clearly that has some effect on the subsidies. We would argue, like most other states, that if you look at the cost of public transport and the external benefits, then 75 per cent to 25 is probably appropriate. Clearly there is always opportunity to put up prices, but it certainly has not been something that successive governments have looked at.

Senator O'BRIEN—So what is 25 to 75 in raw numbers?

Mr Waldock—Total public transport is about half a billion dollars, so if you just break that into—

Senator O'BRIEN—So $125 million—

Mr Waldock—Yes, $125 million fare revenue. That would be about right, yes.

Senator O'BRIEN—is what fare revenue is. Do you expect the usage of the general public transport system in Perth to grow? You are projecting potentially higher fuel prices and I know Perth has gone through a fairly affluent cycle. It may not be quite so affluent at the moment.

Mr Waldock—Yes.

Senator O'BRIEN—But are you expecting perhaps, in the current economic climate, to see an increase in public transport use?

Mr Waldock—That is an excellent question. Last year, because we opened up a new railway system, we saw a 25 per cent growth, but I guess we have got underlying growth in a constrained environment because we do not have enough rolling stock. It is always a catch-up. But we are running at six per cent growth now, and that is compound year on year. As I say, we are bringing in some new railcars now, and we expect to see that jump. There is latent demand out there: people that find it just a little too squeezy and make other travel choices. In terms of future demand, it really is interesting in terms of recessionary periods. You would expect to see public transport jump, and we are seeing that.

Having said that, it is a bit more complex than you might think, because at the same time that we are seeing a recessionary environment, we are seeing fuel prices drop as well, so there are some competing issues. Interestingly enough, we saw a significant jump in public transport when the fuel prices were going up; when they hit $1.50. I think what we have seen is sustained behavioural change because fuel prices have dropped down again, but certainly we are still seeing growth. To answer your question, I think we still see strong demand growth despite fuel pricing.

Senator O'BRIEN—No doubt you are conducting surveys on passenger satisfaction.

Mr Waldock—All the time. In fact, we run very tight surveys and generally, with public transport in Perth, the satisfaction level for trains is 90 per cent and for buses it is about 82 per cent

Senator O'BRIEN—Is that an upward trend or is it static?

Mr Waldock—It has actually been like that for a few years. I think trains went slightly up last year and buses went slightly down through capacity issues, but still in that order.

Senator O'BRIEN—You have got a pretty modern fleet of buses, so what is the problem with the buses?

Mr Waldock—Again, I think the problem with buses is some overcrowding, so that is an issue, especially in the north-east corridor. But there are other issues in buses: they do not always go where people want and buses, by their very nature, are restricted by traffic. What we are seeing is that, because of congestion issues in our city and every city in Australia, travel times are going backwards. That is why I think things like busways and bus priority are fundamental issues that governments should consider, and maybe the federal government as well.

Senator O'BRIEN—Yes. I think state governments and local authorities tend to deal with the busways more than—

Mr Waldock—They do, although I am looking at infrastructure funding as well.

Senator O'BRIEN—You are looking at a bus rapid transit system or something.

Mr Waldock—Indeed. Queensland with their experience in busways, and perhaps Bogota in South America, are areas we should learn from for low-density cities.

Senator O'BRIEN—We are time constrained. It would be an interesting area to explore, given some of the other evidence that we have had of buses versus light rail, but I will leave it for the moment, thank you, Chairman.

Senator BACK—Thank you, gentlemen. Until last Wednesday week I was a daily user of the train system from Canning Bridge, and I applaud the TravelSmart card system, which of course just recalculates and totals up so you never have to actually do anything with it. I do have a couple of questions. In relation to ferry transport, not just across the Swan at South Perth but the potential for Fremantle, and picking up, why we are not doing that and are we going to in the future? With the commencement of the southern railway from Mandurah to Perth in December 2007, we saw, I think, double your predicted usage pretty well within the first few months. My experience of crowding of a morning confirms that.

What has been interesting to me is that I do not see any reduction in fact in Kwinana Freeway usage, and of a morning the parking lot is extending further south almost week by week. Why is it that, with the introduction of a tremendous southern railway which is so easy to use et cetera, we have not seen—at least on my observation—a reduction in peak freeway traffic?

Mr Waldock—Could I answer your question back to front?

Senator BACK—Please.

CHAIR—We are from the Senate. We are used to that.

Mr Waldock—Thank you. That is one of the arguments against putting more and more money into roads. There is a whole theory about induced demand: the more road space you make available, the more people will fill it up. Having said that, your freeway observations are partly true and partly not true. It is certainly freer in the area between Murdoch and Perth, but it is certainly more congested further down. Some of that is probably what we class as 'rat running'. In other words, people still want to go to railway stations but they try and get into the closest railway station where they can find parking. So the sections are being used up as people try and get as close as they can to the city. As I say, whenever you have got road space, people tend to fill it up, especially in the CBD.

I do not know the answer, but I think what you say is very true. We have got 22,000 people, which would be in the order of almost 20,000 cars, that could have been taking cars and are now taking rail into the city from the southern suburbs, so I think it is a good experience.

In terms of your ferries, I lived in Sydney, I understand Brisbane, and I think the ferries are very successful. The ferries in Perth are a little bit different. We have got a very low density around the water in Perth—and, indeed, it is almost prescribed by councils where they have actually de-zoned areas around the river—which means that, whilst it is good for perhaps the people that live in those suburbs, in making it a mass transit system it is enormously difficult because you have not got parking and you have not got densities.

You mentioned Fremantle where we have already got a world-class modern mass transit system in terms of the train. When we did take ferries out when we were closing the system down a year ago for the southern suburbs railway cut-in, we offered free services from

Fremantle, with coffee, over that period of time. Whilst there was some interest, it is fair to say it was a 45-minute trip, so a long travelling time, and that is with no intermediary stop-off. So I think that my answer in terms of ferries on the river in Perth is different than Brisbane. It has got good densities and a narrow river, certainly different from Sydney; I think limited, although East Perth and Burswood have high densities, close to the city, and there is no good public transport. There may be some opportunities.

CHAIR—Is there any question you want to put on notice, Senator Back?

Senator BACK—No. I wanted to comment on the CAT system. It is absolutely brilliant. I use it all the time. It has a stop outside my office in Northbridge, which I have no doubt Senator Ellison had something to do with, but the committee needs to know the breadth of its use. I listen to comments all the time from people from overseas and interstate who are using it. There is very heavy use of it by businesspeople travelling from the city up to here at parliament et cetera, or from Northbridge in and out. It is a very widely used service and it is absolutely brilliant.

Mr Waldock—Thank you, Senator Back. It is noteworthy that that was funded through federal government under Better Cities, so that is how that came about, not through the state government.

Senator O'BRIEN—Its use is incredible. I was interested in the figures; I did not know them. But I can certainly see why: because it is so heavily used.

CHAIR—Better Cities is a very good program. We have run out of time, but I would ask you gentlemen to take something on notice for us. If it is possible, could you provide for the committee the history of how we went from ad hoc public transport set-ups and lines and systems and services to the integrated system that we now have here in WA. That would be very beneficial to the committee.

Mr Waldock—We will work with DPI.

CHAIR—Thank you very much. The committee thanks you, Mr Igglesden, Mr Wyatt and Mr Waldock for your time.

[9.51 am]

ASHTON-GRAHAM, Mr Colin, Principal Policy Officer Household Sustainability, Department for Planning and Infrastructure, Western Australia

IGGLESDEN, Mr David Edward, Acting Director, Urban Transport Systems, Department for Planning and Infrastructure, Western Australia

CHAIR—I now welcome Mr Ashton-Graham from the WA Department for Planning and Infrastructure Living Smart program. I remind senators that the Senate has resolved that an officer of a department of the Commonwealth or of a state shall not be asked to give opinions on matters of policy and shall be given reasonable opportunity to refer questions asked of the officer to superior officers or to a minister. This resolution prohibits only questions asking for opinions on matters of policy and does not preclude questions asking for explanations of policies or factual questions about when and how policies were adopted. Officers of the department are also reminded that any claim that it would be contrary to the public interest to answer a question must be made by a minister and should be accompanied by a statement setting out the basis for the claim. Mr Ashton-Graham, you have lodged a short paper with the committee. Do you wish to make any amendments or alterations to the paper?

Mr Ashton-Graham—No.

CHAIR—Then I invite you to make a brief opening statement before we go to questions.

Mr Ashton-Graham—Thank you. I would like to thank the committee for taking a particular interest in TravelSmart and its contribution to increasing public transport patronage. As you noted, I have submitted supplementary evidence from the department, which we are happy to make public. The TravelSmart approach was developed here in Western Australia. It has now been replicated in several Australian jurisdictions and also more widely in North America and in Europe. The program operates in several settings, each seeking to build stakeholder capacity. We operate in schools, workplaces and major destinations with local government and also directly with households. In the eastern states they call that the communities program. My colleague David Igglesden and I will be able to provide you with information on the integration of TravelSmart initiatives at the place based level, where we operate with major destinations.

I would like to focus on the household aspects of the program, simply because that is what delivers the immediate and large public transport increases. For me, what makes TravelSmart most interesting is some simplicity around it. We have discovered, through some travel diary research, that people do not rationally and clearly choose their transport mode, their destination—where they are going to go about their business—or their trip patterns for how they organise their day. This happens in a much more haphazard way for most people.

Working further with households where we have conducted research, we find that with half of the trips that consumers make, they have insufficient knowledge, experience or motivation to make the best choice in relation to mode, destination and trip pattern. That is something that we uncovered via a survey of journeys within households.

Over the last 12 years DPI has developed TravelSmart along the lines of a counselling based program, which is more common in the health sector. In Europe the adoption of this—again following on from the lead in Western Australia—has been to call it 'personalised travel planning'.

The TravelSmart household program in Perth typically delivers an 18 per cent increase in public transport patronage within a number of months of beginning a campaign in a local area, and that is based on adding patronage to existing levels of service. It is very interesting that recently, with the construction of the Mandurah railway, we have been able to integrate the TravelSmart program into some of the stations on that railway. The TravelSmart effect on public transport patronage increased from 18 per cent to 30 per cent. That is adding to what we, from control areas, think is about a 50 per cent increase in public transport patronage due to putting the railway in. That is an area-wide effect.

The household program also consequently delivered some strong decreases in car travel of around 13 per cent in kilometres. That comes from shifting people's choices to walking, cycling and public transport but also changing their destination or changing their trips to use their cars more efficiently. That package of behaviour change improves public transport cost recovery, it produces significant reductions in greenhouse pollution, it increases community physical activity—which is an interesting by-product from a transport program—and it clearly has local traffic benefits.

Pulling all those things together, the socioeconomic evaluation of the TravelSmart household program finds that there is about $30 of return-to-community benefit for every $1 invested. Although TravelSmart's contribution has been significant, the Commonwealth government's involvement has been fairly small. The exception has been the Commonwealth environment agency, which has provided policy coordination for a number of years, but that policy coordination, we understand, is about to cease. There has been approximately $9 million of Greenhouse Gas Abatement Program funding put into TravelSmart programs in jurisdictions around Australia, and again that program has recently closed.

The state of Western Australia, as the primary funder and driver of these programs, has delivered TravelSmart to about 460,000 residents over a period of 10 years in the Perth and Peel regions. The Queensland government is about to commence a project of a similar scale, which they are hoping to deliver in two years.

Lastly, I would like to highlight that there are significant other policy outcomes from TravelSmart. Water corporations in WA, Victoria and New South Wales have been trialling the same technique to get about a 10 per cent reduction in water consumption from target populations. The government of Western Australia has recently extended the technique to address household demand for water, energy, waste and travel all in the same communications package for households, and we are calling that the Living Smart program. That program is still in its demonstration stage, but we are targeting roughly a one tonne per household reduction in greenhouse gas emissions. The cost of that is projected to be somewhere below $20 per tonne. When you take into account the reductions in fuel and energy costs for households, there is a net negative cost for that program, so the community as a whole ends up ahead. This combined approach is useful and important to this committee, not because it addresses waste and energy but because, being a joined-up approach, we can reduce the unit cost to the public purse of

achieving the same outcomes for public transport and also outcomes for carbon and health. Thank you.

Senator BACK—I do not want to dominate, Chair, because, as I say, I have been and am a regular user. The only reason I do not have my TravelSmart card with me today is that my daughter is down here from Singapore on business and she is using it as an alternative. That is an indicator of how strong it is.

CHAIR—So it is family friendly as well.

Senator BACK—Your figure 1 I would love to see in colour, because it is not as apparent. It is a figure that I would like to be able to use, and I am sure others would. I am most interested in the fact that those of us who subscribe to it and who have the payments taken out of our bank accounts receive a discount. Is it necessary for there to be a discount, because TravelSmart is already widely accepted? I understand the validation for it, because you are holding people's money, but at the present interest rates you are not getting much out of it. I wonder what the addition would be if you did not offer the discount, because it is already there in terms of (a) not having to worry about topping it up and (b) not having to have cash at the point of payment et cetera.

Mr Ashton-Graham—I would like to clarify. The TravelSmart program is a personal travel planning advice program for households.

Senator BACK—Yes.

Mr Ashton-Graham—The smartcard is part of a ticketing system—

Senator BACK—One links to the other, doesn't it?

Mr Ashton-Graham—Yes, they certainly work together. In terms of the ticketing system, the transition across from a cardboard based reader system, which was old and was failing, to the SmartRider system was done in a way that offered similar benefits. Regular users were receiving a discount under the cardboard system, and under the electronic system effectively it is the same discount available to people who choose to sign up to have it loaded from their bank account. So it was trying to keep the product positioned in a similar way in the marketplace, despite the change of the technology.

Senator BACK—Has there been a different process, and how successful has it been, with the retired and aged community versus those still in the workplace?

Mr Ashton-Graham—Yes. Certainly something we have noticed from dealing directly with households is that we find a large proportion of households in Perth do not have regular public transport users in them. When we arrange to go and meet or to talk over the telephone to those households to assist them to take their first bus or train journey for perhaps many years, being able to access ticketing which is already integrated into a student card or into a seniors card is something that certainly overcomes the barrier, which is, 'Where do I get started? How do I make that first trip without getting myself to a place to buy my first ticket?' So that is certainly working very well.

Senator BACK—Can we get a copy of your figure 1 in colour—electronically?

Mr Ashton-Graham—Yes, of course.

Senator MILNE—I am interested in how you train the people to do the personalised contact, because that seems to me to be the absolute key to why you have been so successful here. Now that it is being expanded to include energy and waste, clearly you are going to have to have a training package for a group of people. There seems to me to be a huge jobs potential here. People from retail and people-service industries who may be losing their jobs in the global financial crisis could be trained and go out there and have a significant impact in reducing greenhouse gas emissions and improving people's health, improving transport and so on. Can you tell me how many people are employed, or how did you address the personnel side of this, and how critical is it that the contact is personal?

Mr Ashton-Graham—In terms of the scale of the programs, we have been rolling out TravelSmart—and now including the Living Smart element—for 12 years. So in a typical year we are only dealing with between 10,000 and 20,000 households. So they are fairly small projects being run and focused in local areas. In terms of the personnel to do that, we have generally put that to tender. So we have put it out to contractors, and we specify the number of contractors and the number of services to help the households through these improvements and behaviour changes.

The first level is to have a telephone team who can contact people easily and conveniently in their home, and to organise that in such a way that they are contacted at a time to suit them and they build up a relationship with the same telephone operator over a number of months. The team we have for operating that 10,000 to 20,000 households is, at the peak of a project, about 15 staff. They operate through evenings and weekends, so it is a shift system. In relation to training them, the approach for us is to find people who do not have a telesales or marketing surveying background, so we select people from the local community. Our preferred contractors for this work select people through local employment agencies, so they have generally got a good feel for the local area, they have got local language skills and they know exactly what is what. So in that way conversations become rich and real about real places that you are trying to get to and real roads you are trying to cross.

Another element that makes this program clever and cost effective is that a large number of households can respond on the phone, and with some written information, and make substantial changes. A smaller number get stuck and they indicate that on the phone. So we have a system where the private bus operators make bus-driving staff available by rostering them on, not to drive buses but to go to the homes of people who have major hurdles to overcome. Particularly that might be elderly people who, say, have that fear of getting out and making their first trip. So there we use the specialist. The bus driver (a) gets a change of scene and (b) gets to talk to a customer in an atmosphere which is non-threatening and where he or she is the expert on the system. So it is very good for the HR performance of the bus drivers and for the bus company.

The last area that we have recently been trying to develop an industry in—and there are overlaps with Commonwealth government programs—is providing home assessments of energy and water in homes, and we have got four different contractors for that. We have run training programs with those people over a few days to go through the issues of communications, as well

as the issues of how houses operate. There are now courses emerging, which have been developed by Sustainability Victoria and are now available nationally. We are referring people onto those courses, which are happening every couple of months in Perth.

Senator MILNE—So this is incredibly cost effective. You have got 15 to 20 people for 15,000 to 20,000 households.

Mr Ashton-Graham—Yes. It is done through very complex logistics of having a strict roster for when we contact households and spreading it over a number of months. But, yes, it is very cost effective.

Senator MILNE—That is brilliant. Thank you.

CHAIR—One of the witnesses in Canberra, the international united planners—I forget the group—did a survey in Melbourne and they got a group of figures and they wanted to check that those figures were correct because they did not quite think that it added up. So they redid it again no less than about two or three weeks ago. There were eight reasons why people shifted from dependence on a motor vehicle to public transport and yet the environment or the carbon footprint was not even one of them. It did not even rate in the first eight. Firstly, does that surprise you?

Mr Ashton-Graham—No, it does not surprise me. We found from sitting down with people who have kept a travel diary and then discussing it with them—'Why did you make this trip? What were the other options for you to make this trip?'—that you very rapidly uncover that people have no awareness of where the bus stop is, how much the ticket is and whether the service is or is not time competitive. They also have very little grasp of the costs that are hidden in running a car—you only put the petrol in on occasions. What we have found is that primarily it is knowledge and the opportunity or motivation to experience the system, and then work through the mode shift yourself. It is less driven by external values, it is more by a prompt, and we provide that prompt.

CHAIR—Sure. With the interaction you have had with 460,000 Western Australian residents I will ask you this: apart from what you are saying about selling the public transport service to residents, you could have the safest, most reliable, most efficient, most integrated public transport system in the world, but how do you get commuters out of cars and into public transport?

Mr Ashton-Graham—Yes, you are right. Reliable, high frequency and safe are precursors. When we add our information—adding pocket sized timetables, personal journey plans, a conversation and motivation with those households, in the way that health departments try and deal with issues around smoking and drinking and so on—that is an incredibly powerful combination: as I highlighted earlier, adding about 18 per cent to public transport patronage.

There is potential to be more successful, I think, by running the program much more wide scale so that it becomes a community conversation above and beyond our individual conversations with households. There is obviously a clear advantage to running that at the same time as large scale increases in public transport infrastructure and services, which would allow

people to respond to both what they are seeing in terms of physical infrastructure and what they are hearing from us as advisers.

CHAIR—The answers we get to that question around the country are interesting.

Senator FARRELL—You seem to be very successful in getting people to do more walking trips. You have 15 million more walking trips. How do you convince people to walk instead of using their car? What is it? I understand about the public transport where the bus drops you at the train station. But how do you actually get people to do more walking?

Mr Ashton-Graham—The shift to walking is interesting. We took a communications product that had been used in Germany about 20 years ago and we added walking and cycling to it because, as a transport planning agency, we have responsibility across all those options. The surprise discovery was that in a very highly car-dependent city—about 80 per cent of trips are in the car, either as driver or passenger, in Perth—for most people the experience of their city is one which relates to the main roads and the distributor roads. When we produced local mapping products that showed people where the delis are, where the pocket parks are and where the little cut-throughs are which are accessible on foot, this became a discovery of place for people.

That discovery of place led not just to car trips changing to walking trips but to new walking trips, perhaps for recreation, and also to car trips to a large shopping centre destination being replaced by a walking trip around to the local deli. So it is a change of the actual consumer behaviour as well as the method of getting there. The key tool for that was local mapping and communicating that effectively to people rather than high-level information on perhaps how you can assist your health by driving once less per week. So it is a much more place based achievement.

Senator FARRELL—People do not ring up your service and say, 'I want to get to my local deli. How do I get there?' You provide them with a map and that then enables them to find it themselves?

Mr Ashton-Graham—Currently we have structured the service, for budget and cost-effectiveness reasons, such that we roll it out across Perth at a number of suburbs at a time. It is perfectly possible to do all of that mapping, planning and service provision—have that warehoused away—and to offer the service in a demand responsive way, as you are suggesting. The public transport information line certainly has that and provides an incredibly good service in Perth across all of the public transport modes. To be able to offer the service from a journey planning point of view is possible. We have not had the capacity to reliably be able to offer that service yet.

Senator LUDLAM—I am interested to go back to your earlier comments about Commonwealth government support for your program, which is obviously really valuable. Our interest is in how the Commonwealth can support the expansion of this sort of work. You said there was some policy support and a small amount of Commonwealth funding—$9 million worth of funding that was closing. Can you just give us a bit of a sketch as to what has been there, what is disappearing and what reasons you have been given for why that is being withdrawn?

Mr Ashton-Graham—The policy coordination was offered by the environment agency—the Australian Greenhouse Office and now through to the Department of the Environment, Water, Heritage and the Arts. That involved having a small amount of program funding that allowed the development of the schools, workplace and local government programs in each of the states. DEWHA also provided a coordinating role for the large scale investment through the Greenhouse Gas Abatement Program, where TravelSmart programs were accepted alongside emission reduction programs that were technology based at cogenerational power stations and those sorts of approaches.

The role that the environment agency, through DEWHA, took was also to conduct research into this new area. Although Western Australia has been doing this for 12 years, every day we run a new program in a new area with new challenges—testing a different urban density or a different public transport service quality. We are learning things, so the role across there at the Commonwealth level was to capture those learnings and, if we had questions, to commission the research that might help all of the states more efficiently spread the information and development around.

The withdrawal of that role has been flagged but not yet implemented. We gather from information that has been provided to working groups that the issue is one that the department had. It now has more challenges and priorities, particularly around the Carbon Pollution Reduction Scheme and managing some of the programs which are seeking to assist households to adopt technologies such as PVs and perhaps roof installation and those sorts of things, so it has become a capacity issue for that department.

The opportunity is that this is clearly a very effective complementary measure, in that it does get shifts away from the car in a way that smaller pricing shifts—the sorts of changes we have seen in petrol prices and that we might see coming through the CPRS itself after the transition period—do not achieve. There is an opportunity there to actually identify this measure as something which will effectively increase the price elasticity of petrol and allow that pricing mechanism to work where currently it is not likely to work that strongly.

Senator LUDLAM—Because people do not know what their options are unless they have gone through your information.

Mr Ashton-Graham—Yes. If you artificially put up the price of petrol and people do not understand the options, then they are captive to that and it imposes income difficulties on them. If you provide them with the information alongside that, which is very cost effective to do, they are then able to respond and you get the policy outcome you wanted.

Senator LUDLAM—It is a bit alarming that that support is being withdrawn. Do TravelSmart or equivalent projects operate in every capital city in Australia?

Mr Ashton-Graham—Not every capital city. Through the greenhouse program, GGAP, there were programs in the ACT, Queensland, Victoria, South Australia and WA only. In terms of ongoing funding, only Queensland and Western Australia have picked it up to directly fund it at some level.

Senator LUDLAM—The Commonwealth directly funds those two, or do the states fund them?

Mr Ashton-Graham—The Commonwealth funded across all of those that I mentioned and, now that the Greenhouse Gas Abatement Program is closed, Queensland and WA have carried on with a substantial program for the larger scale programs. The other states at this stage have not.

Senator LUDLAM—I would have thought we would be radically ramping it up rather than closing it down, based on the evidence that you have given us.

Senator MILNE—Could I clarify something you just said. I am a bit confused here. Are we talking two issues or one when you talked about DEWHA flagging that they may not have ongoing support and the withdrawal of funding by the Greenhouse Office? Are we talking two separate programs, so it is actually a double-whammy in terms of withdrawal of services?

Mr Ashton-Graham—Yes, they are two separate programs. One was always going to be a limited life program for achieving some large scale carbon pollution reduction, so we knew that program had a fixed life, as did all the industry partners that are involved. The policy coordination role we had assumed was successful and ongoing, so the two are separate.

Senator MILNE—So it is the latter one now that will be withdrawn?

Mr Ashton-Graham—Yes, so the Greenhouse Gas Abatement Program closed naturally and the policy coordination is being withdrawn.

Senator MILNE—How much support was provided for that in dollar terms—do you know?—or in personnel terms? They are saying it is a lack of capacity, so what are we talking about in terms of the capacity that was there to support it?

Mr Ashton-Graham—I am not fully clear on the structure of the unit staff within DEWHA or what the multiple roles of those personnel were, but we were dealing with a small group of three or four personnel. In terms of the funding for each of the states, there was a couple of hundred thousand dollars a year of funding to help get into schools and workplaces, times each of the jurisdictions that are involved.

Senator MILNE—Thank you for that.

Senator LUDLAM—Yes, that is helpful and somewhat alarming. Thank you. In your submission you have said that you have research that indicates about half of all car trips could be replaced by public transport or a mix of options. To quote you, there is:

… a realistic alternative for up to half of all car trips.

Can you tell us what you mean by 'realistic' and how your research bears that out?

Mr Ashton-Graham—Yes. That was from asking people to fill in travel diaries and then sitting down with them face to face to explore what their options were. To be clear, this is not what we do as part of delivery of the program. That is far too expensive. This is just the research

that feeds the design of the program. In terms of the test for 'realistic', we have broadly said that first of all a person should be comfortable in themselves that they can physically walk or cycle the distance required. If they are unsure of that, we would default down to just a one-kilometre walk and a three-kilometre bicycle ride, so about 15 minutes of light exercise.

On the public transport side, we would consider the trip. First of all, the trip must be reasonably time competitive, so no more than 50 per cent or 20 minutes longer than the current car trip, and the whole of the trip chain for the day must be solved with public transport, cycling or walking, so you cannot find yourself abandoned at night and unable to connect back home.

The interesting thing—and it alarms some people—is the assumption that it is okay, it is realistic and acceptable, for people to spend perhaps 50 per cent longer travelling by public transport. That comes from Perth where we have got a highly competitive road system. The car is almost always the quickest way of getting from A to B.

CHAIR—Not during peak-hour times.

Mr Ashton-Graham—It is a different thing on public transport priority, yes. But what we observed, from the first program experiments that we ran back in the late nineties, was that people were willingly able to shift to longer trips, whether that be walking, cycling or public transport, and to leave the car behind. The very interesting observation out of that, when you think of it from a transport modelling perspective, is that the value of time from widening a road to increase the throughput—to save each driver in that morning two or three minutes—is a very large part of the justification for the road. Yet observationally, by talking to communities, we get them to make the reverse decision—to not value their time; to value their experience and other things that they will get out of choosing the alternative mode.

Senator LUDLAM—You can read on a bus. There is a different quality of time taking public transport. You have to deal with the urban form and the structure of neighbourhoods that you find, and you are mapping that and presenting that information to people. Are you involved at any level in helping plan new communities in new subdivisions and so on, so that your job is easier once people have moved in?

Mr Ashton-Graham—That is the area where David is involved.

Mr Igglesden—That is our role and we have, as I said before, the whole suite of planning policies to make sure that the local environment is conducive to walking, cycling and public transport. That is an area that we do not think about because it is solved, or pretty well solved, or not a major issue for us.

Senator LUDLAM—As in we are planning neighbourhoods now that are perfectly conducive to walking, cycling and public transport? You are not doing too much more thinking about that?

Mr Igglesden—I would not say 'perfect'. We can always do better. But it is world's best practice, we believe.

Senator LUDLAM—Because there was some mapping produced just this last week, actually, that showed black holes in this urban fabric that have no access to public transport at all. This

question is to either of you: what do you do when you are confronted with places where your map shows that people just have to stay in their cars because there is no alternative?

Mr Ashton-Graham—We have, certainly in rolling the program out to 460,000 people, deliberately tried to run the program in areas that have major transport disadvantage, major car dependence, and also areas of different income levels. It has been effective in reducing that car dependence in all the areas. The strongest projects are reducing vehicle kilometres by around 18 per cent. In the toughest areas, the most difficult projects, the reduction is down at around five per cent, but still a significant reduction. So the urban form and those transport opportunities certainly have an effect. As I said, the program average is about 13 per cent reduction.

In terms of how to handle that, we offer people information about using the car in more efficient and appropriate ways when planning their day. We have had areas where the alternatives have been weaker and the primary response has been to get an increase in car passenger trips—so people are able to combine families' tasks better in order to reduce the kilometres and the cost.

Senator HEFFERNAN—Is that reflected in the capital cost? To give you an analogy, if you buy country over in New South Wales that is worth $30 an acre, it might run a sheep per 10 acres. If you buy it and it is worth $1,000 an acre, it might run 10 to the acre. In the valuation of a subdivision where there is no public service—the black spots, as the senator has pointed out—is that reflected in the land cost, because obviously there is a certain amount of public good and taxes in a subdivision? Developers are probably not wanting to pay a cent more than they need to and get as much profit as they can. In an area that is well serviced by public transport, is it generally dearer to buy a house there than in a place that is not well serviced by public transport?

Mr Igglesden—On the perimeter of the city, probably not. I do not think it is a big factor in people's housing choices, and that is unfortunate probably. Our biggest issue with the perimeter of the city is paying for bus services, because generally we plan them through there, but we cannot afford to put them in until several years later and by then everyone has bought the second car and established their practice.

Senator HEFFERNAN—So this is a cart before the horse exercise.

Mr Igglesden—We really want to be able to put the bus services in when the first resident moves into a new area, but the recurrent funding for buses is a major issue and that relates to new areas and our old areas.

Senator HEFFERNAN—To the best of your knowledge, if I am the white shoe brigade man and I go out and buy a broadacre subdivision intentionally, and I go through the local planning processes or local government or whatever you have here, do I expect, if it is an area where there are no public transport services, to pay extra taxes so that the government can provide them and relate that to the cost of the subdivision?

Mr Igglesden—No.

Senator HEFFERNAN—Isn't that a bit silly?

Mr Igglesden—Where subdivisions are extending a long way from existing areas, we are trying to pin funding public transport to the first five years or something like that on it, but we are not very successful in achieving that.

Senator HEFFERNAN—Isn't this an endless bit of road? If you do not put an incentive in the development planning and cost for public transport by way of a levy or whatever, isn't that poor planning?

Mr Igglesden—I cannot argue with that.

CHAIR—This is coming from someone from New South Wales.

Senator MILNE—Yes. Hear, hear!

Senator LUDLAM—We have heard a fair bit, from the Commonwealth anyway, that the priority really has shifted to CPRS and you have indirectly given us evidence that that is impacting on funding resources for your work. Do you have any evidence that the phase-in period, which will probably favour private cars over public transport for a period of a couple of years, will have any measurable impact on the work that you are doing?

Mr Ashton-Graham—As I said, motivators like environment, health and money are secondary to people trying alternatives and finding other reasons to enjoy the modal change. So at small price changes, as I indicated before, price is not a huge issue. I am expecting our work to be made neither easier nor harder by the CPRS price impacts as currently flagged.

Senator LUDLAM—Can we dig a little bit deeper into that, because the officer from the department told us last week that that price signal is their key strategy for the transport sector for the CPRS. It gives private vehicles a holiday, but eventually it kicks in and makes petrol more expensive. That is the key strategy. Are you saying that that is perhaps a little unwise?

Mr Ashton-Graham—The complexity of price elasticity of petrol fuel is that it has not been explored at very high oil prices. At smaller changes in petrol prices, the response of drivers is relatively inelastic—that is, the price goes up and there is almost no change in the driving behaviour. So a CPRS on top of a very high oil price will take us into uncharted territory where we may get that behavioural response that we are looking for. Without the benefit of a very high oil price, it is unlikely to make a significant difference.

Senator LUDLAM—The high oil price is likely to do that for us anyway.

Senator HEFFERNAN—But isn't that completely unplanned, if you have not actually planned a reward or a deficit, if you are planning a subdivision with no public transport? The developer will pick up the profit rather than the public getting the benefit. Surely to God, if you are going to build suburbs way out in the Woop Woop somewhere, with no public transport—nothing but a nice little profit from the subdivision to the developer—then there ought to be a public-good cost to the development so that in time there is a railway line or a bus. Why give the carpetbaggers a profit? It is not a public-good benefit.

Mr Igglesden—Can I respond? We are negotiating with some of the major landowners. When you look at the north-west corridor and someone owns 500 hectares, that is a circumstance where we do get potential payment for railway extensions and things. But we have a very clear regional scheme planning process that identifies the areas where urban development can go—long-term areas—so that we try to make sure that it is an even—

Senator HEFFERNAN—Do you have a carrying capacity for the consolidated metropolitan area of Perth? What is the carrying capacity with regard to water et cetera? When do you build the city somewhere else?

Mr Igglesden—I do not know the answer to that. We just manage things better, I think.

CHAIR—Senator Ludlam, do you have any other questions before the break?

Senator LUDLAM—I am a bit dismayed about your submission and the evidence that you have given us. This is incredibly valuable work. It is being defunded and it is not getting proper support from the Commonwealth. What can this committee do to have your voice heard a little bit louder in funding decisions?

Mr Ashton-Graham—Following through on the central theme of this inquiry as to what we can do to get better value out of public transport investments: it is to understand the point that, if we do get investment in public transport, we add significant value to it by adding—at very small cost—to the behavioural communication component. So seeking to add that one per cent of project cost to get that extra 40 per cent of outcome would be a very sensible path to go down, no matter where the funding for those services investments is coming from.

In terms of running the program operationally, we need to continue to find a coordinated way of investing in the research that is required to make this program better. As I flagged before, 50 per cent of car driver trips in Perth could be made using alternatives. We are currently knocking off only 10 per cent of them. The other 40 per cent really excite me in terms of: we are just learning, so where can we go with it? We could get a great deal of assistance in staying the world leader in this area.

Senator LUDLAM—I really appreciate your time this morning. Thanks.

CHAIR—Mr Ashton-Graham and Mr Igglesden, the committee thanks you for your assistance. We shall now take a short break.

Senator HEFFERNAN—Can I just raise something?

CHAIR—Yes.

Senator HEFFERNAN—By way of cooperation from the committee and the changing circumstances in Sydney, I would like to raise the prospect of this committee not inquiring into the criminal and crime aspects of what went on at Sydney airport but the airport safety aspects of what went on.

CHAIR—So you are requesting a private meeting, which we shall have in the break.

Senator HEFFERNAN—Thanks very much.

CHAIR—Thank you very much.

Proceedings suspended from 10.33 am to 10.48 am

BARTLETT, Mr Peter Richard, Convener, Bicycle Transportation Alliance

BENZ, Mr Heinrich, Spokesperson, Bicycle Transportation Alliance

CHAIR—I welcome the representatives from the Bicycle Transportation Alliance. We have not received a submission, so we will ask you to make a brief opening statement before we go to questions.

Mr Benz—Thanks very much for having the inquiry and looking at the view of cyclists. We do have a role to play. As cyclists, we see the role of our association is to reduce car trips, shift car trips onto cycles, and in that way it is similar to public transport, which has as its main function the reduction of car trips. Eighty-two per cent of trips in Perth are done by car and the medium distance is only five kilometres, so those trips could well be shifted onto another mode of transport, and that would also reduce greenhouse gas emissions. We think that cycling should be part of the multimodal transport picture.

What is desired is seamless integration of walking and cycling. So, to use the words of another report, the integration should be irresistible so people actually want to walk and cycle to a station and then use a train rather than using a car. There are basically two areas of contention: there is the station environment and then actually having bicycles on the train. We feel that in the short distances—the three to five kilometres to the station—cycling and walking should have a priority, particularly cycling, by having safe environments to get to the station—that is, lower speed cycling corridors; treating the station as a public area rather than as a parking area; and move car parking further away so that car drivers have the opportunity for that little piece of exercise that they should have twice a day.

Cycling is probably the most efficient in the reduction of greenhouse gas emissions. There is probably nothing else that is more efficient than cycling to reduce greenhouse gases. There are direct examples of that: for instance, there is a city in Switzerland that has 35,000 inhabitants. They renovated their old train station and provided 1,000 parking spots for bicycles out of a city of 35,000 people. Not surprisingly in that city, only 28 per cent of people used a car to go to work.

Infrastructure is really important. When we look at public transport and the money spent on public transport, on the roads, the money that would be spent on bicycle infrastructure would be very beneficial. There is a small amount of building costs and basically no maintenance compared to public transport, which subsidises every kilometre by about 75c. We have a lot of subsidies put into public transport and basically nothing happening in the cycling picture, which does not require any money once it is established.

In Perth, even though we have heard a lot about very good integration of walking, cycling and public transport, the reality is that you cannot even get your bicycle onto some train stations without using two lifts—for instance, at Bassendean. So it is not very easy to get onto the train station with a bicycle. Also, there is a curfew on the use of bicycles on public transport in Western Australia. You cannot use public transport at the time you want to use it. If you want to

go to work with a bicycle and you have got two or three kilometres at each end to cover by bicycle, you cannot take your bicycle on the train between seven and nine.

Mr Bartlett—Unless you have got a folding bike.

Mr Benz—Yes. It is the same in the afternoon. If you were cycling today, where the weather forecast was good, and you cycle into town and it starts bucketing with rain, you are stuck in town. You have to go to the pub for two hours and get drunk until you can go home on the train. That is not in the interests of public safety.

I think there can be real improvements in the integration of cycling and walking and public transport, and that is where the real synergy will come from. We think that perhaps five per cent of the federal transport funding should go into cycling infrastructure, because it is cheap to build, it is effective, and there are no ongoing costs. That is basically where we are.

CHAIR—Thank you, Mr Benz. Mr Bartlett, do you wish to add to that?

Mr Bartlett—One of the side benefits of the generally progressive improvements in cycling infrastructure—which have got a way to go—has been to pedestrians. Some of the paths that have been constructed for cycle use have seen a large rise in pedestrian use, so there has been concurrent usage. Cyclists are not always too pleased by that, but it is a positive aspect. There is no doubt that, as Heinrich said, one of the major issues in getting people to use public transport is convenience. In terms of pedestrian and cyclist usage, the convenience is tipped in the wrong direction. For example, the state government is planning to build a greater number of car parking areas along the southern railway line—I think it is 3,000. They are not actually going to go very far and, given that we already know that the average car trip to the station is something under two kilometres, if you invested that sort of money in improved pedestrian and cycling facilities, that would have not only a greener benefit but also a health benefit. Most people would see it as quite feasible to walk to the station and catch the train.

CHAIR—Thank you, gentlemen. Talking about cycling corridors, there was a survey done that said most of the car trips to the railway station were within three or five kilometres; the figures were given to us the other day. I note your suggestion, Mr Benz, about moving the car parking further out so that motorists can get some exercise by walking to the train station. It will always create some conversation. We understand there would be ACROD parking for those that need it. We have been told that there are myriad reasons why a lot of people drive—safety for children; those who have young families or babies. To get the integrated process going, there have been some lively conversations around the country, and I must admit that cycling is one form of reducing the dependency on the motor vehicle, but there is a long way to go to get it integrated into public transport. Are you aware of the King George centre in Brisbane? It is a bike centre where I think there is room for about 200 or 300, 400 pushbikes. They can park their bike there; there are lockers and showers; hair dryers. They can get rid of helmet hair and stuff like that. Are you aware of that centre?

Mr Benz—No.

CHAIR—You are not aware?

Mr Benz—No, but it sounds like the standard in Singapore and other places as well. There are quite a lot of places that have these centres; some of them are really high quality. The Singapore one is like a hotel facility, with dry-cleaning and food facilities and everything. That would be great to have, but it would be enough to be able to take the bicycle on the train easily, and have perhaps the front door or a couple of extra doors and standing room only there, and that would be the only place where bicycles could be taken on trains. Being able to get onto the station area without lifts would be great.

CHAIR—You are so right. I am sure Senator Back will ask some questions on that. We have been talking about this in the last three days of hearings in Brisbane, Sydney and Canberra: it is a good initiative, but you have got to have the room on the train for the bikes so that people can use the trains in peak hour. We are aware that here in WA there is no incentive to ride your bike if you want to be at work between seven o'clock and nine o'clock in the morning. We quizzed the bus confederation, I think it was, about that. Clearly, the reason is that there is not enough money in a pushbike when they can squeeze in a couple of extra seats. So we are mindful of that.

Senator BACK—I do appreciate this opportunity. I would like to ask a number of questions, as I did in Canberra the other day. First of all, do you think that the compulsory use of helmets is a limiting factor in people not riding bicycles, adults particularly? Secondly, what is your view of so-called pedestrian and cycle paths? My own view is that it is more dangerous for pedestrians and more inconvenient for cyclists to have them both on the same path. We have certainly seen instances, have we not, of severe injuries? The chairman has stolen my thunder with this comment: at the very time that people do want to use cycles to go to work, they cannot.

My other question relates to the circumstance linking into the free use of public transport by older people, starting on 4 April. Would you care to comment on the feasibility of cycle use by the elderly? There is not much point in them trying to get to trains to use them after 9 am, because there are no car parks after 7 am. How practical do you think it is for people in their 80s to be using bicycles? Helmets first.

Mr Benz—I will talk about helmets. I think it is a very good idea for cyclists to wear helmets. I have some doubts about whether it should be compulsory, but that is a personal opinion. There are undoubtedly some people who are discouraged from riding a bike because of the necessity to wear a helmet. Certainly when helmets were first made compulsory, there was a huge drop in cycle participation.

Senator BACK—There was.

Mr Bartlett—It has probably crept back a bit now, and it is more widely accepted. I was talking to someone the other day who runs one of the hire bike set-ups who said that people from overseas just accept that as, in this case, an Australian eccentricity. My personal observation is that there are a substantial number of people who do not bother to wear helmets; that carry them on their handlebars and things, and it tends to be the more press-on cyclists who do wear them. I would always recommend to cyclists to wear helmets, but compulsion may be just another statute that is almost unenforceable in some instances.

Mr Benz—First of all, what we see is that most countries that have really high cycling participation have no helmet laws. If helmets are such a great protection, people in those countries must be dying in droves, but they are not.

Senator BACK—But they are not.

Mr Benz—I think that high cycling participation is more important for the safety of cyclists than helmets.

Senator BACK—This was a point I tried to make very strongly to the then Minister for Police when they were compulsorily introduced some years ago. I was running Rottnest Island, with a very high use of bicycles. The point we were trying to make was that the gain from compulsory helmets was going to be more than offset by the loss of fitness by people who would not wear them.

Mr Bartlett—That is right.

Senator BACK—So I support your point.

Mr Benz—In Switzerland with electric bikes, if they go above 25 kilometres an hour, they are treated like a moped and they have to wear a helmet. Below 25 kilometres an hour, they do not. We do not want to measure the speed of every cyclist, but some people just crawl along on their bicycles. I know at least one such person.

Senator BACK—Senator Fisher wants to make an observation. Then I do want to come back, if I may, to this question of cycle versus pedestrian access.

Senator FISHER—In terms of helmets, are you familiar with the experience of countries like the Netherlands, but in particular The Hague, where lots of people ride bikes and helmets are not compulsory. You said, Mr Benz, that you do not think cyclists are dying in droves. Are you familiar with those sorts of experiences? Can you draw on those to illustrate the wisdom or otherwise of compulsoriness of helmets?

Mr Bartlett—We have raised that point, but it is what you might call an issue that is not even open for discussion for us. That is just not under consideration. We would not consider revoking the compulsory basis for helmets. But what you said is quite correct.

Senator FISHER—When you say ‘not under consideration’, is it seen as politically incorrect to even ask the question?

Mr Bartlett—I do not know about that, but it is: how much effort do you put in when there are plenty of other things to be done?

Mr Benz—We think it is a waste of time to rail against the helmet laws. It is much more important to get a safe environment on the roads and to get more public shared paths. Perhaps we can go into that question of public shared paths. We could spend all our time arguing against helmets, because there are a lot of good arguments against them, but it is just a waste of time, so we are not doing it.

Senator BACK—Shared use?

Mr Benz—I do not wear a helmet when I cycle.

Senator FISHER—That should be struck from *Hansard*!

Mr Benz—It is interesting that we have this concept of public shared paths, which seems to work as a concept when there is a low volume of pedestrians and a low volume of cyclists. As soon as the volume increases, there is a potential for conflict and accidents. To me, it would seem logical that, if you have a road that gets really clogged, you build an extra lane. When the Narrows got really clogged, they put the second bridge up.

Senator BACK—It is just as clogged.

Mr Benz—It is just as clogged, of course, because the traffic will always fill up the available space, except for cycling because there is a limit to how many people you have in a city, so they cannot actually fill up the space. You would expect that from, say, the Mount Henry Bridge to the Narrows, there would be a bicycle path and a pedestrian path. That would be logical, but that money does not get spent. They would rather have extra lanes on the Kwinana Freeway.

Senator HEFFERNAN—Could I raise something by way of safety? I have a mate who is now a quadriplegic who was out for a bike ride and got run over. The driver swore that he never saw him, because he was driving in a straight line and was focused straight ahead. Apparently sometimes a driver's eye focus does not pick up something that is going along. Are you aware of that sort of thing? The other question I have been busting to ask all morning is: are you any relation to Mercedes?

Mr Benz—I probably am, but it is probably too far back to give me financial benefits. In relation to your first question about cyclists striking pedestrians, on a public shared path people go quickly. The problem we have in Perth is that the public shared paths are used for both commuter cycling and recreational cycling and also for people to train in groups. It is quite unsuitable for all these uses. We have one area of the West Coast Highway which has a lot of conflict between cyclists and pedestrians—Hillarys Beach, Watermans Beach. That road could be made one lane for cyclists and a big space for pedestrians. It would be easy—a stroke of the pen.

Mr Bartlett—I do not think there is a particular answer. It depends on capacity. Some areas fill up quite quickly and, as Heinrich said, some cyclists move too fast and are inconsiderate. Other areas—for example, along Curtin Avenue where the road is wide enough and there is an extra lane painted along the side—have really excellent set-ups for a bike rider who is moving at speed, or bike riding generally, because they are treated as part of the traffic. There is never a problem with pedestrians moving in that area and there is enough space for cars to go around. In my personal view, that is one of the most successful issues. But there are areas that have some particularly bad sections of road where you need a bypass facility.

Up around West Perth where our offices are, there is a track that comes down from past the City West station, and some cyclists travel far too fast down there at certain times of the day. We

run a campaign to slow them down and be more aware. It is in nobody's interest to disadvantage another part of a section—

CHAIR—It is heartening to hear that, Mr Bartlett, because I was on the Bibbulmun Track yesterday and a mad, lycra-clad cyclist came from nowhere on a mountain bike—a lunatic. I had schoolkids on the track.

Mr Benz—Can I add something to that?

CHAIR—Yes.

Mr Benz—Yes, there are lunatic cyclists and lunatic car drivers, but lunatic car drivers kill people. Lunatic cyclists are just annoying.

CHAIR—Mr Benz, if this lycra-clad lunatic had hit one of those kids yesterday, he would have done some damage. He was flying downhill, but we do not have to get into that. I am actually on your side, I think.

Senator LUDLAM—What is the state of the Perth bike network? We have a network here, but it is a bit patchy. How are we doing?

Mr Bartlett—It is like the curate's egg: it is good in parts. The new bits are really quite good in places. There are one or two design shortcomings. Some of the earlier bits really need rebuilding. The classic area is around Hutton Street, which really needs a lot of money because there is this huge conflict between large numbers of cyclists and inadequate ability to cross very busy traffic roads.

Senator LUDLAM—Is there a kind of master plan to put cycling in for the whole metro area?

Mr Bartlett—I think there is a master plan but it is not a particularly master maintenance plan, you might say. Things tend to get built as and when roads are constructed, particularly main roads. They will put the cycle path along the road. But in terms of going back and revisiting what has previously been built and bringing that up to scratch, that is a fairly large gap.

Senator LUDLAM—Who is responsible for that? Is that a DPI issue?

Mr Bartlett—It is one of life's complex things. It is a mixture of DPI, Main Roads and, in some instances, local councils.

Senator LUDLAM—To my mind, the inner ring suburbs are pretty good but the CBD is really hostile to cyclists, unless you are a bike courier and are willing to take your life in your hands. Is that borne out by your experience?

Mr Bartlett—Yes.

Senator LUDLAM—That is also another difficulty. If we are asking people to commute to the city on their bicycles, when they get to the CBD, it is quite hostile.

Mr Bartlett—Compared to other cities like Adelaide and Melbourne, yes.

Senator LUDLAM—Is there a cost estimate floating around for what it would take to complete, inasmuch as that is possible? What would it take to complete the Perth bike network—bring all the suburbs that are already built out up to scratch?

Mr Benz—There is a public share path review that DPI has been undertaking for the last two years. It has not been published yet. Perth still runs on the 1990 master plan for cycling, because the review has not been done. It has been in the making for two years and we cannot actually get to see it. Apparently on the political level, you can get to see it, so you might be able to get that.

Senator LUDLAM—We had those officers sitting right where you are this morning and I did not think to ask them. So 1990 was the last time that was done properly?

Mr Benz—Yes.

Senator LUDLAM—There is a two-year review in play at the moment—

Mr Benz—Yes.

Senator LUDLAM—but no-one has seen the outcome. Has your organisation been consulted?

Mr Benz—Two years ago, yes, we actually were asked for input and we did provide input through our organisation. That is basically where it was left.

Senator LUDLAM—That is a little disappointing. Can you tell us a bit about the trend in cycling in Perth? Is it up, down or sideways?

Mr Benz—Up.

Mr Bartlett—Definitely up. It is going up all the time.

Senator LUDLAM—Any idea—

Mr Bartlett—What is really quite nice to see is an increasing number of people wearing non-cycling clothes, because that is where our interest is—in encouraging people to take short trips. There is a lady who rides down here in the morning wearing high heels, which I think is a great step forward, because that is the sort of cyclist we are keen to encourage—'Oh, I can ride half a kilometre'—so they do not see it as a unique and separate activity.

Mr Benz—In relation to volumes, I think at the moment there are 9,000 people every day coming into the CBD on bicycles. 9,000 trips is quite a lot. That is up from 5,000 about three years ago, so there are a lot more people coming into the CBD. These people do not use the parking spots. They are not in front of you on the Narrows Bridge. If you could subsidise them

to the same extent as public transport—you probably would give them $2 or $3 a day each to just ride into the city—you would get even more people riding in. A free cup of coffee for everybody who rides into the city every day.

Senator LUDLAM—As long as it is good coffee.

Mr Benz—At the art gallery on Wednesday morning, we give free cups of coffee to cyclists.

Senator LUDLAM—That is happening now, is it?

Mr Benz—Yes, 6.30 onwards. You can come before the meeting.

Senator LUDLAM—Just going back to the questions about helmets that were raised before, what statistics are there about cyclist road trauma or the accidents that happen to people on bicycles? What proportion of that is related to automobile traffic?

Mr Bartlett—The last figures I looked at for hospital admissions—in age grouping they tended to mirror car accidents—the young males doing the usual testosterone-driven behaviour—and the majority of them did not happen on public roads. They were people hacking round in the bush or riding in private areas and having accidents that way. That is in terms of admission to hospitals, yes. That is as big as, if not bigger than, road trauma.

Senator LUDLAM—I am wondering if you know the degree to which accident statistics from cyclists are related to their coming into conflict with other road users, with cars, or do you think it is more recreational people on those bikes?

Mr Bartlett—I do not think car conflict, in terms of direct accidents, is a major part of bike accidents. Most of the bike accidents that I have had, for example, are principally sliding off.

Mr Benz—There are a fair amount of hospitalisations that are caused by bicycles being struck by cars going in the same direction.

Senator LUDLAM—That is where I was going.

Mr Benz—I think about 80 per cent of hospitalisations are caused by that. It is quite a lot. The Austroads statistics show that. That was quite interesting.

Senator LUDLAM—That was what I was after really—the degree to which, if we got the bike network right and got cyclists out of conflict with traffic, we would reduce that.

Mr Benz—You would reduce the amount of hospitalisation. There are only three cycle deaths a year, which is actually not very much when you think about it, here in Western Australia. That equates to about a 12 to 1 factor of deaths to hospitalisations, so we are talking about perhaps 50 hospitalisations. It is not huge amount compared to pedestrians. There are 20 pedestrians a year killed in Perth. Separating traffic and slowing traffic down perhaps in the suburbs where you have interaction between cyclists, pedestrians and cars would help. A safe speed would be 30 kilometres an hour. That is a safe speed where these three modes of transport can interact. At 30 kilometres an hour, the chance of cyclists or pedestrians surviving the impact from a car is 85

per cent. At over 50, that goes to a 15 per cent chance of surviving and above 60 it is basically levelled: he is going to get killed. So reducing car speeds in the suburbs would really help us to make cycling safer and reduce injury.

Senator LUDLAM—That is happening now in a number of European cities.

Mr Benz—Yes.

Senator LUDLAM—What is the speed limit going to in suburban areas?

Mr Benz—In Switzerland they do pockets of 30 kilometres an hour. They had a 25 per cent reduction in cycling and pedestrian injuries, and they directly credit that to the reduction of speed in those suburban areas. They do pockets that are between one and two square kilometres and in those pockets it is 30 kilometres an hour. Then you would get to the next higher speed road, so you do not have to drive at 30 all the way, say, from Armadale to Perth. You would be in a suburban pocket and then you would get onto a normal 50-kilometre-an-hour road, so the impact on your travel time would only be a few seconds but there would be a huge impact on pedestrian and cycling injuries.

CHAIR—Senator Ludlam, it is time, so would you like to wrap up with one last question.

Senator LUDLAM—Again coming back to my comments about the CBD, what does the City of Perth have on the table at the moment to improve the accessibility for bicycles?

Mr Benz—To our knowledge, there is nothing happening. They are employing some type of cycling person apparently, so we hear, but they have been quite resilient in—

Senator LUDLAM—Opposition.

Mr Benz—All you have to do is close a few car lanes and then it becomes unattractive to go with a car into the CBD and it becomes attractive to go by foot or by bicycle and you change the whole picture.

Senator LUDLAM—On that note, that is a good way to finish up. Thanks very much for coming into today.

CHAIR—Mr Benz and Mr Bartlett, thank you very much for your assistance to the committee today.

[11.20 am]

NEWMAN, Professor Peter WG, Director, Curtin University Sustainability Policy Institute, Curtin University of Technology

CHAIR—I welcome Professor Newman here today. Do you have any comments to make on the capacity in which you appear?

Prof. Newman—I am professor of sustainability at Curtin University of Technology. I am on the advisory council of Infrastructure Australia. I will not be representing them, but it is hard not to refer to what we are doing there.

CHAIR—That is fine. Thank you very much, Professor Newman. Would you like to make a brief opening statement before we go to questions?

Prof. Newman—I have a few quick points to make. Since my submission I have gathered the data together on the extraordinary rise in public transport usage across Australia. It has had a 5.2 per cent per annum growth rate in recent years; in Melbourne, an 18 per cent growth in two years. These numbers are quite extraordinary in history. We, for the last 20 years, have been trying to keep public transport from going into too rapid a decline, but it has been a remarkable turnaround, apart from Perth where we have had a continuous growth in public transport usage since the early nineties when we started to rebuild the rail system here. So across Australia, most cities are now recognising that they have to double their capacity. It is an absolutely essential part of the way they see their future.

All the submissions to Infrastructure Australia reflected that, and they all were putting urban rail onto the agenda in a way that has never been allowed before. No federal process ever allowed urban rail to be part of that funding process, and it has been a very interesting thing for me to see how urban rail can stand up very well against every other form of transport and, in economic terms, in full, rigorous analysis, can indicate its importance for our cities. That is both with metro—which is the new boy on the block for Sydney and Melbourne—heavy rail expansions and light rail, which is dramatically increasing in American cities and which is part of a number of cities' proposals and I believe should be firmly put on the table for WA and Perth; and buses. So it is the whole interconnection of that system.

The critical next stage is planning for that in a whole network sense. It has taken most of our cities by surprise, the need to expand so quickly. But even in Perth, where we were expanding it, we did not have a 20-year plan together. We now are putting that together and you heard from them. But it was a pity we were not in a position to go to Infrastructure Australia with anything, because there was no plan that was ready. The other part of the planning is how you develop the land use around railways, in particular, to make the most of that infrastructure and how the market actually pushes for that. It needs to be facilitated.

Most local governments quite like that idea, as long as it is not in their local government area. That process of redevelopment around rail stations is something that needs to be built into, I think, the financing of all rail systems so that we can develop PPPs—public private

partnerships—around land development opportunities. That is, I think, the agenda that is being developed across most American cities. We have done it at Chatswood in Sydney and it keeps being raised as a possible way of helping to finance rail in Australia, but it is very rarely done, mostly because we do not have enough support from local government in how to do that. They want the benefits, they do not want what it costs for them. That is purely a political cost of redevelopment around a rail station. Whenever it is done they love it, but it is the process of change.

My submission shows that, if you double the capacity of our rail system, we could very substantially reduce car use. That is beginning to be seen in the data in the US where vehicle miles of travel have been declining now for five years and, in the last year, dropped 4.3 per cent. Our data is not available yet on that, but my indicators are that that is already happening. It is a very different world when you are planning for a future where cars are reducing and public transport is increasing. It does mean that you can take some of the road space. That is essentially what needs to happen, I believe, for light rail, in particular, that can be built in already, very quickly, down areas where road space is available. It is best if you can do it down the middle of roads or in median strips, but every now and then you are going to need some road space. I think we are in a time in history where we can do that—and must do it.

The second thing I want to say is that plug-in electric vehicles and that technological revolution is happening dramatically. The Americans are putting billions of dollars into that. We will have electric vehicles everywhere and they will be linked into renewable energy and will be 100 per cent carbon free. That is suddenly putting public transport in a position where it needs to reclaim its greenness, so I think public transport should be going down this track as well. All buses should be, in the future, plug-in electric and all electric train systems should be based on green power so that they are also carbon free. I think that will be on the agenda for all public transport.

I think regional transport will be based on gas and biofuels rather than electric. That transition can happen quite quickly and easily. Intercity public transport, based on fast rail, will come. Finally, Indigenous communities, I believe, need to be thought about in terms of bush buses. It is not enough to say, 'Toyotas and four-wheel drives will keep them going.' There are many people for whom that is a real issue. Getting into regional towns from Indigenous areas will need regular bush buses. There are a few that have been developed and we need to build on that as an experience for those places. Thanks very much.

Senator O'BRIEN—In terms of lithium ion battery technology, I heard last week—as a matter of fact, on the radio—that there is developing technology for coating of the receptors to increase the rate of charging a hundredfold.

Prof. Newman—Yes.

Senator O'BRIEN—Which would make the plug-in vehicle possible to be recharged at a service station in about five minutes.

Prof. Newman—Five minutes, yes.

Senator O'BRIEN—Which would then, one presumes, severely limit the potential for the hybrid. You would not need two engines if you could recharge so quickly.

Prof. Newman—It is happening quite rapidly, and the real problem with the Green Car Innovation Fund is that it is not green or innovative; it is a way of propping up an industry that is not changing rapidly enough. The American industry were not changing enough either, but they were told, 'You'll get your money, but you must build the plug-ins.' Plug-in electric vehicles are going to take over very dramatically. The internal combustion engine has no longer got the high ground in terms of technological appeal. You can do most things with the lithium ion battery now and it opens up the possibility of a storage mechanism for renewable energy that cities have never had before. It is not just about getting better transport, it is about enabling renewable energy to happen, and that is the breakthrough in thinking. For me, it is the biggest technological transition that we have seen, and Obama is onto it. They will go ahead in leaps and bounds, using that.

Senator O'BRIEN—Some of the cities, pre Obama—not that I am saying Obama has not embraced the technology properly—have also embraced the idea that the fully combustion engine vehicle has got to be on the way out for public and private transport—for the larger cities, anyway, in the United States.

Prof. Newman—Yes. Certainly a dramatic shift to electric rail has been happening, but mostly in their old areas where they used to have public transport before they closed it down. In the inner areas of LA, for example, you do not need to have a car any more. You can live very well without one. Even in cities like Houston and Phoenix they are building light rail. But the outer suburbs, built around the car in the last 50 years, are still neglected and still very vulnerable. That is where the subprime mortgage problem started and it has swept their cities up. They are not going to invest there any more. They are a bit uncertain as to the extent to which they can rebuild public transport out there.

I have just come back from there. I took my new book around nine cities and I talked to the new administration, and what they really wanted to hear about was our southern railway, which does go right to the outer suburbs and it does well. Fifty-five thousand people a day are using it—far more than they predicted. There were 14,000 people carried on the buses. You can go to those areas which most rail planners in the past have said do not deserve a railway because it is too scattered. It is a very important new trend to see that you can do that.

We did that in Perth without federal help and it has worked, and the mechanism of doing it down the middle of a freeway is available to cities. Sydney and Melbourne can only think about tunnels because they cannot imagine putting it down road space. It is time to do that. You will save billions.

CHAIR—Could I add something there, Senator O'Brien. I will come straight back to you. This is the fourth day of hearings of this committee. So far evidence has been taken in Brisbane, Sydney and Canberra, and the Western Australian southern railway is the envy of the other states. It is truly a fantastic infrastructure project that was initiated by the previous government, and continually will be improved by the new government, I am quite sure.

Senator BACK—If I can correct you on that, Chairman: it actually had its origins with the previous Court government, thank you.

CHAIR—Senator Back, they wanted to go via Kenwick, so we will not go down that—

Senator BACK—So they still should, Chairman.

Senator HEFFERNAN—Settle down, you blokes. Settle down!

CHAIR—It was a bipartisan rail project.

Senator O'BRIEN—Moving away from the parochial arguments that seem to be circulating around at the moment, I want to put to you some of the evidence that we took, particularly in Sydney from Professor Hensher, about bus rapid transit and the capital cost of that versus the cost of light and heavy rail, particularly for some cities that might find it a little more difficult to expand their heavy rail system or to develop them from the start. What do you say ought be the emphasis, given the alternatives that are proffered by submissions such as yours and Professor Hensher's about bus rapid transit/light rail/heavy rail?

Prof. Newman—We have been involved in that debate with David Hensher for many years. He does get funded by the bus and coach associations, so that should be taken into account. The issues are cost and capacity. The Brisbane bus rapid transit has been remarkably successful and has performed very well. However, it was more expensive than if they had used light rail. They put in very expensive overhead systems. There is a lot of engineering and concrete involved in that and, although they say it was cheaper, it is not necessarily the case.

Senator O'BRIEN—So they are not telling the truth. Is that what you are saying?

Prof. Newman—What numbers do you pick for the alternative to rail? That is the issue. If you had put rail on the ground, down some of the road space, you would not have had to build these massive structures. Any time you have to go up or down, it is 10 times more expensive, and that is what they did. It is possible to use space on the ground and, if you can do that and get away with it, it will be a lot cheaper.

Senator O'BRIEN—Brisbane is particularly traffic constrained. I imagine that that would have been a factor.

Prof. Newman—They could have taken it down the freeway.

Senator O'BRIEN—The ones that they are building?

Prof. Newman—No, the ones they have had. That is harder. There was not enough space down our freeway. We had to take space out of that road to do it. It was quite hard to do—in parts it was easy—and we had to build two bridges. But it cost $30 million a kilometre to build the southern railway, and most of the Brisbane busways are more expensive than that.

Capacity is the issue. You reach a point where you cannot put another bus down there because, when they reach the end point in the city, they bunch up very quickly. It is very hard to get

people in and out of buses as quickly as you can in and out of trains. You can get 600 people out of a train in 20 to 30 seconds. If you are getting 60 people out of a bus in a minute, it is very rapid. Buses do not have lots of doors. Passengers do not have the ability to get in and out quickly. So buses bunch up and that is the problem in all the busway cities.

Very few big cities have busways that work. Big cities need rail and, at some point, Brisbane is going to have to do a lot more with its heavy rail system. That is part of what they have put in for Infrastructure Australia funding. It is a whole new revamping of their rail system. They know they are going to have to do that at some point. There is that issue. As cities grow, they need higher capacity systems, and there is nothing as high capacity.

Senator HEFFERNAN—As in Bangkok, are they likely to go up a floor?

Prof. Newman—In Bangkok there really was not a lot of space in the road. Going up was the only option and that has been dramatically successful. They have gone up in Vancouver, for the SkyTrain, and it has worked quite well. But I would like to make the point that there are alternatives for going on the surface in all of our Australian cities. We have a lot more space than they do in Bangkok.

Senator BACK—Professor Newman, can I come back to this question of the electric plug-in vehicles and ask you whether or not they are planning to use a smartcard, an RFID card; simply taking one as you need one and driving it to another location—in other words, removing the need for ownership of vehicles et cetera in those circumstances. It seems to me that it absolutely lends itself to that technology. You only pay for the distance that you travel.

Prof. Newman—Yes.

Senator BACK—You do not have the capital cost of owning the vehicle and having to garage it et cetera. Is that something they are looking at now or is it something that ought to be looked at, and is it only a feature for larger density cities?

Prof. Newman—I would like to see it put very clearly on the agenda. I am very pleased to hear that you are thinking ahead like that, because this SmartRider card that we have in Perth is very good as an integrating device between the three modes we have, but there is no reason why this could not be made available to service a certain number of taxi rides, for example, if you cannot access a bus after hours. It could be used for free bike services in the same way that the Velib bike service is available in Paris. That is a credit card they put in.

The electronic ticketing systems lend themselves to all forms of transport. The first stage will be with car sharing. Car sharing is taking off. Developments can have car sharing. Say you build an inner city apartment building with 100 apartments and people come and go from there. They just need access to a car occasionally and it is a perfect opportunity to just get one when they need it. They use the card and it is part of the whole system. For tourists coming to certain areas, gophers and electric motorbikes and even small electric smart cars could be made available very easily.

There is a development in Perth being planned, the North Port Quay development. It is quite controversial here. It is 10,000 dwellings off Fremantle being built out of dredging spoil. That is

planned to be the first one using this technology—100 per cent renewable with a smart grid and electric vehicles. So you will have a house, land and car package that you buy into, and the car will be an electric vehicle. It could be a retrofitted one, it could be a purchased one, and in the settlement itself the vehicles made available to visitors will be based on that card system. I have been involved in the Treasure Island project in the San Francisco Bay. It is a similar size, about 15,000 dwellings. They are rebuilding that entire site—it is an old military base—as an eco model, and they will be using the smartcard for all forms of transport.

Senator BACK—That really could revolutionise the decision making by families in terms of car ownership. Some of the figures we have seen here for the proportion of family incomes that is spent on transport and ownership of motor cars and the proportion of time that they spend doing nothing, this to me is absolutely the way to go.

Prof. Newman—Yes. The other thing about the electric vehicle is that, when it is doing nothing and it is plugged in, it is earning money for the owner by providing that storage capacity to the utility, and they will pay for that. So it will be possible to make the transport system part of a renewable energy revolution, which we need to do anyway.

Senator FARRELL—Obviously one of the aspects of the electric car is: where is the energy coming from? In South Australia there is quite a bit of work being done on geothermal, so sort of renewable nuclear energy. Are there any such developments in Western Australia where people are looking at trying to get a greener form of energy?

Prof. Newman—Yes. There is quite a lot happening across Australia on the various renewable energy forms. It depends entirely on whether the utilities really want more or not. They find all kinds of ways to show that it is not economically acceptable when in fact it often is, because they cannot bring it into the grid. Any more than 15 to 20 per cent and they cannot accommodate it. The breakthrough with the lithium ion battery—

Senator FARRELL—Fifteen to 20 per cent of what?

Prof. Newman—Of the grid cannot be more than renewable, because it fluctuates. Geothermal would be all right because it is a constant flow, but most—wind, solar, wave—are fluctuating, and fluctuating electricity in the grid is very hard to manage. So you need a storage mechanism. The breakthrough with the electric vehicle is that you can now have that storage available. In Denmark, in Europe, they have 20 per cent renewables. They cannot go any higher. So they have got a relationship with this firm called Better Place, which is putting in enough electric vehicles to enable them to go to 40 per cent.

Adelaide is already on the 20 per cent renewables base. They cannot go any higher than that. They would be a perfect example of a place that now needs to develop a storage mechanism to enable that to go higher, or to do what I think should be on the national agenda and is being suggested through IA which is that we need to make a much more extensive national grid, because the links even between South Australia and Victoria are not very good. When the winds are blowing and the sun is out, you cannot be storing it in the rest of the grid. There is very little connection. The states now need to take this opportunity of renewable energy to make a more national system. That will happen.

There are solar thermal projects planned in all Australian cities. There are three being planned in the Pilbara. They are all being abandoned now because we do not have a proper grid there. Smart green grids are what Obama is funding. They are putting $30 billion into it. It is something that has to happen in Australia. It is not yet part of our agenda. It will be. There are geothermal opportunities in this city. We have hot water.

Challenge Stadium here is entirely heated—all the pools and the air conditioning—by geothermal energy, just a kilometre down. It does not use hot rocks, it uses hot water. We could use that also for electricity. There is a CRC in geothermal energy here that is looking at building the first power system based on that, as well as more hot water to replace air conditioning. I think there are real opportunities in geothermal that are going to emerge quite quickly.

Senator FARRELL—Are there any regions in Western Australia where it is more likely to—

Prof. Newman—Yes, there are some hot spots. They have now been allocated and the geologists are out there at the moment checking on what they can get from that.

Senator FARRELL—One of the obstacles obviously in Western Australia is that you are not part of the national grid.

Prof. Newman—Not yet.

Senator FARRELL—Is there anything in the foreseeable future where you might be?

Prof. Newman—I see the solar potential and wind potential down our coast as a critical part of our future. The Pilbara is the Saudi Arabia of solar energy and it needs to be given a proper grid. That then needs to be linked down to Geraldton where the south-west grid begins, and we need to go across the Nullarbor. There are wave and wind opportunities right across that southern coast. I think we need a national grid to be built as part of the next renewables transition. Public transport and private transport will fit into that, so it can be seen to be an integrated approach to the future.

Senator LUDLAM—Thanks, Professor, for coming in. I would like to bring you back to the work that you have been doing for quite a while on densities and what happens to a city when you get the density right. My main question is: what happens to a city when you get public transport right? What are the flow-on benefits?

Prof. Newman—It is quite dramatic and very hard for some cities to imagine. What happens is that the market changes for land when you get a good public transport system, and you immediately begin to develop around it. So when Subiaco was being planned as a transit oriented development from Better Cities back in the eighties, it was seen to be something that Perth would never accept, because it was too dense. You only need to go to Subiaco today to see that it is a dramatic success, and all the cities along that line—Claremont, Cottesloe—now want to do what Subiaco has done.

There is a market for it that develops and that market can be facilitated or it can be stopped. There are many examples in Perth where it has been stopped, but there are probably 20 TODs now being planned. The one at Cockburn Central with six 20-storey towers is going to become

the city centre for the city of Cockburn. They could not have imagined that when they just had a freeway or when they even just had a busway there. It changes the nature of the city. It builds centres. Those centres are not just good for public transport; they are where the new jobs go. That is where the knowledge economy goes.

Part of our work in Infrastructure Australia has been to introduce the term 'agglomeration economies' and to bring that into the assessment of infrastructure, so when you are dealing with this in public transport you are not just talking transport, you are talking about city building. 'Agglomeration economy' is a term that Eddington brought into the UK assessment that he did on their transport. They found that, when you look at it, cities and their productivity depend on agglomeration economies. Very sprawling cities like Phoenix and so on never develop the centres where this new economy emerges. They build lots and lots of suburbs. Brisbane is a bit like that. It just goes on and on and, while it is building suburbs it is an economy, but it actually does not create long-term productivity relating to knowledge, economy, jobs. They do not go to shopping centres; they go to city centres. We need to build them in the suburbs.

The best way to do that is to build rail that will make that happen. That has been my fundamental motivation. I am not a trainspotter. I enjoy what they do to cities, and I have enjoyed seeing that happen in Perth. Our density is going up again. It reversed for a 30- to 40-year period. Brisbane's density has remained reasonably static. Adelaide is static. Melbourne and Sydney densities are now going back up again quite rapidly, I think because they reached the end of their sprawl. They could not go any further out. You could live in Marysville and places like that, but it is an hour and a half to get to work.

The opportunities now are all about redevelopment, and making redevelopment happen is a big agenda for Australian cities. Heavy rail and light rail will make that happen. I think light rail does it just as effectively as heavy rail, at a cheaper cost.

Senator LUDLAM—When the southern railway line was being planned—and you have pointed this out in your submission—critics said that Perth was too low density to support development like that. Obviously they were wrong, but what actually happened?

Prof. Newman—You need to bring people to the stations, and Perth's transport planners have been very clever at how they have done that. They have provided a certain amount of park and ride, good bus integration—not as good as it could be—and a lot of kiss and ride; a lot of people get dropped off. That is something that we have seen in the northern suburbs as well. It provides an option that was not there before.

As soon as you do that, people want to live as close as they can, and the real estate values start going up and councils start talking about redevelopment. In Mandurah itself, they want to redevelop their whole city around the rail station. That would never have been considered before. It is an opportunity that is created, and I am fully supportive of your light rail opportunities for Perth.

What the media have picked up on today from my submission is the idea of the 'knowledge arc' light rail that would run from Curtin to UWA as a first step in Perth. Melbourne of course runs very effective light rail; Sydney has a privately funded system, but as soon as you mention getting further light rail in Sydney, you get spat on. It is a word you are not allowed to use. That

is partly because of the bus lobby there, but it is also partly, I think, because Sydney does not have to do what Melbourne has done. Brisbane has looked at light rail and passed up an opportunity, but the Gold Coast is now going to do it. It is on the agenda in Canberra; I reckon it should happen. Hobart is now looking at it. Darwin is looking at it. Newcastle is looking at it. I think it is an important next step for Perth.

Senator LUDLAM—I think in your opening statement you said that it is taking off across the United States. Obviously there are a couple of decades worth of history in Europe of light rail. Is it true or is it an oversimplification to say that light rail can fill a niche between heavy rail and a bus network?

Prof. Newman—Yes, it can. It blurs at both ends. It merges into what heavy rail can do. You can put six light rail vehicles together and run them at high speed down a corridor and it looks very like a heavy rail system. Portland's light rail system looks just like our rail system, except it gets off the main tracks and then runs through the city centre and turns at right angles. We cannot do that with ours. So there is a merging at that end, and at the other end, if you have just single cars running through low-density areas, it can be doing much the same as a bus does. But what it does better than the bus is when it gets several cars together and runs at speed down a corridor.

Senator LUDLAM—Without trespassing on probity and what you can and cannot say about the Infrastructure Australia bids, in a short list that came out—I think it was late last year—the board was actually pretty critical of the quality of some of the proposals and the submissions that had been made by state governments. What were the key reasons for that?

Prof. Newman—What we are used to in Australia is submitting lists and getting our proportion according to the population. That is how we have done things, so WA was bound to get 10 per cent because we have got 10 per cent of the population. It does not work like that in Infrastructure Australia; it works on the basis that the best proposals, that are put together with rigour and which are needed for the national interest, will get funded. That was what we were set up for, and it is a very much better way to do things. Infrastructure is inherently political. It is very hard to avoid that, but we have tried.

The first submissions that came in were just lists really, so they had to go back and do a serious plan: how do they fit in? In what way are they going to improve productivity for the national interest? What are they doing about greenhouse gases? So few of them had even shown whether it would save or make it worse, and none of them had done the fundamental thing that we ask for in agglomeration economies, and the road proposals had not included induced traffic. Induced traffic is now included in all road proposal assessments around the world, but the road authorities in Australia have tried to get away with not doing that.

Essentially, what happens if you build a good road is that it attracts people to it. If you do not include that induced traffic, you are assuming that the demand curve is flat. There is no commodity that has a flat demand curve. Traffic engineers have been getting away with that in Australia for 30 years, and the benefit cost ratios are inherently biased. So asking them to do that was difficult, but some of them did it. Those who did not suffered the consequences.

Senator LUDLAM—That sounds a bit dramatic.

CHAIR—Thank you, Professor Newman. I note your passion for light rail and I look at inner Melbourne's light rail through the trams—and I have said this to the Victorians—and I think it is second to none. I think it is absolutely brilliant that you can leave the MCG with 100,000 people and within an hour everyone has gone. There is no argument. But I also have a leaning towards the rubber wheels in the way of flexibility. When we are starting to plan new corridors and plan new routes, you cannot beat the rubber wheels, because if a school pops up the rubber wheels can be in and out. Anyway, how can you convince this committee that it is better to spend the money now, and how can you put up an argument for flexibility and productivity and the like on light rail versus buses, with the small population that we have here at the moment in the Perth metropolitan area?

Prof. Newman—It is not just Perth: all Australian cities have the same issue. We have had flexibility in transport planning as the major priority for the last 50 years, and we have created car dependence, with buses kind of picking up the pieces. Car dependence is really reaching its end. It is very expensive. We have got numbers on that which show that it is now being heavily subsidised and is something that is not favoured by planners and in many ways by younger people, who are no longer interested in living far out and using a car. They want to get in where the urban action is, where that light rail system is. We have got that kind of evidence.

But the key thing is this: flexibility means that you can also take it out at any point. So if you are a developer and you want to build around a good public transport system, you cannot rely on that bus connection being there. It can be taken out at any moment. You have got your financing for the next 20 to 30 years to pay off your development and you can be told, 'Yeah, there's going to be a bus lane going straight past your place,' and suddenly a mayor is elected who says, 'Look, my public don't like this. We want to take it out,' and it has gone. You cannot do that with fixed rail systems. They stay put, and you can build around it and be certain of it, and you can get the financing to build your developments around it. You can get very much better market based approaches to land development than if you have a rubber wheel solution. That has become very clear in the US.

Denver is rebuilding around six new rail lines. The financing for that was raised through a tax that was imposed on them through a referendum for which they won 75 per cent support. The campaign was run by the Chamber of Commerce, not by the green groups. The green groups were certainly very keen to be part of it, but the Chamber of Commerce did it because they said, 'We want to get certainty around land development.' So that is what is happening.

Even before those lines were being built—and they are being built—the land development opportunities became very clear. With transit oriented development, where people have a car but usually one less car per household on average, they save 20 per cent of their household income, so there is enormous market support to move to those areas, whether you are older or younger, and that is being proven time and again.

Our research has shown that flexibility is important, but being fixed is also important. A balance between those two—getting both of them so that we have the flexible land uses feeding into the fixed line—is how we need to build our cities.

Senator HEFFERNAN—If it saves 20 per cent of the household budget, what does it cost the household—in real costs, I mean? You can allocate the costs.

Prof. Newman—If you want to live in a TOD and want the same kind of house, you probably will not get it. It will be a smaller house or a unit. You make that trade-off. You are going to have lower travel costs. The person who wants the big block further out will have lots of cars and they will have a much higher transport budget. When you look at the total of transport and house combined as a package, it gets bigger and bigger the further out you go. So affordable housing is there.

Senator HEFFERNAN—So the cheaper house—

Prof. Newman—The cheaper house is offset by the more expensive accommodation. We have lots of data on that as well and it is important to see that both things are there. There needs to be a market provision for those who want to have less on the transport side because they can see that costs are going to go up.

CHAIR—I have a question for Professor Newman. We have slipped over time, but I think it is important. Let's say we have the best, most reliable, safest, efficient public transport system in the world. In Canberra last week we had witnesses from an international planning association who had done a survey in Melbourne. The figures came back, but they were not quite convinced, so they went out and did it again—this is about three weeks ago—and there were eight criteria for how you could get people out of cars and into public transport, and the environment and the carbon footprint were not amongst them. How would you suggest that we get people less dependent on cars and into public transport?

Prof. Newman—I have not actually talked about the carbon footprint being a driving force in that.

CHAIR—No, I know you have not, but in your submission you did mention reducing oil use.

Prof. Newman—Reducing oil use, yes. That was the context for it. If it were done in the context of reducing petrol prices and if people were asked that, I think you would find that a lot of people are worried about their transport costs and how oil does impinge on them. It certainly did last year when the oil price tripled, and it will go back up again.

That is the context for me. In the long term, that will drive it. But I think you can make a case—and we did in Perth—that it was not driven by carbon or oil. Occasionally oil would raise its head. But we did similar surveys, and people always came out in favour of saying, 'We want investment in public transport before putting more roads in.' Seventy or 80 per cent of people would say that; then there is an uncertain group; and then less than 10 per cent of people would say, 'Roads before public transport.'

CHAIR—Could you provide those figures to the committee?

Prof. Newman—Yes.

CHAIR—Thank you.

Prof. Newman—That was a state government survey and it was used as part of the process of how the rail was funded in Perth.

CHAIR—On behalf of the committee, thank you very much, Professor Newman.

[12.05 pm]

BUCKEE, Dr James William, ASPO-Australia

ROBINSON, Mr Bruce, Convener, ASPO-Australia

ROSE, Mr Benjamin John, Committee Member, Sustainable Transport Coalition of Western Australia

WORTH, Dr David John, Committee Member, Sustainable Transport Coalition of Western Australia

CHAIR—I welcome representatives from the Sustainable Transport Coalition of Western Australia and ASPO-Australia. Does anyone have anything to say about the capacity in which they appear?

Dr Buckee—Yes. I am an expert witness for ASPO.

CHAIR—Thank you, Doctor. I will invite all of you or some of you, or however you want to do it, to make a brief opening statement before we go to questions.

Dr Worth—We have provided some additional material which we will hand out shortly, but I wanted to make three points. In terms of your inquiry, the answers are there already. They are contained in previous Senate inquiries into Australia's future oil supplies, in the House of Reps inquiry into sustainable cities and in the experts you have heard here today. Most of the answers have been around for five to 10 years. They just have not been acted upon by government.

Secondly, since I appeared before some of you in the Senate inquiry into Australia's future oil supplies several years ago, the situation has got a lot more dire, not just due to the global financial crisis. We have seen a peak in normal crude oil since about 2005. The annual amount has been about 74 million barrels a day. It stayed that way for about four years. Over the last few months, with the global financial crisis, it has probably dropped down to about 72 million barrels a day.

Just in the last three or four months about half of America's oil and gas drilling rigs have been closed down because those companies cannot get cash to keep their drilling going. That means that when there is an economic recovery we will not have the oil and gas ready to come online. In terms of that, I have given you some material from the International Energy Agency, which released *World energy outlook* in November.

The main point they make, which I think is key for your inquiry to think about, is that to maintain the current oil and liquid fuel supply at the level it is today, in the next 20 years the world will have to find four additional oil provinces equivalent to Saudi Arabia, which is the major world oil supplier. To keep that oil from decline but allow for a small increase of one to 1½ per cent due to the growing Chinese and Indian economies, we will have to find six Saudi

Arabias in 20 years. In the last 20 years we have found zero. We found zero in the last 20 years but we have to find six in the next 20 years. That rings, for me, great alarm bells.

From the future oil supply Senate inquiry, you heard evidence that, because the oil refineries in Australia cannot refine about two-thirds of the oil they produce, we export that oil overseas, so at the moment Australia is reliant on imports for about 80 per cent of its oil and liquid fuels and we have no strategic reserve in case there is a stop to those ships bringing us oil and fuel. We are in an incredibly vulnerable situation in the short term, let alone in 15 or 20 years time.

What we would support as a community group is the government, through your inquiry and through other work, urgently becoming a command government, through which we work out plans for each capital city about public transport and how to make us less vulnerable to this oil situation. Thanks.

Mr Robinson—Thank you very much. I appreciate the Senate inquiry coming here, and I think you had a busy last week. The Australian branch of the Association for the Study of Peak Oil and Gas is part of a worldwide organisation. We are a network of professionals, trying to help. We have working groups in the capital cities. You have one submission from our ASPO Sydney group. We have working groups of health, defence and security finance sectors. You have a submission from our defence and security working group. Dr Buckee rang last night saying he was in town, so I have asked him to join us, because he is a serious oil professional. He was president and CEO of Talisman Energy in Canada until recently. To give it a size, that is roughly producing twice as much oil and gas as Woodside. On that analogy, I understand that prior to Don Voelte taking up the job, Dr Buckee was offered Voelte's job and declined because it was smaller than the one he was in.

The peak oil time frame is likely to be pretty short—five to 10 years or less—and, back to our submission, there is a quote, perhaps from an economist:

> Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist.

In the oil supplies inquiry, this committee heard the past director of ABARE Dr Brian Fisher say that, if the price of eggs is high enough, even the roosters will start to lay. That is a colourful phrase. I get laughs in oil conferences when I say that I think ABARE knows no more about petroleum geology than it does about avian reproduction biology. It is a bit of a worry. The previous inquiry was sceptical about ABARE and asked a lot of questions. Economics, market forces and things are not quite as fashionable, although it does not seem to have sunk in, and, as with a lot of things, the economists did not do too well with predicting the financial crunch.

Our summary is that public transport planning must start with a vivid appreciation of the urgency of preparing for short-term oil shocks and for long-term oil shocks. There are a range of things that I could go into. The previous inquiry suggested that ABARE and Geoscience Australia should report about the global oil supply. I have not seen anything. We certainly feel that community awareness and engagement are very important. With the water shortages in the east, people are aware of them, people reacted favourably. The Queensland and Victorian governments did not fall just because the dams were running short.

Certainly we feel that Australia should be following Margaret Thatcher's example. She put Britain on a fuel tax escalator to put the price of petrol up, to send the signals to fund better health systems, public transport and so on. The fuel taxes are currently controlled by the federal government but transport itself is controlled by state governments. In the previous regime, the Western Australian government was able to put 4c a litre onto the price of petrol under the fuel tax. Under one government, that went largely into public transport and, under the successive government, it went into country roads, but the people who ran the transport had the ability to set the petrol taxes.

CSIRO has forecast an $8 a litre scenario in one of their economic modellings. Reece Waldock talked about $4 a litre. There are a whole range of things we do. In terms of sudden oil shocks, I think we should be preparing for petrol rationing allocation systems and how that would impact on public transport. I came in by train today and there was not room for three or six times as many people on that train, which would be the case if there was a 25 or 30 per cent reduction in the availability of petrol and diesel. All these things are known, as Dr Worth suggested. The question is, why aren't they getting into the public domain? I would just like to hand over to Dr Buckee, who is much more expert to be able to talk about peak oil than I am.

Dr Buckee—Thank you very much. It was really a fine opportunity to be able to talk to you, Senators. As Bruce said, I did phone up last night and say, 'Hi.' He said, 'Here you are.'

CHAIR—Mr Robinson never misses a chance. He is very helpful. Well done.

Dr Buckee—I have had 37 years in the oil industry. I was CEO of a large company for the last 16 years and I have just retired. As Bruce pointed out, that company produced about half a million barrels a day, which is sort of Australia's consumption. From the 16 years of exploring the world, I would make the following observations: there are virtually no unexplored basins in the world. The ones that there are might be in the Arctic, and that illustrates the point quite neatly because it is obviously really difficult to get that.

The underlying fact here is that the world is consuming 30 billion barrels of oil a year and finding eight. It has been like that since 1980, maybe a little bit earlier, and it is certainly not getting any better. There are two further things. People say, 'Look at the subsalt discoveries in the Gulf of Mexico and Brazil.' I would say, those are extremely difficult resources to produce. You will notice, of all the discoveries in the deep water Gulf of Mexico, not one barrel has been produced; not even on the list. It is the same for Brazil: it is subsalt and it is really difficult to produce.

The second point is that—I agree with the gentlemen over there—the black oil has peaked. This is disguised by the NGL production from the big gas fields in Qatar. They are quite rich in liquids and, as the LNG has been boosted from there, so has the associated NGL. So that has enabled the world's liquids to keep growing, albeit slowly, while the black oil itself has declined, and this is disguised.

Another point in opposition to this thesis is, look at all the big oilfields in Canada—for example, the tar sands or oil sands. My response to that is that you have to think of tank and spigot: it is a big tank but the spigot is pretty small. The best projections get it going to two or

three million barrels a day when the world is declining at four or five million barrels a day, so it does not really change the big picture at all.

The recent demand weakness has certainly disguised the tightness of supply demand. It has also deferred a lot of investment and it has deferred a lot of drilling. It has given people who are making big investments cause to doubt. As a result of this, the supply side has weakened. The demand side is driven by population growth and GMP per head, which is going up. So it is inexorable that the stress situation is going to come around again and the price of oil will start going up again in the next year or so.

I see the price going up until price rations demand and so I see the outlook as a long, gentle plateau, but by 2030 definitely we will be seeing a decline in oil production. So for people who are in the long-term planning business, as you are, to focus the mind you should think $20 a litre. That focuses it quite well and throws into sharp contrast the sorts of things you have to do.

CHAIR—$20 a litre by when, in your estimation, roughly?

Dr Buckee—This is a mind thought on what is going to happen, I would say, in a few years because, as I said, price will ration demand. I do not think that the recent price hike did ration demand particularly.

CHAIR—Thank you, Dr Buckee. Before we do go to other senators, this committee did an inquiry into Australia's future oil supply about three years ago, where one of the witnesses we had the pleasure of hearing from was Dr Ali Bakhtiari, who told us all of this three years ago: 'Be prepared for $3 or $4 a litre very soon.' Half of us sat there and thought, 'Jeez! That couldn't happen,' but there you go.

Senator LUDLAM—Thanks very much for your submissions and your comment. What does $20 a litre of oil represent, roughly, as a world oil price per barrel?

Dr Buckee—I do not want to focus too much on that. It is just a thought experiment. The price of oil is a relatively small proportion of the end gasoline at the pump. It is probably 15 or 20 per cent, so—I do not know—$150 a barrel.

Mr Robinson—Highly expensive. CSIRO said $8 a litre. The Sustainable Transport Coalition six or seven years ago suggested a $10 a litre scenario. These are not just price rises but something very different where, instead of costing $50 or $100, it costs $500 or $1,000 to fill up your tank. It is a jump. The numerics of the jump are not relevant.

Dr Worth—We have seen great pressure on Australia's present public transport system with the price going from $1 a litre to $1.50 a litre in the last two years. Basically, you have got sardine cans in most major cities in the peak hour, so any higher price—$2, $4—and the public transport system will not be able to cope.

Senator LUDLAM—Yes. That is part of the reason for being here. On the graph that you have handed around with all the ABARE miscalculations and stuff-ups, which I guess we could find funny if it were not so serious, what was the cause of that spike? Is that peak oil being priced in or is it something else?

Dr Buckee—These things are always a combination of factors. What we call non-commercial loans were in there as well. That is the people who are not commercial and they are paying the price for it, but they are not a huge impact generally. Their proportion of the traded oil is relatively small, like five per cent; I do not know whether you consider that a lot or not. But the underlying supply-demand tension was there, exacerbated by decline in big fields, in particular Mexico, and a lot of speculation about Ghawar. It is still open in my mind as to whether the higher price of oil contributed to the credit crunch we are in now, but I think it is a pretty minor contribution. Excessive use of debt and things like that were obviously a more proximate cause. So that might have been excessive, but not by much, in my mind.

Senator LUDLAM—You said in your opening remarks that you think black oil has peaked. Is that another term for conventional oil? What is the definition of 'black oil'?

Dr Buckee—Normally, it is black oil with condensates, gas condensates, and other liquid stripped out. Black oil is stable at normal temperatures and pressures and, if you have to get it out of a gas field—or otherwise associated gas—that is called 'not black oil'.

Senator LUDLAM—When was that peak?

Dr Buckee—I would say 2006. It sort of flattens, but something like that.

Senator LUDLAM—And so what is picking up the slack since then is unconventional oil, gases and—

Dr Buckee—NGLs.

Mr Robinson—Natural gas liquids.

Senator LUDLAM—Thank you.

Dr Worth—In terms of the increases, it is about nine million barrels a day from NGLs, about three million barrels a day from ethanol—these increases are mainly in America—and about a million barrels a day from tar sands in Canada. That is a rough split.

Senator LUDLAM—So peak oil has happened already, yet you are saying that we still have not really acted on the recommendations that you furnished us with last time we were here. Obviously, at the moment the economy has really focused people's minds. If the world does go into a recession, what does that do to oil demand around the world? Is that going to buy us some time?

Dr Buckee—Yes, a year or two years or something like that. Even so, last time I looked—and it was, admittedly, before Christmas—overall demand was and is still increasing. It has reduced in the US and it will reduce in Europe, but in India, China and so on, it is the rate of growth that is slowing, not absolute growth.

Dr Worth—The other thing to consider is that we are in the eye of a cyclone. We do not know how big that eye is—the recession—so it is really bad for employment. More people become unemployed. It is really good for climate change gases. Obviously, the less that we produce the

less climate change gases there will be, but it is going to be really bad for oil prices when we come out the other side. Oil wells are closing down, rigs are closing down, people have stopped buying the floating oil ships that they need in Brazil and the Gulf of Mexico, so we could see quite a rapid increase from the $52 we are at today to $150 or $200. We are back at $2 a litre probably very quickly.

Senator BACK—I am by no means disputing the figures, because I have come out of this industry, but can I ask you how accurately we know the amount of stored product in Saudi and the Emirates? I recall when working in that region that they jealously guarded their reserves. In fact, I recall in Saudi and in Abu Dhabi it was punishable by death if anybody released those. How do we know the accuracy of the figures?

Dr Buckee—That is a totally valid point. We do not. I worked in Qatar for three years. I would say nobody knows. Even they do not know. They do not even know exactly what their production is. People have to resort to counting tankers; they have some idea of production at the wellhead and some idea of the tankers. You make a valid point, but the differences are so big between consuming 30 billion and finding seven or eight billion. I admit there is storage in the middle, but the storage is not that big. It is a few days worth of production.

Senator BACK—I also ask the question, from the point of ignorance, of how many years ago it was that Australia was 75 to 80 per cent self-sufficient in light crude. You were saying we are now about 80 per cent relying on imports. There was a time when we were very much happier in our position.

Mr Robinson—For a short time in 2000 we were roughly self-sufficient. We have been broadly self-sufficient since the Bass Strait times, but the demand, the curve—I think there is one at page 41—is going up. Unlike Britain, our demand is going up substantially and the production forecasts from Geoscience Australia are all going down, so the net gap is increasing. Dr Worth was talking about how much we actually import, but the gap is some $18,000 million a year now, and if we double the quantity and triple the price, that gets to be a sizeable impost on the balance of trade.

Dr Buckee—On the Saudi question, I also know quite well Sadad Al-Husseini, who used to run Saudi Aramco. We both gave a talk in New York and I had to apologise that I had not conferred with him beforehand. It was all about the ageing fields in Saudi. They have brought on one new field down in the empty quarter and it gives you a measure of how tough it must be if they have to go down there to get the new oil. The big thing is that Ghawar, which is five million barrels a day, is wobbling, and the point is that if the big fields go, like Cantarell and Burgan, then it does not matter what the rest do, because they are so dominant. The basic thesis is that distribution of reserves is so extreme. Three big fields—Ghawar, Cantarell and Burgan—dominate the reserves and production.

Senator BACK—I was going to come to that question of the supply chain and transportation. I recall being in the Strait of Hormuz in 1988 in the middle of the Iran-Iraq war when the ships could not travel through the straits by day, they were in and out only by night—that was 21 years ago—and being told that the Japanese economy required a supertanker to leave the Strait of Hormuz every 30 minutes. Today, of course, we have got China and we have got India, which is

by no means self-sufficient and is never going to be. My question to you is: where are the alternatives?

Dr Buckee—Alternative what?

Senator BACK—Supply of energy for the world.

Dr Buckee—First of all, as you know, roughly two-thirds of the world's oil goes through the straits of Hormuz and Malacca. In my view, windmills are a nonstarter. The big winners are conservation—use less—and public transport and things like that. Australia and Canada have big spaces and extreme temperatures in common, so they are a bit tougher. The only thing I have seen recently that is really good is these in-line tidal things. I was in Nova Scotia recently. They are using a thing that looks like a lifesaver. The fish go through the middle and it costs $3 million a megawatt. Amongst things I have looked at, that looks pretty good. I do not believe in the biofuels. I certainly do not believe in windmills. Solar, in a distributed, low-energy requirement is fine. The best of the lot is the iconic Australian windmill where it is needed—pumping water. That is good. The rest are not economical.

Mr Robinson—Senator Back, some of the alternatives like wind, solar and nuclear are not very useful for powering planes or tractors or whatever. ASPO Australia is more interested in liquid fuels, although some of our natural gas is currently used for generating electricity. We could take that natural gas and use it for transport. Reece mentioned that half his buses were running on natural gas. There is an overall energy problem, but we are interested in liquid fuel for transport.

You mentioned the Strait of Hormuz. There have been discussions about what would happen if the Israelis or someone else take exception to the Iranians or vice versa. Some 20 per cent of the world's oil goes through the Strait of Hormuz. Supertankers have trouble dodging Exocets and things, so that is one of the risks for very short-term things. We had a gas shortage last year of 30 per cent for three months. If there was a 30 per cent petrol and diesel shortage in Western Australia or Australia, for Western Australia that would mean three to six times as many people trying to get on every bus and train, if only 25 per cent of people in cars wanted to change. Public transport should be preparing for a short-term fuel crisis—we do not have those preparations—as well as the long-term ones. That is important for our defence and security, as was mentioned in the Defence and Security Working Group submission.

CHAIR—I want to ask a question that is a little bit outside of our inquiry. Dr Buckee, you have sounded the bells and an alarm went off in my head. I put this question to Dr Bakhtiari in Sydney and I would be interested to hear your answer. I asked him if we were to combine all known energy sources—gas, oil, solar, wind, tidal, biofuels; everything—would we still have enough to power the world's insatiable demand for energy in the future?

Dr Buckee—I do not think so.

CHAIR—You could not be any clearer than that.

Dr Buckee—I think we have seen the end of oil, in a gentle sense. It does not go just like that. The all-time reserves of oil and gas are similar, so I think you will see a peak in gas use, but

some four or five or six years further out. Even coal and nuclear have some limitations. The availability of high-grade uranium-235 is in question and good quality coal is in question. I think nuclear has to come. These other things just pick away at the sidelines. I think energy is going to become a very scarce and expensive resource.

CHAIR—Mr Rose, do you wish to make a very brief statement? We have time.

Mr Rose—I can present this public leaflet to the committee.

CHAIR—You are tabling that.

Mr Rose—If I say anything I would be reiterating a lot of what David has said, but basically STC supports behaviour change away from cars towards a mix of sustainable modes, and public transport has room for expansion from eight per cent perhaps to close to 20 per cent. Of course, there would have to be a lot of new rolling stock purchased. The most important thing, I think, is that significant transport behaviour change is only likely to occur if there are more fiscal incentives and disincentives which fully reflect all of the intangible costs of car use and make it more cost effective for people to travel by public transport than by private car. Such measures would best be attached to fuel in higher fuel taxes.

We recognise, of course, that this is politically very difficult and that there needs to be a fair bit of education that is occurring only very minimally at the moment. We support continuing expansion of the Living Smart and TravelSmart programs to include more TV and media ads. The very important part is that there has to be public education and awareness raising so that people can see the need for the fiscal incentives and extra taxes that will get people out of the private car. It needs to be put in terms of global warming, of course—cars being a significant source of greenhouse gases—but also energy security in these sorts of times. The health benefits also link in with the use of bikes linking in to stations and biking to work and so on.

On that note, I would like to bring to the attention of the committee that the Rotary Club of Perth is also putting together a new program to stimulate community behaviour change, so that is an indication that community support for this is broadening. Their program focuses on things that people can do to reduce greenhouse gas emissions.

There are a couple of things that I would like to say about the bus and rail system, particularly the need for more linkages with bicycles into the rail system—that is, facilities for bikes and certainly bike paths linking up with the travel nodes. Also, buses currently do not have any capacity to carry pushbikes and very limited capacity to carry prams. Something could be done, or should be done, about that. I could make another comment from my own point of view, not on behalf of the Sustainable Transport Coalition, but I do not know whether that is in order. Is it?

CHAIR—You can do anything you like, Mr Rose. By all means. We will pull you up if you are out of line.

Mr Rose—Good. There is a presumption that air travel will continue to be the means of connecting state capital cities. There have, of course, been plans put up to do fast rail, starting between Sydney and Melbourne and, I suppose, followed by Sydney and Brisbane. But it seems to me that there should at least be a study done on that to cost electric fast rail. I do not mean

very fast rail, because that is also very expensive, but rail at a speed of 200 to 250 kilometres an hour. Obviously Perth to Sydney would be the last one to be done, but you could get over there in 18 hours, and you could get between Sydney and Melbourne in three hours—and Brisbane.

Air travel has realised that it has many problems, including supply of fuel, which is currently fossil fuel, with very little chance for that quantity of fuel to be sourced from anywhere else. Nuclear aeroplanes were considered dangerous even in the fifties when they tried them. Fuel security is the main thing. Also, the greenhouse gas emissions are, of course, very significant from aircraft. It is not taken into account that what is currently reported for greenhouse gas emissions is only domestic emissions. There are also overseas emissions created by Australians travelling overseas, which seem to be just lost. They do not seem to be reported.

That would double the very small amount of emissions that are reported for aircraft and take it up to at least three per cent. If you take into account the ozone effects from nitrogen oxides creating ozone, you have a further global warming effect that can be said to be about 2.7 times, but it is not as long lived as carbon dioxide. So, yes, I would like to see if something could be done about looking at fast electric rail between the cities. Thank you.

CHAIR—Thank you, Mr Rose. I do pick up on your comments about the health and fitness benefits of cycling. The Brisbane cycling fraternity put that to us as well. They also said that there is great return to the economy in productivity, and cyclists were better looking, so you work out which one of us up the front here cycles—and it is not me! And ABARE is discredited when it comes to predicting the price of oil, which will trigger Senator Heffernan, I am sure. Senator Ludlam.

Senator LUDLAM—Yes, the ABARE graph is very entertaining. Oil is used for a lot more than transport—gas perhaps even more so. In the event of an oil crunch, what is the order of priorities or the order of demand on oil and gas reserves?

Dr Buckee—For your car, you need this much petrol, you put it in the tank and it drives up the hill. Nothing else can do this. It is totally irreplaceable as a transportation fuel, so I think premium use for oil is transportation.

Senator LUDLAM—What about agriculture, for example?

Dr Buckee—Well, tractors, I guess.

Senator LUDLAM—No. What I am getting into is that we might find that it is simply too valuable to be burning in an oil shock environment.

Dr Buckee—You can make gasoline and diesel, generally.

Dr Worth—And certainly most states have a liquid emergency act and regulations to look at what should get fuelled first. The problem for Australia's case is that we do not have any strategic oil reserve, unlike China, America and other OECD countries. I think Australia and New Zealand are the only OECD countries without a strategic oil reserve. So the impacts will be quite severe, quite soon, compared to other countries.

Senator LUDLAM—How would you characterise the state of readiness of Australia? Just for the benefit of *Hansard*, that was laughter from Mr Robinson.

Mr Robinson—Sorry about the interjection. There is a federal Liquid Fuel Emergency Act which was amended a couple of years ago. There are meant to be state liquid fuel emergency plans. The only one that I have seen is the Western Australian one, which is grossly ineffectual—just odd and even numberplates and things—so I differ from Dr Worth in my optimism on the preparedness. One of the things that should come out of this committee would be a recommendation that we do have a fuel allocation system. There was another economist who was chief economic adviser to President Reagan—Professor Martin Feldstein, who is now at Harvard—suggesting that tradeable gasoline rights on right-wing economic points of view are more efficient than corporate fuel efficiency standards and also gasoline taxes. But there should be serious thought given to how Australia could handle a short-term emergency. If you ration petrol, you have to ration public transport as well, because public transport does not have the capacity. So what is done is open to debate, but someone should be thinking about it, and it would seem, given the 'no worries, business as usual, she'll be right' lead from ABARE, that it is awkward for people like Reece Waldock to be thinking of what people would do if there were a 30 per cent petrol shortage.

Senator LUDLAM—From the point of view of this committee, though, contemplating spending large tranches of Commonwealth funds on public transport, what do you think of the proposition that we are better off building it now rather than waiting for the oil shock?

Mr Robinson—Senator Milne chaired a briefing in Parliament House in Canberra when Dr Roger Bezdek, who is an economist from Washington, gave a bit of a briefing. His presentation is on our website. He spoke to the Supply Chain and Logistics Conference in 2007. He is a co-author with Bob Hirsch and Bob Wendling on mitigation. A lot of things have to be started 20 years before peak oil, and one of those is public transport. So, in both short-term and long-term planning, public transport needs these lead times.

Jeremy Leggett, with the Industry Taskforce on Peak Oil in the UK, suggested the oil crunch was five years away. People did not read any of the signs of the financial crunch coming, and we have an oil crunch coming probably within five years. Hopefully, we will have got out of the financial crunch before the oil crunch comes. It is not certain. It is really important that we plan much better for the oil crunch than we did for the financial crunch. Throwing squillions of dollars at it after the event is not all that effective, as Malcolm Turnbull has pointed out, for instance. A stitch in time saves nine: there are crucial reasons that we should spend more time considering the possibility of an oil crunch and what might happen if it comes—when it comes.

Senator LUDLAM—What about a food crunch?

Mr Robinson—In Australia we are relatively well equipped, but how do we allocate available petrol and diesel? Currently, the farming communities will be outbid by overanxious mums in leafy suburbs driving unfit kids to school in obese four-wheel drives. They will outbid the farmers. We need to be keeping the rural communities going—the farming communities, the farmers themselves. There are a whole lot of things that we do need. We should be prioritising these and certainly Australia's food production is very important.

Senator BACK—Certainly, Mr Robinson—if I can jump in—if the leafy suburb mums do outbid the farmers, it will not be much longer that their kids will be obese.

Mr Robinson—Yes.

Dr Worth—Senator Ludlam, a real example of why we need federal government leadership and early planning is the time it takes to build new rolling stock. If Reece Waldock were to order a new train set this morning, it would be four years before he could get it from the Queensland manufacturers. In Melbourne they are getting their trains from France, so we are exporting jobs overseas.

Senator O'BRIEN—You cannot just put more trains on the train lines.

Dr Worth—You can, with respect, Senator.

Senator O'BRIEN—The point is that you cannot just increase them exponentially.

Dr Worth—Not exponentially. You could double the number of trains on a train set. You just have to change the signalling.

Mr Robinson—In Western Australia we can put more trains on. In Sydney and Melbourne it is pretty chockers anyway.

Senator O'BRIEN—Yes, that is right.

Mr Robinson—I think that is what Senator O'Brien is referring to.

Dr Worth—I have to disagree, I am sorry, Bruce. In Melbourne they are running the same number of trains through Flinders Street as before the loop they put in—the same number as in 1975. They have a plan to double the number of trains through Flinders Street. The only problem is that no government has funded it. The capacity is there in our present public transport system, but it will take four years to get rolling stock onto the train line.

Senator HEFFERNAN—Do we need a CBD?

Dr Worth—That is where most of the people live at the moment: around housing, employment, education.

Senator HEFFERNAN—But with modern communication and transport, why do you need high-rise offices, with everyone sitting in them and all the lights on all day? With modern communications and transport, why do people have to be in one office? It used to take six weeks for the cricket team to go to England and play cricket; now they go overnight. Why is this thing in your head that you have to have a CBD?

Mr Robinson—If we have peak oil in, say, five years, which is the scenario that CSIRO is using, and it is more optimistic than Dr Buckee and Dr Worth say, we cannot change the city form, so we have a CBD. ASPO Australia is focusing on two, three, five, 10—at the most 20—years, and the city forms are fixed, largely, for that time. As Professor Newman says, we can

develop transport oriented developments, but we are left with the cities as they are and in the short term we have to do as much mitigation and adaptation as possible within the system we have got.

Dr Buckee—Could I add a couple of points that are important. As I am an expert witness, I thought I would make them. One is that there is a rise of nationalism within the petroleum-blessed states, on two grounds. Firstly they say, 'We don't need you to do it,' and secondly, 'We've got lots of money now. We don't need any more money'—for example, Algeria. This means that the regular process of exploration and development has been hampered, and that is in the past, I would say, three or four years.

The second point that is really important is that exports decline faster than production because of consumption within the nation states. So you are finding that, although the production goes up, domestic consumption is growing faster, and exports are declining faster, obviously, than production.

Mr Robinson—Some of that arises because petrol is subsidised heavily. Petrol in Caracas is 2c a litre; in a lot of the Middle East, in Libya and Iran and Iraq, in the order of US10c; and even Queensland subsidises petrol to 8.3c a litre. All these subsidies are not sensible and, with the pollution reduction scheme, dropping the price of petrol to make up for any carbon tax is very irresponsible.

Senator LUDLAM—Who is doing it well? We are a little bit sick of pointing overseas to look for the best examples, but who is doing it well—oil vulnerability generally, rather than just public transport?

Mr Robinson—In Australia, the Queensland government has had an Oil Vulnerability Taskforce which reported. The Minister for Sustainability, Climate Change and Innovation, Andrew McNamara, was drawing up a Queensland government oil vulnerability mitigation and adaptation strategy. Very sadly indeed—and I think this is a loss for the nation as well as for Queensland—Andrew McNamara was defeated on local issues over a dam, about which I do not know much, but the only politician who was taking an interest in people driving at a state or federal level is no longer the member for Hervey Bay. That was happening in Brisbane.

The late Dr Ali Samsam Bakhtiari briefed the WA cabinet in 2004 and he briefed this committee. We do not have a lot of things to show from WA, for instance, for Dr Samsam Bakhtiari. Within Australia there is not a lot. Brisbane is building a pentagram of tunnels under the CBD, so it does not sound like Andrew McNamara had a lot of sway in cabinet there. Internationally, there is really no-one. The Swedish government has a policy to reduce their oil use by 2020, so they have policies and good public transport and things, but I am not sure how much actual action has been taken by the Swedish government. Overall, we are not well prepared. Just as the US government was not very well prepared for Hurricane Katrina, no governments are prepared for the oil storms.

Dr Worth—There is a lot of good work being done at a local government level, and it would be worth your committee looking at what the Brisbane City Council have done in terms of climate change and oil vulnerability. The City of Stirling here in Western Australia have also put

a lot of effort in, because a lot of the services provided by local government are fuelled by diesel and if there is a problem, their services suffer. Those two cities are doing quite good work.

CHAIR—Why don't you give us a very quick overview of what the City of Stirling is doing?

Dr Worth—Basically, they start at the top with their managers, and they are doing public education, as Mr Rose has suggested is needed. They are preparing a plan for maybe working with other councils to get biodiesel supplies to replace diesel. They are also investigating the options of compressed natural gas to run their trucks. In the City of Stirling's case, they are looking at providing employment and living opportunities in the city of Stirling, rather than in the CBD. That will also increase efficiencies of trains because, rather than having people come unidirectionally, there will be people going back to the city of Stirling to live and to work. Some of that is long term, but a lot of it is also very short term. Last year they were looking at diesel at $1.80 a litre and what would happen to the services that the city could provide on their limited budgets.

Mr Rose—It is worth mentioning, too, that our bus fleet here in Perth is largely converted from diesel to compressed natural gas, which is essentially methane. That is potentially a sustainable fuel, it is lower emission than diesel, and those buses work very well and are quieter and less polluting than diesel buses.

Senator HEFFERNAN—What do you think the source of biodiesel will be?

Dr Worth—There are various sources, but a lot of it will come from agricultural waste. In Tom Price, the local government there provided funds to an Aboriginal cooperative that built their biodiesel source from waste oil and, in fact, when the diesel ran out—because they rely on shipments by truck to get their diesel—that Aboriginal cooperative kept the town going for 10 days with their biodiesel. It needs to be renewable, I think—certainly in terms of economics. The WA Farmers Federation are doing a lot with their members in small cooperatives because, in terms of economics, you do not want to transport this stuff very far. It needs to be renewable; it is probably agriculture based.

Senator HEFFERNAN—But not competing against foods?

Dr Worth—No.

Mr Robinson—Could I add to that? Certainly biodiesel is very important, as is ethanol. There is a graph here. Because of the sheer volume that Australia uses, even if we turned all of our 20 million tonnes of wheat per annum into ethanol, and the same with biofuels—and they are very important at a local level, particularly for regional areas, for people running their farms and things—they would be inconsequential for Australia's transport oil needs.

CHAIR—Fortunately, we are not going down that path.

Senator HEFFERNAN—So why don't we go to thorium?

Mr Robinson—It is a bit hard to run a plane on thorium.

Senator HEFFERNAN—But as an energy source?

Mr Robinson—ASPO-Australia is interested in liquid fuels for transport, and I do not think there is much relation—

Dr Buckee—It is energy density. The oil here is—

Senator HEFFERNAN—No, I am really talking about power generation and smart cars and—

CHAIR—Sorry, gentlemen, we might just tweak it back to public transport. I think that would be helpful. Sustainable energy is very important; I agree with that.

Dr Buckee—Somebody asked the more general question: 'Well, who's doing it well?' Having lived for a long time in Canada, which is wrestling with the same problems, I then went to London, and nobody uses a car because the magic Oyster does everything pretty well. You have this one thing and it works on the tube, the buses, the rail—everything.

CHAIR—But there is also a congestion tax there that has helped, hasn't it?

Dr Buckee—I talked to taxidrivers. They do not think it has done anything at all. It is just that different people have gone into the middle.

CHAIR—That is amazing, Dr Buckee, because there have been witnesses who have come to us and held up the previous Lord Mayor Livingstone's work. His great congestion taxes increased the average speed in London from 11 miles an hour to 19 miles per hour. It is interesting that you have that view.

Dr Buckee—I just want to make that point. If we are discussing that, then that works very well. My four children and I do not have any vehicle in London. We just walk around. The second point I wanted to make is that I was in ASPO USA, and there were a lot of people there talking about advances that are based on chips. They say that chips can drive your car much better than you can.

CHAIR—Coming from Perth, I believe that.

Dr Buckee—The point is that this is going towards walking into a public vehicle, saying, 'I want to go to Mandurah,' and it will do the rest for you. You will not have to touch it.

CHAIR—It would be handy coming home.

Dr Buckee—There are a number of very good ideas being developed that are sort of light rail equivalent but on elevated tracks and using new technology. I have probably passed this all to Bruce.

Senator HEFFERNAN—Does that make allowances for kids running across the street?

Dr Buckee—It is elevated, so you have to walk up to this railcar and say, 'I want to get off at' and give the destination.

Mr Robinson—I would like to reiterate that ASPO thinks that public transport planning should start with a vivid appreciation of the urgency of preparing for short-term and long-term oil shocks, and we do not see the federal government giving that particularly high priority, and the funding for public transport federally is certainly part of that.

CHAIR—Thank you, Mr Robinson. What I have taken from your presentation, gentlemen, so far, when we talk about fiscal incentives and disincentives, is very interesting. You, Dr Buckee, live in London and say that congestion taxes et cetera do not work, so it is bringing us back to the point that—and I am not putting words into your mouth; you will soon defend yourself if necessary—if the transport system is integrated, safe, reliable, efficient et cetera, people will eventually use it, especially if the price of fuel is on the increase. Is that it in a nutshell?

Dr Buckee—And it will increase.

Senator HEFFERNAN—Did you take the wrong turn on the wrong bus? How come you are here?

Dr Buckee—I need to paraphrase the question. Why am I here? Because—

Senator HEFFERNAN—I just thought you might have got on the wrong train or the wrong bus!

Dr Buckee—No.

Mr Robinson—No, he is here by design.

CHAIR—You see, Senator Heffernan has this wonderful knack of opening his mouth to swap feet: if he was in the room for the opening statements, he would know why you are here. Are there any closing questions before we go to a break?

Dr Worth—Could I make one short closing statement?

CHAIR—Of course you can, yes.

Dr Worth—There was a question from Senator Milne earlier in the day about employment. It is really important that we look not just at saving the car industry in Australia but boosting our opportunity to build public transport rolling stock—whether it is buses or trains—and not just in Queensland. We need that spread in other states. There was also a question about the CPRS and whether that would make any difference. The advice you had from the transport department was that it would. I have provided on slide D here some information from the RAC in Victoria, showing it would make minuscule difference in terms of financial incentives and that really we need other strategies from the federal government, rather than just relying on price signals. It is really important that the federal government starts to take a lead in this area: it has been barren for too long. Thank you.

CHAIR—That is a very good point, Dr Worth. The bus industry's presentation to us could not have made that any clearer, either. They import the chassis and the engines, but everything else is done in Australia, so in terms of future employment we did hear that loud and clear. Thank you very much, gentlemen from the Sustainable Transport Coalition WA and ASPO Australia. Thank you very much for your assistance to the committee.

Proceedings suspended from 1.01 pm to 1.51 pm

CURTIS, Professor Carey, Partner, Australasian Centre for the Governance and Management of Urban Transport, School of Built Environment, Curtin University of Technology

CHAIR—I welcome Professor Carey Curtis. You have lodged submission No. 131 with the committee. Do you wish to make any amendments or alterations to that submission?

Prof. Curtis—No.

CHAIR—I invite you to make a brief opening statement before we go to questions.

Prof. Curtis—What I wanted to talk about was the state of public transport and drawing out the issues of measurement really—that was my focus—and the implication for city building and future investment. I have been given permission to show you bits of the PowerPoint. It is rather large—14 megs—so not very emailable. You have the notes page, so effectively the transcript and the slides.

We need to think about ways of measuring the state of public transport and my interest is in two key measurements. The first one is car dependency. It is really important, when we think about public transport, that we reflect on how car dependency is understood in Australia. People talk about Australians being car dependent. Phil Goodwin, an eminent professor from the UK, did a big study on car dependence back in 1995. He makes the distinction between car-dependent people and car-dependent places, and that is what I am trying to depict here. There are some other messages in that slide that I am sure you will pick up—'The love affair with the car starts at a very young age.' It certainly does.

Car-dependent people include, clearly, some disabled people, those managing young children for certain forms of travel, and people needing to carry bulky goods or heavy shopping. I noticed you had a submission from Barking Mad in relation to dogs on public transport, which is an issue very dear to my heart. I did not realise you could not take dogs on public transport until I got one, and it is clearly a problem.

Those people are car dependent on some occasions but not necessarily all of the time. I think that car-dependent places are really at the heart of the issue. A car-dependent place is where there is either no public transport or public transport is uncompetitive with the car. I think that is the crux of the issue here.

If you look at the statistics—and I am sure you have heard from Peter Newman and others—Australians own the highest number of cars. They are certainly the biggest car users, apart from the Americans. We need to look at giving people a choice. If they normally travel by car, how do we give them a choice to use public transport?

That leads me to my second measurement, and that is the measurement of public transport from the mind of the individual traveller. When you are making a decision, 'Do I travel by car or by public transport?' what sorts of things are you taking into account? This is a picture in Utrecht in the Netherlands that picks up some of these issues. Some of the questions you will ask are: 'Is

there a public transport service?' 'If there is, how frequent is it?' 'How long is it going to take me to get from door to door?' 'How legible is my journey?' 'Am I able to find my way?'

Many people are quite anxious about making public transport trips. It is not easy to understand the system, to navigate your way, to know whether you are going to need the right change, whether the bus driver is going to abuse you if you do not have the right change and so on. The other question is: how comfortable is the journey? 'Will I be able to go to the toilet en route?' 'Am I going to be able to sit somewhere?' 'Will I be able to get a cup of coffee?' 'How do I arrive there?' 'How well integrated is public transport with the car, with the bicycle, and rail to bus?'

These are important aspects. The work we have been doing is trying to model public transport accessibility. We have this new planning tool called SNAMUTS—spatial network analysis of multimodal transport systems—and we are looking at potential accessibility. We are trying to understand the accessibility of the public transport network and the accessibility of place. Our argument is that accessibility is not just about networks; it is also about what you do when you get to wherever it is you are going and whether the opportunities are there.

We are trying to quantify the existing public transport network and what happens if you improve it or modify it and the implications for where you might or might not intensify land use. This is the conventional way of measuring accessibility, so accessibility is not a new idea. Usually it is some sort of measurement of travel impediment, either by distance or by time. You can think about it in peak and in off peak. You can build congestion into it. You can cost it—how much different modes of travel cost.

Our argument in this tool is that public transport accessibility is different. Not only do people think about time, but they think about how long the transfer time is, what the frequency of the service is and where they can get to. If you have a car in Perth, you can get more or less anywhere. There are no restrictions. If you want to choose public transport instead, it does not go everywhere.

These are the indicators. There is a web link that I ought to email through to you that breaks down all of the detail of these indicators. It is another really meaty document. Essentially, these indicators pick up the ease of movement, transfers, connectivity to the whole network, catchments of residents and jobs, competitiveness with road travel, opportunity across the network and integration within the network. I am not going to go into the detail of that because we do not have time.

What I want to show you is Perth in 2008 after the opening of the Perth to Mandurah railway line. This slide shows very well the state of current public transport in Perth in terms of potential public transport accessibility. What you are seeing here is the off-peak period. We have modelled our accessibility on the off peak rather than the peak, because our rationale is that we need to be competitive with the car, so we need to serve all of the sorts of journeys that we would take during the day—educational journeys, shopping journeys, business trips—so we need to understand the off-peak period if we are going to make public transport a possibility.

What you are seeing here is a composite of those seven indicators, a bit like a traffic light system, so if it is green you have got very good public transport accessibility, through to minimal

service as you go into the red. Believe it or not, we had to add another code here, which was black, which is the urbanised areas with minimal services, so that is people that basically have a bus service less than every half-hour.

What surprised us when we produced this was how many locations were actually fairly central within Perth. We were expecting this map to mirror the work of Jago Dodson and Neil Sipe, the VAMPIRE or vulnerability map, which shows that the most vulnerable communities are on the urban fringe. We were really surprised to see fairly central areas with poor accessibility.

CHAIR—I am sorry to interrupt. Can I just ask a question as we are going, Professor?

Prof. Curtis—Yes.

CHAIR—My eyes are not all that great. Is the black the bottom bar along your colour coding?

Prof. Curtis—Yes.

CHAIR—Okay.

Prof. Curtis—This one here is saying urbanised areas without minimal service, so I am talking about some of these fairly central areas.

CHAIR—Wow!

Prof. Curtis—They are pretty close to the city centre.

Senator BACK—Is the area around parliament the only one that has got very good service?

Prof. Curtis—Yes, the CBD, and that is because Perth is essentially a radial public transport system. Everything comes to the CBD. It is assumed that you are catering for the CBD work journey.

CHAIR—You can see that.

Senator BACK—Thank you.

Prof. Curtis—It was, I should say. Things have improved. I have pointed out the black side, the minimal service, but notice that we have got areas with very good accessibility and, in my experience of working in this field, Perth seems to be the envy of other cities in Australia, and it certainly has done a good job. The opening of the Perth to Mandurah rail line opened up fantastic accessibility in these areas. I have got another slide to show you on that one. This is before the railway and this is after. So watch these places here: this is Bull Creek and this is Cockburn Central. They go from, you would have to say, appalling—that was what was written in the press yesterday. I do not want to use that language!

CHAIR—No, say it as it is.

Prof. Curtis—Okay—from pretty poor accessibility to really significant improvements. I think that attests to the fact that, if you do invest in good public transport that is competitive with the car, you succeed in improving potential public transport accessibility. There are other reasons why Perth's public transport system is envied. In the research I have been doing in the last 10 years or so, I would point to the governance of the system and the forward planning—that Perth has planned ahead and done a very good job—and its ability to integrate the rail network with other modes. In this example here, when we opened up the new railway line, all of the buses were swung around to integrate with rail. This picture here is Cockburn Central.

Murdoch station has got a huge car-park, one of the biggest on that rail corridor, and lots of complaints in the press. It is overloaded. Nobody can park there after—I do not know—7.30 in the morning. We seem to forget that 60 per cent of the people catching rail are actually coming by bus.

CHAIR—That is a problem they have.

Prof. Curtis—We have also got pretty good cycle access. It is not perfect but, relative to other cities, pretty good. I think those slides show you that, if you invest, you succeed in improving accessibility, but there is still much work to be done.

These are some of the other things that our tool can model. This one is saying that if you lived in Cockburn Central before the railway line, the areas that are highlighted yellow are where you got good public transport access, and look at the improvement by integrating bus and rail after the railway opening. We are using this tool to advise government on the land use planning side—accessibility. It was not just about the network but also the opportunities at that place. I just flick you back to these two places again, which are at the heart of my research: Bull Creek and Cockburn Central.

We spent $1.7 billion building this railway. We have improved accessibility considerably. I do not know whether you are going to get a chance to go out, but here are the car-park and a bus interchange. There is nothing to come to apart from home. There are no offices and no shops. But Cockburn Central is a little bit different. The government agency, LandCorp, are attempting to build transit oriented development there: higher density housing, civic uses and so on.

My argument is that if you invest in public transport you really need to be ahead of the game with land use and think about how to capitalise on that. Whilst it is happening here, it is happening rather late, I would say. This slide here is highlighting activity centres in Perth that have high accessibility—they were the green ones on the map—and the walkable catchments; so, within a 10-minute walk, how many people live there and how many jobs are there; within a 30-minute catchment the same sort of thing; and some pointers here as to what else ought to happen. We talk about the unbalanced node and that we need to intensify land use. It could do with more jobs or more housing.

The conundrum is the other end of this very long table, so you are only seeing the top half and the bottom half. These are the areas that have poor public transport accessibility. Some of them also have very poor land use. One of the conundrums is that if you are going to invest in public transport there is never going to be enough money. How do you make the right choices? Do you

just go for this end of the table and say, 'Let's try and improve accessibility,' or do you start thinking about how to capitalise on places that do have good accessibility?

CHAIR—Professor, I cannot read that and I cannot read it in here, unfortunately. Is there a trend? Are these outer areas?

Prof. Curtis—No. Some of them are actually quite central, so Palmyra and Melville are what we call middle ring suburbs. Palmyra is quite close to Fremantle. Melville is—

CHAIR—Quite close to Fremantle.

Prof. Curtis—fifteen minutes by car to the city. It is that pattern of that earlier map.

Senator BACK—I will probably ask you this, if I may, without repeating myself: could you provide or have you provided to the committee a copy we can read? I think it is very important, because you cannot call Palmyra and Melville outer suburbs.

Prof. Curtis—No, absolutely.

CHAIR—They are quite affluent and they are on major routes.

Prof. Curtis—I can do that today. If somebody has got a thumb drive we can download it.

CHAIR—Yes. The reproduction in the photocopying of the maps is just a grey blur.

Senator BACK—Before the professor goes on, could I just make an observation. In this morning's media, Professor Newman had been talking about investment in light rail having higher priority, but I just draw the attention of fellow senators to the domestic airport, and I hope you might comment on it. Those of us who go to or from the domestic airport are only too acutely aware of the ridiculous situation now with parking and transport to and from et cetera. We did not hear Professor Newman talk about the priority of light rail over access to the airport, but it certainly got a run in the media this morning prior to this hearing.

Prof. Curtis—I am going to go on and talk about some of the future modelling we are doing, which will pick up that point.

Senator BACK—Thank you.

Prof. Curtis—What we are working on at the moment is definitely teamwork. I am supported very much by my colleague, Jan Scheurer, who is partly at Curtin and partly at RMIT. You might catch up with him over there, I am not sure. He is the technical person behind these things. We are working for the Department for Planning and Infrastructure, pointing out the choices that might be made in terms of public transport, and we are modelling for scenarios. One of them, the one on the left, is simply to boost the frequency of the service; so not to build any more infrastructure, just to improve the frequency.

Remember, I said that people think about how long the journey takes, how many transfers there are and how frequent the service is in order to make that choice. So that is one scenario.

Then we take that plus land use and transport infrastructure scenarios, and they are extremes. When you model scenarios you always go for the extreme. This is a light rail solution which focuses future growth right in the centre of Perth and is talking about really boosting the intensity of jobs and residents and building a light rail system to go with that.

The other two scenarios are to pick up what we call the middle ring. This is a freight line at the moment. There is a view in this country that you should not mix passenger rail with freight. It is not one that I support. I think it is simply an operational issue. But you make this freight line a passenger line and you build the outer area. You pick up areas in the middle ring suburbs for employment growth. Then the last scenario is fringe expansion. So I guess it is business as usual: keep rolling the urban carpet out. There is a big heavy rail solution in there, and lots more buses. That is the kind of stuff we are modelling. We are still working on it, so I cannot show you everything, but in about a month's time I can forward that through to you.

This is the status quo: the frequency boost, light rail, middle ring and the fringe expansion. This is saying that, if you wanted to provide a minimum standard network, this is how many service hours you would have to provide for those land use and public transport network solutions. This is just one to compare it with. This is saying, 'What kind of reach are you going to achieve there in terms of hitting residents and jobs?' What we are showing there is that you would have to put an awful lot of money into fringe expansion for not much more of a return than what we have got now. The two that are the most interesting are what happens with light rail and middle ring. This is partly answering your question here. You get a much bigger benefit in terms of the number of people that you might reach with those solutions. We are now modelling one that looks at a combination of those two to try and improve even that reach.

Senator HEFFERNAN—On the bottom line there, that is your more distant suburbs, is it?

Prof. Curtis—Yes.

Senator HEFFERNAN—There is a lot of criticism around about caged chooks and animals. The further you go up the top there, the more you have got caged humans—very intense, high-density living, no open space, that sort of thing.

Prof. Curtis—I see. You mean at the fringe?

Senator HEFFERNAN—Is the balance against that, out in the fringes where it is not as viable on the spend, that it is more livable as a human being?

Prof. Curtis—That is a big question about livability. One of the issues at the fringe is—

Senator HEFFERNAN—If you have got four kids in a high-rise, it is difficult, especially if it is seriously urban consolidated.

Prof. Curtis—There may be a cultural—

Senator HEFFERNAN—Maybe you shouldn't have kids.

Prof. Curtis—Would you like me to respond?

CHAIR—Maybe you should let the professor answer your question, Senator Heffernan. You are like a machine gun, one after another. Professor.

Prof. Curtis—Okay. I will attempt livability. I think the densities in Perth are pretty similar whether you are at the fringe or in the centre at the moment. The blocks are getting smaller and smaller at the fringe. One of the things that is never costed in is the cost of transport to those households. What is going on at the fringe is that the poorer households move out there because land is cheaper, housing is cheaper, and they do not factor in the cost of having to run one or two cars, so their quality of life and their livability, I think, is highly questionable. I can look up some research and put that through to the committee to back this sort of stuff up.

Senator HEFFERNAN—We asked that question this morning on the cost-benefit analysis of the cheaper house and land versus the dearer transport and where does it come out? You can have a crack at that.

Prof. Curtis—I will point you to that.

Senator HEFFERNAN—Good.

Prof. Curtis—There is an excellent paper, as well, that has just been published in the journal that I chair.

Senator HEFFERNAN—My kids will be interested.

Prof. Curtis—Yes. On your issue about whether families would live in high-rise, we need to understand what high-rise is. The sort of intensity of development we are talking about in the middle ring and the central area would be three- or four-storey houses. That is not high-rise in the imagination of many people.

Senator HEFFERNAN—It is really not the height of the rise; it is the availability of the space to kick a football or—

CHAIR—That is a very important point, but we might get you to finish your opening statement.

Senator HEFFERNAN—I did not realise she had not.

CHAIR—No. We are keen to ask some questions. We have your time until 2.30 and it is now quarter past two.

Prof. Curtis—This is the last slide. Hopefully you can read the text.

CHAIR—I can read that one.

Prof. Curtis—And hopefully you can read the small print here, because it is important. If the Commonwealth were to take action, I would argue that we need to start thinking about investing in transport, not in different modes of transport. What happens at the moment is that the Commonwealth invests in roads. Those roads are primarily used for the freight task and, because

of the way road planning goes, essentially private households in vehicles go along those roads. If we are going to spend Commonwealth money on transport funding, it ought to be transport as a whole—so all of the modes within there—and some clear decisions should be made about how to measure best value for money, so cost-benefit analysis in its traditional sense will not cut it.

We need to think much more widely. We need to think about the least cost to emissions. We need to think about which is the cheapest option in terms of minimising fuel use, which is the safest option for the most vulnerable users, and they are the pedestrians and people on bicycles. We need to think about robustness in terms of medium to longer term use of those facilities. We need to think about how we build cities. So we need to think about an integrated solution. It is not just about building a road or a track or whatever; it is what the implications are for the city.

We need a change in culture. Public transport has for many decades been seen here as a welfare solution. It is not considered to be a transport task in its own right, as it is in other European cities. Hopefully, I have given you a very clear idea now that the majority of travellers have a choice. That is not to say there are people who cannot drive cars or do not own cars, but the majority have a choice, and we need to really think about the transport task rather than the welfare task.

I would argue that, if there is any money going, you need sound evaluation of any investment that is made. We would really like to do our SNAMUTS modelling for all Australian cities and we would ask you to consider that in terms of evaluating where best value for money might be of any investment that there is. But I would say that, because I am a researcher and I would like to do the job! Thank you.

CHAIR—Thank you, Professor. Before I go back to Senator Heffernan, I want to draw your attention to page 4 of your submission. Please help me out. I am baffled by the example of the photo from Utrecht and what that meant as part of your submission to this committee. I might be the only one lost there.

Prof. Curtis—I was trying to point out what is good about public transport. There is legibility here. You can see from a long way away what is going where. If you go to Flinders Street railway station in Melbourne, it is a nightmare. It is really illegible. It is difficult to try and work out which platform you should catch your train from. You cannot do it. You run between platforms, up and down, trying to work out where the timetables are. They tell you where the end of the route is but not the places on the way.

This is telling you what time. There is the clock. How many railway stations—or even airports—have you been to where there is actually a clock? You can bring bicycles into the station. They are banned in some of our stations here. There are places to sit; there are places to snack; there is something to watch on the telly. It is light. I was trying to show you what might be considered a good experience of public transport travel, and you can certainly navigate around the Netherlands very well on the public transport network without needing three degrees.

CHAIR—I appreciate that. Once again, I could not see it in the picture. Thank you very much for that.

Senator MILNE—My question is about your modelling. Infrastructure Australia has tried to take a big-picture analysis of the infrastructure needs across the country. Transport is obviously a large part of that. What sort of funding are we talking about if we were to say we think it is a good idea for your model to be applied across Australian cities as a tool that could inform Infrastructure Australia if the Commonwealth decided to invest more in transport, including public transport? What sort of investment cost are you alluding to?

Prof. Curtis—Minuscule in the overall picture of what consultancies seek to fund. The Western Australian government are considering extending the Roe Highway another segment, and I think there is something like $20 million being spent simply on the planning work; not building it. We are probably talking about $200,000 or $300,000. I can come back with a firm figure and show you what we could add onto that. At the moment what this is modelling is potential accessibility. We would like to put another layer on in terms of what people are actually doing, for example. But if you would like, I can come back to you with a more accurate figure.

Senator MILNE—If you would take it on notice. You said that one of the investments the Commonwealth could make would be in this kind of modelling as a universal thing across the country. We would be interested in a figure and the sort of thing that could be done.

Prof. Curtis—And what kinds of outcomes? Yes, I can do that.

Senator MILNE—Thank you.

Prof. Curtis—I said I would come back on something else. What was it? Somebody will let me know.

CHAIR—You will give us a copy electronically so that we can—

Prof. Curtis—Hopefully that will be fixed up.

Senator MILNE—Also in a few months you can provide us with the work that you have—

Prof. Curtis—Thanks.

CHAIR—You tested us then, Professor. We would rely on the *Hansard* as a prompt.

Senator LUDLAM—I have a couple of questions about the modelling that you are doing, but when you came into the room you had a bit of a laugh at the map of the Metropolitan Region Scheme on the wall. Can you tell us what that was about?

Prof. Curtis—I said I hoped somebody has told the senators that this is not necessarily how Perth really is. I sit on the Western Australian Planning Commission, and our meetings are held in the Department of Planning and Infrastructure. Most of the maps around the place are of the MRS at various points in time. That is the intent. That is the zoning. That is not how Perth really is. The flesh-coloured areas, for example, are urban deferred, so there are not even necessarily any firm plans to build in those areas yet. It is quite useful to compare it with an aerial photograph of the current built Perth. People tend to think Perth is an extremely long, linear city, and in some ways that might be true, but please look at a proper map of Perth as well.

CHAIR—Are you suggesting it is shorter?

Prof. Curtis—Yes, and relatively compact.

Senator LUDLAM—What becomes of the work, the modelling, that you have done for Perth? Where is that headed? Who is using that?

Prof. Curtis—Perth has a metropolitan planning strategy called Network City. At the heart of that strategy is the idea that you properly integrate land use and transport. If you look at planning documents back to the fifties when town planning began here, they all talk about land use and transport integration, but the reality is that it is not particularly well integrated out there. We are feeding this work into some decisions about which activity centres ought to become the strategic activity centres. It is also being fed into some of the thinking for public transport planning for those future scenarios, in terms of where you might get better potential accessibility for money.

Senator LUDLAM—There was some really interesting work presented to us in Canberra by a researcher who had a proposal for corridor style development in Melbourne, a bit similar to what they already had, that would look at intensifying the corridors just along the existing tramlines. I think he put 700,000 people along those corridors without expanding Melbourne's urban footprint. Is there anybody doing that kind of work in Perth? What we are getting is simultaneously some thought of intensifying the strategic nodes but also west-sprawling without too much inhibition onto the Swan Coastal Plain, so we are getting both forms of development here.

Prof. Curtis—This is the scenario here, when you intensify development. With the lights on, you may not see so clearly, but this framed pinky-purply colour is the area plan that would be intensified to accommodate the next 20 years of population growth. It is actually a long corridor. It is not necessarily a big, tall canyon. We actually have some photographs of the type of development that you could build on here. It is certainly not huge high-rise, but along these corridors and very central.

CHAIR—Can I ask a question along those lines, please, Senator Ludlam? Professor, with the scenario for light rail, I notice there is no proposed light rail plan for the major industrial areas of Welshpool and Kewdale.

Prof. Curtis—And you are asking me whether there should be?

CHAIR—I have to put my hand up. I spent most of my working life around there before coming here, and public transport has always been a problem out there.

Prof. Curtis—Good point. I will feed that one back to Jan and ask him why, what is going on, because it is certainly going up to Balcatta.

CHAIR—And Osborne Park, yes.

Prof. Curtis—Balcatta is probably more the type of employee that you would find at Welshpool. This is also picking up the domestic airport. That was a question—

CHAIR—That is a good point, sorry. Senator Back has also mentioned that Canning Vale is not on there as well. I understand that Welshpool-Kewdale is a lot bigger, but Canning Vale is expanding at a rapid rate of knots.

Senator LUDLAM—Just to confirm, you intentionally were concentrating on the inner city. This is not a middle ring scenario.

Prof. Curtis—Yes, and this is not the ultimate scenario. What we have actually done is model three extremes.

CHAIR—I understand, sorry, and I am not going to get into a blue with you. Let's look at areas, but Cannington to Welshpool and Kewdale is five-eighths of nothing in terms of kilometres out from the city.

Prof. Curtis—Jan Scheurer would answer this better than I would.

Senator LUDLAM—Sure. He is appearing in Melbourne, I think.

Senator MILNE—On this issue of intensifying along those corridors, to take up the point that Senator Heffernan was trying to make, in most European cities where there is a cultural acceptance of high-density living, a lot of apartment dwellings and so on, they have also planned for considerable parks and public space as recreation areas. If you are going to an intensification scenario along those transport routes, is there any integration with the planning authorities about recognising the need for more public open space and recreation in the light of higher density?

Prof. Curtis—That question may be more of a concern in other Australian cities. Certainly in Western Australia we have had a standard in planning of providing 10 per cent public open space, which is actually a very high standard. Some people would argue that we are actually oversupplied with public open space.

Senator MILNE—Are you saying it is not an issue?

Prof. Curtis—I am not sure it is the same issue. We have also had the benefit of the Western Australian Planning Commission and the Metropolitan Region Improvement Fund, which enables that public open space to be bought, provided and preserved, so it may be a bigger issue, in terms of a shortage of public open space, in cities where there is not that same level of regional planning, where the planning is really occurring at local government level and it is fairly ad hoc and fragmented.

Senator MILNE—That is my issue. The problem we have here is that all these planning scenarios take place independent of each other and you do not end up with an integrated plan.

Prof. Curtis—Yes, that is absolutely right. You must plan in that way, on that argument.

Senator LUDLAM—You have said in your submission that you cannot assume that the private sector will increase intensive development where we increase accessibility. So what do you think are the factors that would make that happen?

Prof. Curtis—This is an area where I think we really need some good research. I am almost at the point of completing some work that has been mapping what land use we have around our 69 stations in terms of residential and employment uses—and public open spaces picking up—but it is looking at how intensely that land is used around public transport and then comparing what town planning schemes have zones, so the intent. We have modelled the Valuer General's Office figures for actual land use in 2001. I think we are showing that about seven of the 69 stations have higher density development, and I am using that word with caution. I am talking about anything over 15 dwellings per hectare net.

If you look at town planning schemes—and we have mapped those now—67 of the 69 stations are all intending higher residential development, but when you look at there, it is not happening. The only places it is occurring are Subiaco, Cockburn Central and East Perth, and they are all development authority sites. They are where the public sector has had to come in and take the initiative. One of the reasons I think it is not happening is that it is too easy for the private sector to develop at the fringe, and they get an awful lot of subsidy to do that, but I have never been given the money to test that. I have only seen a back-of-an-envelope calculation as to what sorts of profits are being made for development of the fringe. I think one of the problems is that we are not good at steering private sector development to places where people would benefit from the accessibility that that creates.

Senator LUDLAM—We are taking a place at the table after more than 10 years absence. What would be the first steps? What are the most important things you think the Commonwealth could do?

Prof. Curtis—I think the Commonwealth showing an interest in urban planning would be an absolutely wonderful thing, looking more fully at how much it costs to keep extending the urban area. The department of housing here are anxious about Network City because it talks about bringing people back into the centre—for good reason: to give them good public transport accessibility—but they are concerned about the land costs and whether they can supply cheap public housing. But it is a very narrow view because, as I said earlier, it does not really cost what it costs people to live out there.

We have not been successful in planning—and Western Australia arguably has a very strong planning system relative to other states—and we have not been successful in steering employment out to centres beyond Perth. Perth CBD has actually spread, which has made it quite a challenge even to serve work trips here by public transport, with offices beyond walking distance. Does that answer your question?

Senator LUDLAM—The most important thing would be to take an interest in urban planning so that we are not just spending money on people's pet projects?

Prof. Curtis—Yes.

Senator LUDLAM—That is good.

Senator MILNE—And transparency of the real subsidies and costs of the fringe belt, because that is not clear.

Prof. Curtis—Yes. I have only talked about one cost. There are many others.

Senator BACK—I would like to agree with you about not being comfortable with the information flow. You made that comment when you spoke about Utrecht. Professor Curtis, you mentioned the situation with regard to Roe 8 and you have not been invited to be involved in that process. I will make sure you are.

Prof. Curtis—Thank you.

CHAIR—There you go!

Senator LUDLAM—The point of that was that, for what we are spending on one section of freeway, we could actually roll that sort of work out across the entire country and then some.

CHAIR—Thank you very much for your assistance to the committee, Professor.

[2.35 pm]

MACKENZIE, Ms Michelle, Executive Manager Infrastructure, Western Australian Local Government Association

MITCHELL, Mr William McLennan, President, Western Australian Local Government Association

CHAIR—I welcome representatives from the Western Australian Local Government Association. Do you wish to make an opening statement before we go to questions?

Mr Mitchell—If I can, please, Chair. What we are doing is, hopefully, having our late submission handed around. We did not have an opportunity to put this up, but at the request of the committee late last week we have agreed to appear before you and put some written information in front of you. If I can speak very briefly to that, we will then be very happy to take questions.

The preamble is just what we are about. It should be noted that the association represents every council in the length and breadth of Western Australia, which is fairly unique in itself. We also noted that 'public passenger transport infrastructure and services' is not defined by your committee, so we would like to put our own definition around that and say that it includes buses, ferries, taxis, fitted track vehicles, such as trains and light trains, and aircraft—all of those in Western Australia provide regular public transport services—and the infrastructure required to maintain those services.

One of the critical matters—and it probably follows on from Senator Ludlam's last question of the previous speaker—is that we see that there is an urgent need to have an integrated land and transport system. That is lacking, we believe, in Western Australia. That system should consider equity and, in particular, rural and regional Australia.

Local government generally does not have responsibility for public transport in Western Australia. However, we do contribute quite substantially in funding and in kind, although we are not legislated to do so. We do so for the management of the local roads that are used by buses and taxis, the provision of dedicated bus lanes on local roads, the provision of non-core bus stop infrastructure, the provision of road and street lighting and, quite importantly in the rural and remote areas, the provision of airport infrastructure. Local governments own and operate a considerable number of regional airports. The provision of these transport services is a joint provision in service with state government.

In relation to the provision of community transport infrastructure and services, we feel that local governments have had to step up to the plate because of inadequate or nonexistent services, and that is certainly the case in a lot of our rural centres and rural populations.

Local government in many cases takes the lead role in development and funding of integrated transport systems, and you will see that in the examples that are part of this submission. We give quite vivid examples of how regional councils are involved and the costs that are involved to

those councils. Historically, local governments have been responsible for funding bus stop infrastructure in Western Australia. However, on clarification of legal advice in 2007, there is not a requirement for local governments to do that. In the past they have been funding the bus stops, the shelters and so on, none of which are a requirement of local governments.

A positive Commonwealth initiative certainly we feel has been the Infrastructure Australia program, and we note that this particular body is one of the various bodies that can recommend specific programs to Infrastructure Australia for investment in transport infrastructure and in general. That is something that we do applaud.

Another point we would like to make is that, for the majority of our remote Aboriginal communities within rural and regional Western Australia, there is simply no access to general public transport. That follows a number of case studies, ranging from metropolitan through to the regions. I think you will find about six of those. Then under section 5, the assessment of the benefits of the public transport system, we have broken that down into a number of parts, starting with road safety benefits, and that is certainly quoted in a number of published road safety strategies—that there is certainly a road safety benefit in the increased use of public transport; the environment and climate change—simply the greenhouse emissions that are put out by passenger vehicles as opposed to getting more people onto public transport; oil vulnerability, with peak oil production now upon us; equity and access for those who cannot drive, whether they are too young, whether they are disabled, whether they are too elderly; the economic efficiencies of one or two people in vehicles as opposed to use of public transport. The integration of cycling and pedestrian initiatives, of course, is all part of that linkage.

Just finishing up, Chair, it is the section 6 measures by which the Commonwealth government could facilitate improvement in the public passenger transport services and infrastructure, and I do not propose to run through those but there are a number of examples, ranging from offering the fringe benefit tax on motor vehicles through to the support of major public transport pieces of infrastructure, whether they be airports or whatever. The final case is the impact of the Carbon Pollution Reduction Scheme on road construction and maintenance activities, which is something that is a bit of an unknown at the moment, but if that scheme does come into vogue, then all of the costs of building, maintaining and running roads as opposed to rail links, light rail et cetera, will be balanced out with the Carbon Pollution Reduction Scheme.

CHAIR—Thank you, Mr Mitchell. Ms Mackenzie, did you wish to add anything to the opening statement?

Ms Mackenzie—No.

CHAIR—If not then I will go straight to questions.

Senator LUDLAM—Thanks very much for your submission and your detailed opening statement. If local government does not really hold a core responsibility for providing public transport, but I would suggest, I suppose, that land use and planning would be a vastly more important role for local government, to what degree are councils considering the provision of public transport when planning new subdivisions, for example?

Mr Mitchell—Certainly most of the subdivisions now are done on the basis of being able to walk to transport or walk to shops or wherever. The provision of that public transport, as you say, although it is not a key responsibility of local government, tends to come back onto local government as a community service. The CAT buses that run by this building, for instance, are provided out of the parking revenue and so on for the City of Perth as a service to their community. So although we have the urban planning issues that we can certainly have our say in, there is a community demand that councils play some role, and they tend to play a bigger role in the more remote and rural areas.

Ms Mackenzie—The previous speaker mentioned a number of state planning policies, such as Network City; there is a Liveable Neighbourhoods design code. Certainly councils use those state policies in planning subdivisions, and one of the issues is the conversations between state and local government around that subdivision planning, and with the developer. In one of the case studies here—on page 9, I hope, of your copy—the City of Stirling has certainly taken the lead in planning subdivisions and integrating transport as part of the subdivision process.

It depends upon the capacity of the current transport system to integrate with any new subdivisions, so some councils are well placed and some not so well placed in terms of that integration. What the councils are finding is that they are often now taking the lead in developing integrated transport strategies that will guide subdivision or development. The challenge is, in a metropolitan area where you may have 30 local governments, to make sure it is all connected across the region, and that is where it is really critical that the state government sets that blueprint into which the subdivisions fit.

Senator LUDLAM—This has come up before: some local governments are doing very good work, but their domain is necessarily focused on their LGA.

Ms Mackenzie—Yes.

Senator LUDLAM—You have got a state government in WA looking after a third of the continent, you have got the Commonwealth looking after the whole country, but who does the whole-of-city plan? Where does that happen, or is it not happening?

Mr Mitchell—We have had a look at it with the Western Australian Planning Commission, with the Network City network in Peel. In fact, that diagram has expanded on the old metropolitan regional scheme and basically followed the rail line down to Mandurah and so on. So there is a much more integrated package. Of course, local governments are quite involved in the consultation and drawing up of major schemes such as that.

Senator MILNE—You say in your submission that one of the big gaps in public transport is in remote communities in Western Australia, particularly some of the Indigenous communities that you have mentioned there, where there has been an attempt to provide buses—a Saturday bus or a Sunday bus or whatever—but it has not really been very successful. Do you have a solution? It is a complex problem, but I am interested as to whether there has been any real analysis. What is the solution? Do we need to provide greater frequency and so on, which would need to be heavily subsidised because you would not have the volume use. I am interested to know whether you have actually looked at it and thought, 'What is the ideal scenario in the event that it could be costed?'

Mr Mitchell—We have not. But because of the great distance between most of these communities, aircraft are the only way to go. A number of the larger communities do have RPT runs for both personnel and for stores, and I believe that is subsidised by the Commonwealth. When they actually get to the other end, though, it is normally local governments that need to maintain, build, resurface et cetera those airports. Of course, the other part of that equation is that a significant number of those landing strips are not sealed and, therefore, are not all-weather strips, and they exist in the tropical north, which means they can become unserviceable very quickly.

Senator MILNE—So who is actually looking at public transport provision for rural and remote communities? Is that the Local Government Association? Is that the state planning authority? Who is looking at that? They are the sorts of funding issues that are not coming forward.

Ms Mackenzie—I can only speak from personal experience. I worked at the Town of Port Hedland for about eight years, and we had a number of Aboriginal communities that were 15, 20 kilometres out of town, and the council bit the bullet and put on a community bus. There was no way the state government was able to or willing to put on a public transport service in the traditional sense.

CHAIR—Where was this?

Ms Mackenzie—The Town of Port Hedland. It was enormously expensive. The council had to buy the bus, had to maintain the bus, had to do the bus timetabling, and there was no scope or capacity at that time—and we are talking five years ago—for the state to provide a service. The conversations with the communities were about, 'Should this be a service that the community council should run?' but for a whole lot of reasons it was not able to take that on at the time. That was only possible because 15 kays is not a long way from the town centre. When I lived in the Kimberley, I was 260 kilometres south of Halls Creek. There is no way you could have run a bus service, for weather reasons—

CHAIR—Were you at Balgo?

Ms Mackenzie—Yes, I was at Balgo for three years. As the president said, the only public service was the aeroplane. That was critical in terms of a whole range of health, medical and community services. That is why we have highlighted in our submission from WA that air transport is a real public transport service in this state. I am not too sure if it is the same in Victoria or Tasmania.

Senator O'BRIEN—To the islands it is.

CHAIR—I am sorry to come in, Ms Mackenzie.

Ms Mackenzie—That is all right. I am finished.

CHAIR—Senator Back wants to follow on from a question and I have a question too, if you do not mind.

Ms Mackenzie—No, not at all.

Senator BACK—I also want to focus on this, for the obvious reason of the absolutely essential aspect of airport maintenance, remotely, for Western Australia. You mentioned 1994. Since I was involved at that time, if my memory serves me correctly, that was a time when the Australian government withdrew a lot of its activity. We were very lucky to get the last of some of their stores for permanent lighting on an airstrip that had a high use of RFDS services. As you say there, it was from 1994 that the Western Australian government contributed to the development of regional airports. The statistic you have noted there is that there was a demand in 2005-06 totalling $20 million and a further $8 million estimated as a result of audits. That is $28 million. Can you tell us how much did get supplied and therefore what the shortfall has been? Do you have any indication of that?

Ms Mackenzie—Yes. The Regional Airports Development Scheme—and do not quote me on *Hansard*—

Senator MILNE—We will not hold you to it. It is a recollection.

Ms Mackenzie—certainly did not meet the $28 million. I know the state government has topped up and broadened the scope of that scheme, but I am thinking $5 million per annum.

Mr Mitchell—It is in the vicinity of $5 million, I believe.

Senator BACK—I ask the question, of course, because at the time a group of us—and I recall you being one of them—were disgusted and very concerned by the Commonwealth's unilateral withdrawal and the timing that they gave us to make our adjustments. Would it be your recommendation to this committee that the Commonwealth should re-examine that decision? It perhaps affected Queensland also and, as Senator O'Brien has just said, Tasmania's offshore islands, but it had a profound impact on Western Australia, as I recall.

Mr Mitchell—You are quite right, and it continues to have a profound impact on the remote airstrips or airports from when the Commonwealth changed their rules and regulations. For instance, only two years ago there was the airport security issue for jet-compliant airports. Councils in Western Australia, who own the majority of those regional airports, had to put in equipment that would initially detect explosives. Even though the equipment was part of a grant of between $300,000 and $600,000, there are significant costs in fitting that into the infrastructure of the airports, and then having the conveyor belts and the partitioning and the lot that goes with it. It did not seem such an impost about six to nine months ago when there was a lot of mining traffic going through those airports and therefore, on a per head basis, you can start to get economies of scale. That has significantly altered in the last six months.

Senator BACK—I think members of the panel need to understand the flow-down effect, one of which, of course, is the necessity to collect landing fees. I recall at that time the RFDS being very concerned because they were not going to be immune from landing fees and, in a different context, when we introduced water bombing aircraft initially to Perth, there was the argument I had both at Perth Airport and subsequently Jandakot because they were going to be demanding full landing fees every time the water bombers came down to ground to refuel. Those are the

flow-down effects. We need to be aware of that and we need to examine it because, especially for our remote areas, it imposed a huge burden which I do not believe was fair.

CHAIR—While we are on the regional case study of the Shire of Roebourne, three places—Karratha, Dampier, Wickham—are mining; Roebourne is an Indigenous community, and if it were not for the government infrastructure, there would be absolutely nothing there; and Point Samson was originally for fishing. I started running in there as a young truck driver in 1979. I go back to the days when if you were Aboriginal you were turned around as soon as you got to Karratha. You were not allowed into Karratha. I do not want you to comment on that—but feel free if you want to.

But I go back to those days when those towns were run by the mining companies. Quite simply, if you did not have a job, you did not get into that town for accommodation. Whether it be Hamersley Iron or Cliffs Robe River, all the employment was done from Perth. With the greatest of respect, yes, it is a problem and I accept that. But would you agree, back in those days the mining companies had responsibility for everything? I am certainly not having a go at your regional case study, but it is all very well to say that government—whether it be local, state or Commonwealth—is the presumed baddie because it will not tip in for public transport, but the mining companies have a serious role to play here.

The mining companies can come out and tell us how great they are doing and how wonderful they are and what a fantastic playground they have put in, but I am defending all tiers of government here. If you are going to use regional studies and you are going to use the greatest offshore hydrocarbon and gas industry and the largest port in our state and are looking to treble your output, there is some responsibility from our corporate captains as well. Now I will take some commentary on that.

Mr Mitchell—I certainly agree with you, and I believe that they are chipping in, in probably the right amounts. Those companies have been protected in the past by state agreements. Now that those towns have been normalised, we are about to open the door to allow councils to rate appropriately their infrastructure within those towns. If you stick with Port Hedland and the contribution that the mining companies make, the Town of Port Hedland has revenue in the order of $20 million per annum that it expends for looking after the citizens of Port Hedland. I believe that, prior to the economic downturn, they were paying the federal government $20 million a day in royalties. There is a bit of equity there as well.

CHAIR—That is a very good point, because—getting off the track a little bit—we have got this nonsense up there in Port Hedland about Mirtanya Maya. We can't even get that damn well sorted out. But I will not go into that.

Senator O'BRIEN—Mr Mitchell, I want to put to you the theme of a number of submissions that we have had about what essentially is your submission 4.3, 'Creation of resilient cities through integrated land use and public transport planning'. The implication, if not specifically set out in the submissions, although I think in some cases it was, was that one of the impediments to that is the NIMBY principle—'not in my backyard'—and that is run through local government bodies in various cities, whether it be Perth, Sydney, Melbourne, Adelaide or wherever. What is your organisation's attitude to the conflict between the need for the creation of these resilient cities through integrated land use and public transport planning and resistance

from particular local government bodies about the creation of those sorts of cities because of the desire not to change the character of particular parts of cities?

Mr Mitchell—Perth is fairly unique in that the CBD itself, I think since 94 when it was broken up, has been very small. The capital city is basically the CBD, which is very unusual. They run a CAT bus service that is the envy of their neighbours, but I believe that they are working with those neighbours to extend that service possibly through to the coast, and certainly to the university and hospitals and things of that nature. I do not think that holding the cards very close to the chest is the way of local governments these days. They are looking very much to cooperate on a regional basis. In Western Australia at the moment we are going through a structural reform climate, whereby we are encouraging all councils to form regional groups and to look at service delivery on a regional basis, and transport is certainly one of those services. There are obvious connectivities and connections with different municipalities.

There are 30 councils in the metropolitan and Perth and Peel region and you can see it is quite a large area. One of the diagrams that was put up earlier stopped at around about Scarborough beach. I do not know if you noticed that. There was nothing going north of there. From about there north in the cities of Stirling, Jingalup and Wanneroo you have got about eight-twelfths of the metro population—in excess of 800,000 people out of 1.2-odd million. If you were trying to get people to come in and go out, then that is an issue. But, no, I think cooperation is very much to the fore with local government.

Senator O'BRIEN—So, where there are proposed transport corridors and a desire to increase density along those corridors to make efficient use of them, you are suggesting that there would not be a problem in the Perth region in achieving that?

Mr Mitchell—No, because in Western Australia the Western Australian Planning Commission sets the R-codes. It sets the densities, not local governments. They can appeal and apply to have that changed, but it is WAPC that has that overriding power, and that was mentioned by the previous speaker. That is probably one of the more powerful state bodies.

Senator O'BRIEN—What, if any, impediments exist to achieving that in Perth?

Mr Mitchell—There is possibly a need to look more at regional planning rather than individual town planning issues. That is certainly a way to get uniformity from street to street. Even though there are the overarching rules, you can still get down to different levels of governance by different councils, which can slow things down or speed things up, and different levels of expertise.

Senator O'BRIEN—And in terms of population density, does your organisation have any policies about current densities in places like Perth?

Mr Mitchell—Yes, certainly. As I said, we are working very closely with the WAPC on Network City, which is basically a program that will see the population of Perth and its surrounds grow by 400,000, I think it is, in the next four or five years, and how are those people going to be housed and where is the work going to come from for those people if they are housed in particular areas? We agreed with the previous government and we agree with this government that there needs to be a combination of infill and new green land developments. In

that outer metropolitan area it is quite obvious where the new developments need to go but, in terms of infill, they need to follow transport nodes around areas that have access to rail and public transport and road public transport.

Senator FISHER—Ms Mackenzie and Mr Mitchell, thank you for your definition of 'passenger'—the terms of reference, essentially, of the inquiry. I noticed your reference to 'land' and I noticed your reference, very importantly, to 'rural and regional'. Whilst outside the terms of reference, I think, of this inquiry, I understand that Co-operative Bulk Handling has announced in the last couple of days that it is having difficulty bringing harvest to town. Indeed, it can manage to bring only about 30 per cent of Western Australian grain farmers' harvest to town or to port in time, and it is appealing for assistance to do that. Particularly bearing in mind your appropriate emphasis on integration of transport services—so, whether it is passenger or otherwise, it all impacts on the end-point equation—would you care to reflect on that or make a comment about that in the context of this inquiry?

Mr Mitchell—Thank you, Senator. That is certainly another direction that we have been taking for a number of years now. I think it is well known that the rail infrastructure, the ground infrastructure, has fallen away in recent years and it has not and will not enable those volumes of traffic to be carried at the necessary speed in the future. We have been talking about a railroad rescue for some years now, and probably we are two years late—it should have been addressed during the boom times—but it certainly will impact a great deal on our local road system.

There are two packages that we are speaking about. One is a $400 million railroad, which is a combination of resleepering and some roadworks—on main roads, not on ours—and a contribution from the cooperative grain people so that they get quick empty and load facilities. The second is that if Co-operative Bulk Handling, as they have indicated to us, change their grain receival points to a primary, secondary and satellite system and rejig things, it is quite clear that if things stay the same and the same amount of tonnage is carted on rail, we will probably need about another $400 million to upgrade local roads to be able to handle that product from farmer's gate to port.

It is an issue that needs to be looked at. It is not as simple as just upgrading a rail line. I think it is a combination of a hub-and-spoke scenario. Not all the grain comes through Perth, of course. We have got Geraldton in the north and Esperance in the south-east and a couple of ports in between that handle grain. There are issues with being able to fill those grain boats to capacity and get economies of scale in some of those ports, but that network is very much at the forefront of our mind at the moment.

Senator FISHER—Is there anything that you think could be done within the terms of this inquiry to assist?

Mr Mitchell—Again, it is an infrastructure issue. If this inquiry were making a series of requests to Infrastructure Australia and prioritising those requests, then certainly that $400 million one-third Commonwealth, one-third state, one-third industry would be at the top of our hit list.

Senator FISHER—The grain harvest is a pretty significant contributor to Western Australia's economy.

Mr Mitchell—Indeed.

CHAIR—In all fairness, it is a very important issue, Senator Fisher, but that is not public transport. But we are far-ranging in this committee.

Senator FISHER—Thank you.

CHAIR—That is quite all right. And we all agree, on this committee, on whatever is best for Australia. In winding up, Ms Mackenzie, what were you doing in Balgo?

Ms Mackenzie—I ran a women's resource centre.

CHAIR—I just lost a $2 scratchie! I thought you might have been a teacher. I lost to Senator Milne. Senator Milne was correct. We do thank you very much for your assistance to the committee, and I will pay that $2 scratchie when we get to Melbourne, Senator Milne. Thank you, Mr Mitchell. Thank you, Ms Mackenzie.

Proceedings suspended from 3.08 pm to 3.33 pm

MARTIN, Professor Gregory Stuart, Executive Director, Planning and Transport Research Centre, Curtin University of Technology Australia

CHAIR—I welcome Professor Greg Martin.

Prof. Martin—Thank you, Chair.

CHAIR—Last time I spoke to you, you were 'Mr' Greg Martin, so congratulations, Professor. Do you have any preliminary comments to make?

Prof. Martin—Thank you. I am the Executive Director of the Planning and Transport Research Centre. The short name is PATRC. That is based in Curtin University of Technology but it is a collaboration of the four public universities in Western Australia, so I have four university shareholders and two government departments: DPI—Department for Planning and Infrastructure—and Main Roads Western Australia. I have six shareholders supporting this centre.

CHAIR—Thank you, Professor. You have lodged submission No. 133 with the committee. Do you wish to make any amendments or alterations to that submission?

Prof. Martin—No, I do not.

CHAIR—In that case I will invite you to make a brief opening statement before we go to questions.

Prof. Martin—Okay. I understand that you are more interested in the questions and that suits me fine. My comments are based on public policy and a practitioner view. It seems to me that one of the things that is really important in considering public transport is the purpose for doing so. What are the policy objectives you are trying to achieve? There are many occasions when people have the idea of, 'Let's do more public transport,' and that is legitimate, but it is against what background? Public transport is very expensive. It is expensive in both capital and operational costs, so you have to make sure that that asset and operational cost is going to be well used, and one of the really crucial things is how you are making sure that your investment in public transport is doing a really good job.

That takes me to talking briefly about land use planning together with public transport. While in Western Australia we are doing very well—I think the Public Transport Authority whom you have heard from today, is doing well in the national scene, by a national comparison—there is always the challenge of how the next money is spent and is it spent in a way that is going to enhance the performance of public transport in serving public policy objectives. I could talk a great deal, Chair, but if there are questions I would prefer to respond to those rather than keep going on and on.

CHAIR—Thank you, Professor Martin. That is appreciated and we will go straight to questions.

Senator MILNE—Earlier today we heard from Professor Carey Curtis from the Australasian Centre for the Governance and Management of Urban Transport. We are hearing from a lot of academics and academic institutions and research centres such as yours, all coming up with different proposals about what the Commonwealth should do as a priority. One of her suggestions was that the model that they have developed, SNAMUTS, should be adopted by the Commonwealth in greater transport planning across the country. I am interested in what you think are the priorities. If the Commonwealth were to take an active interest in public transport for the first time in a decade, what do you think would be the most useful engagement?

Prof. Martin—The important thing for the Commonwealth is to ask: in what context is public transport being promoted and what are the things that make it a worthwhile investment? I would come from that perspective. I am not familiar with the particular model that Carey must have relayed to you. I do think research is important, because there are a lot of things that people are pursuing intuitively which are not really proving out in practice, so it is easy to spend a lot of money but are you really achieving end results? For instance, you have probably heard about transit oriented development in your going-around. I do not think people have really got a good handle on that yet, because we have got a cultural background where people are used to driving cars and are expecting to have parking wherever they go. I think in developing these centres, if you are going to make them larger and have them around a public transport hub, then you have to make sure that it is an attracter which does not really require people to use cars.

I am answering your question in the sense of: know what you are setting up; how is public transport playing its part; and are other things compatible with making public transport the preferred alternative for getting there and getting away from there? The difficulty at the present time in Western Australia is that we are pursuing transit oriented development options and we have identified a very large of locations—40 or 50—and my concern is that we are not looking at the cultural change that is required to make those work in a way that I think is ideal. We still have low density, low viability, low attractiveness for some of those centres. I think you have to do that at the same time as you are trying to make public transport work for you.

Senator MILNE—Coming down to a very practical level then—parking policy or parking incentives, disincentives and so on—what is the most useful thing you could do in terms of planning policy or parking? To tackle congestion, people talk about congestion taxes as being one way to go. What do you think we should do about parking?

Prof. Martin—If you are talking short term, what you need to do is look at areas of high-level activity now, where people are wanting to live where they work and play. They are the sorts of places that should be reinforced and given more strength. You have still got box shopping centres, you have still got remote shopping centres not on mainstream public transport routes, and it is very difficult to assume you are going to get rid of cars in those circumstances, so you have to look at those centres where people are not needing to use cars and try and reinforce that. Whether that is a strip or a location, that is where I think there would be support for using public transport and not being required to provide as much parking.

Some of the town planning rules require parking. Even if you have a small business that you are trying to set up, some of the town planning rules require you to have so many parking bays because they are worried about people parking on the street, but I think it is a deterrent to small business to have to find extra land on which to put half a dozen parking bays, and if there are,

isolated, half a dozen parking bays around the place rather than a major parking area, I am not sure that it is very valuable or very useful. It comes back to: what is local government trying to do?

Yes, you do need parking but you also need some strategies for that parking, be it time based, paid parking, whatever, so that you have got a chance of having people thinking about alternatives. It still has to be an attractive place to go, people still want to go there, it still has to be viable, but you are encouraging people not to use motor vehicles to get there.

We have a Canadian coming here on Wednesday afternoon, from British Columbia. He was recommended to us by Dr John Rennie who visited from the US last year. He has written a book which is supposedly one of the be-all and end-alls in parking management and strategies. My organisation is bringing him to Perth. He has been on the east coast for the last week or so. He is coming to Perth for four or five days, and on Thursday he is running a one-day course for people here on parking management and strategies.

It is a real live issue. It is not easy, but I think what we need to do is to decide what we are trying to achieve, what we need to make some parking strategies worthwhile, and what complementary things we need to do. If you just come hard-headed with parking, you lose the viability of your centre. If, on the other hand, you do not do anything about it, you will have a bunfight, with people trying to find parking, and they will drive around and around. So you do need to find some strategies. I know I am beating around the bush in terms of generalities, but you need to know what you are striving to do, then make sure other things are compatible with that policy direction.

CHAIR—Professor Martin, this is our fourth day of hearings around the country since we started this inquiry. We have been to Brisbane, Sydney, Canberra and now we are here in Perth. There is myriad information hitting us at a hundred miles an hour, which is all very informative and it is certainly wide ranging. What has come out is that everyone is parochial about their little patch, but most of the witnesses have pointed to 'Perth does it.' I am not saying Perth has got it fantastically spot-on—I am not saying that for one minute—but we are up there, especially our southern railway link and the integration with our smartcard, which you would know about more than anyone, I suppose. But I have to ask you—because I see that you are in collaboration and supported by the government of Western Australia, so I can ask you this—how can we do it better here?

Prof. Martin—How can we do it better? I think the trunk rail service is a winner, in terms of its patronage and its growth in use.

CHAIR—What is a trunk rail service?

Prof. Martin—It means that it is on a fixed spine and, if you are on that spine, it is fantastic because you walk to the station, get on the train, go to work and come home again. But you have a lot of space in the metropolitan area that is not served on that line. So the question that I think is really important is: how do you feed those main lines? As you know, the policy or the practice that has been adopted in Western Australia, here in Perth, is to not have buses running in parallel with the rail line but to feed the rail line. So what is the capacity of the rail line? That is under pressure, as you probably heard from Reece Waldock this morning.

But how convenient is the distribution service, the delivery service, to rail stations? I have a concern that, while the coverage of the area by bus services delivering to rail stations is very good, everyone is within 300 or 400 metres of a bus stop et cetera, some of those bus routes are very circuitous. In convenience terms, they are not nearly as good as a car, where you can go much more directly to the rail station, and in fact in some of the stations people drive more than 10 kilometres to get to a rail station. If you are really wanting to get public transport to do the job that cars are doing, you have got to find a way of getting people most quickly from where they live to a rail station and without that circuitous route. You have to make sure that it is convenient and competitive.

So there really is a question about whether there is a different regime that you could adopt in terms of how you run your buses. Rather than a coverage approach, maybe a convenience approach might be more effective. It might leave some people out but it might benefit more people overall. That is a hypothesis I put which has not been tested yet. But if people are driving 10 kilometres and then trying to find a park at a rail station, the real question is about where that ultimately is going to get to. Are you going to then spend public money building multilevel car parks or do you find some other way of getting people to those stations, or do you have other routes that are heading from where they live into the city, if that is the origin-destination route that is required, rather than having people going cross-country and then coming to the city through the rail station?

So you ask, 'What could be done better?' I think the challenge is, first of all, to reduce the amount of travel that is required, if you can, so where is employment and where do people live? If you can, in the longer term, find ways of making that closer and making those options, in a generation or two, better, that would be the first thing I would say. The other one is, in the short term, can you find ways of avoiding people needing to park at the rail station? Can you either run people into the city by bus or by rail, or can you get them to a rail station in a way that does not use their car? I think they are important considerations in the medium to long term.

CHAIR—Yes. A question that certainly I have been pursuing around the country is: how do we get people to park the car and get on public transport? There have been myriad answers, including: put a reliable, efficient and safe public transport system there and people will come to it, no doubt, which I am starting to lean towards, thinking, well, that has certainly been proved. But there have also been conversations about financial disincentives. It is amazing, because there were some witnesses who said, 'Look at what London has done with congestion tax.' Then we have had other experts who have said, 'Well, that's a nonsense because of the public transport system'—the 'Oyster' card, I think, was the word used. With your vast experience, how would you have input into that?

Prof. Martin—I think congestion tax is fine, but you are talking about pricing. There are a number of things that come into pricing. Do you price access, like a congestion charge? Do you price parking? Do you incentivise public transport more? These are the sorts of variables that you can play with. If you look at the Sydney circumstance, my understanding there is that, because it has become so horrendous to try and go into the city by car and to pay the parking fees that apply, they are getting people onto public transport. That seems to be a better option to me. But then you have got to make sure that you have capacity on your public transport. That is one of the issues that is hitting Melbourne and Sydney and it is starting to hit Perth. In my

submission to you, I mentioned a report that we had done for PTA, which probably was described to you this morning. Was it described to you this morning?

CHAIR—Yes.

Prof. Martin—We did an exercise over the last year which said, 'If petrol goes up $2, $4 in 2007 prices, what sort of increase and expansion of bus and train do you need just to cope with that?' That is not changing mode share. The population is increasing, the cars increase; the mode share stays about the same but patronage increases. But the amount of bus and rail hardware that you have to buy is quite enormous, plus the operation cost. So it is fine to be promoting public transport, but I am sure government treasuries are thinking very much about: 'What's the public cost of this versus the private cost of people paying for their own car and their own fuel?' When we see fuel costs go up again, which I am sure they will when the economy recovers, I think people are going to be very much inclined to be looking for public transport, if that saves them money.

CHAIR—Are we ready for it here in WA?

Prof. Martin—I think we are ready for it, if you live close to convenient public transport. If you are not close to convenient public transport, I suspect you are not ready for it. So there is a real issue about how do you get more people in closer proximity to public transport that is taking them from where they are to where they want to go?

CHAIR—My last question to you, so that we can share it around, Professor Martin, is: what is your view on light rail? I am talking specifically Perth here.

Prof. Martin—I think light rail is a technology, but I go back to my very first point to you: what are you trying to do? What purpose are you serving? My personal view is that the notion of a light rail system from the University of Western Australia through the city to Curtin University of Technology—both those universities are in locations which are not well served by public transport—would be ideal because I think you would find a lot of students who would preferably use public transport if they could. It would be a convenient alternative for them. At the present time, all the universities are struggling with parking. In fact, at Curtin today I had a visitor come to see me who had trouble finding a short-term car park. The public pay car parking is always full, so if you have a short-term visitor they just cannot get there.

CHAIR—I have trouble finding the car parks at Curtin university! That view is shared by DPI and PTA as well.

Prof. Martin—Can I come back to your point about light rail? I think you have to know what task you are requiring it to do. If it is a task like the one that I have just described, I think that makes a lot of sense, but then you have to do it so it has right of way and it is not interfering with other traffic and other traffic is not interfering with it, and it is reliable, and you have got capacity on it. I think that is fine. In terms of doing it more generally, I think you would have to make the argument that it is really worthwhile as against a rubber-tyred vehicle.

Senator MILNE—I just wanted to ask you to table something, if you have it, or take it on notice, following up from the chair on a question I asked Mr Waldock this morning. You mention

what rolling stock we would need in the event we go to a $4 or higher petrol price and that this would be a massive amount. We have an issue now where we are losing car manufacturing in this country because we cannot compete. We have got people losing jobs in manufacturing. The question I asked Mr Waldock this morning was: what is the potential in Australia to retool some of those factories to create jobs making the rolling stock that we potentially need? At the moment this is the issue: we are trying to create jobs in a recessionary environment and build competitive advantage into the future. Have you looked at linking the kinds of projections you are making on the rolling stock with how we might use it as a regional stimulus?

Prof. Martin—I do not know the direct answer to your question. Clearly, there are railcar manufacturers and bus assemblers in Australia. In fact, Mr Alan Bray, who is sitting behind me, could answer some questions about bus assembly because his company is involved in that. Certainly it would increase employment if we had a boost in the number and the production rate of those sorts of vehicles. Whether it is feasible or sensible to retool factories to increase that capacity I do not know.

Senator HEFFERNAN—One of the things that tickles my fancy is why we actually need CBDs in the long term. When I was a kid a hundred years ago in Sydney, everyone used to go into the city to shop, to DJs and Farmer's and those sorts of shops. Now it is just down the road. Why do we need CBDs in 50 years time?

Prof. Martin—I think you will find there has been a study done in Melbourne. Have you been to Melbourne yet?

CHAIR—We go there next week.

Prof. Martin—You may ask the question, but I think there a study has been done in the last year which talks about the importance of the CBD to the wealth of the state, and I think about 80 per cent of the wealth generated in the state is generated out of the CBD, out of the metropolitan area.

CHAIR—We had a Victorian bipartisan committee come and see us and put that to us in Canberra.

Prof. Martin—Yes. I am just reciting what I believe has been stated. But there is a real question, and I think you are leading to the question, 'Why don't we have employment closer to housing?' I think that is something we should be looking to try and achieve. If you are trying to reduce the travel task and greenhouse gases and fuel use and all of those things, the less travel that is required the better, and if you are talking about the work trip, which is obviously in peak, and which determines the capacity you want in your public transport system and the congestion you have on your roads and so on, if you could find a way of having people working closer to home and not necessarily in the CBD, I would presume that is going to lead to a benefit. But, of course, you have CBDs and central city councils who are very keen to keep growing and strengthening their rate base and so on.

Senator HEFFERNAN—And to domicile people. That comes down to a question of amenity and the capacity to bring up three or four kids on the 25th floor.

Prof. Martin—Another crucial factor is: can you afford to be in the city? That is the trouble. I have been talking about densifying particular locations so that public transport at that hub works and you have got viable businesses, but it means that land and property values go up too, so affordability then becomes an issue for the average person.

Senator HEFFERNAN—But surely there is a social cost, too, if you are a family of four kids brought up in a high-rise at the back of Surry Hills, the nearest park is two miles away and you cannot kick a football outside. There is the social cost to the normality of a family in a caged cow situation in a high-rise versus—and you would definitely need a cost-benefit analysis—a cheaper home with dearer transport but with space to kick a football.

Prof. Martin—There is research going on. There is a centre at the University of Western Australia that I am connected with which is looking at the built environment and health. One of the issues is the social and health circumstances of different sorts of built development. People are suggesting that this densification be a bit higher rise and that there be smaller blocks and all that sort of thing, so that affordability is retained, but it does have those consequences. Are you providing public space that compensates for asking people to live in closer proximity? I think you can design that, but then you need to have a precinct design that takes that into account. You do not just leave it to the market to work it out. You do not leave it to developers to build on all these lots without taking into account what the total picture is. There is a need for there to be some masterminding, some master planning, so that you can have the sorts of design features that balance out the higher density and provide that landscape, that open space, that public space. You can do it, but you have to have that bigger, broader view rather than just leave it to chance.

Senator HEFFERNAN—It is interesting to go to some of those public high-rises where you have floor gangs. They are kids that are bored witless and they gang up. It is like the bikie stuff.

Prof. Martin—Mental and physical health is an important element and I think there is some research going into it now. Is saying, 'Let's get denser,' necessarily the right thing for us? In the short and medium term—

Senator HEFFERNAN—We are worried about it for cows and chooks but we do not seem to be worried about humans.

Prof. Martin—I think there has to be a design element that is built into it, looking at a whole precinct, and trying to design a precinct rather than leaving it to chance.

Senator LUDLAM—My question follows on from where Senator Heffernan was going. One of the questions in your submission is: is one-way travel, to and from the peak, the best use of our public transport investment? Is that why you are posing that question?

Prof. Martin—The reason is that the peak determines the capacity you are trying to provide. I mentioned that that public transport report that we did was all based on peak, the work trip demand: two hours in the morning and two hours in the afternoon. Unfortunately, we go one way in the morning and we come back the other way in the afternoon. If we could convert that to two-way travel—in other words, an origin and a destination in the morning and in the afternoon—then one presumes the load will not be so heavy and that the future load will not be so heavy. Maybe we have got what we have now, but, if we plan to develop some employment at

major hubs that could take advantage of the fixed rail assets that we have now, the chance is that we can moderate that growth and reduce the pull on the public purse.

I think that in the next 20 years we are going to have to think about broadening our work hours. In fact, people might select to broaden their work hours so that they are not trying to travel with all the other traffic, and we should be aiding and abetting that. The other thing is to try and develop centres so that people are going in the counterdirection, if that is possible.

Senator LUDLAM—Presumably, that would feed into lateral public transport so that it is not completely spoke and hub and people can get around the city as well.

Prof. Martin—Yes. I think you are talking about a network approach rather than a spoke-and-hub approach, because it is not really spoke and hub when you think about it. It is hub, and the main routes are the spokes, but people are having to feed to the spokes, so you have still got the issue of, 'Where are people really wanting to go?'

Senator O'BRIEN—In terms of this concept of travel in the peak, obviously one of the solutions is what you were discussing with Senator Heffernan, in a way, and that was increased density around some of the employment areas, as well as creating new employment areas in the future, which obviously involves government policy as to location of workplace, departmental location et cetera. How do you perceive communities' responses to the concept of increased density, even with a 40 per cent open space plan built around seven-storey buildings?

Prof. Martin—I think that planners using planning jargon like 'height' and 'density' frightens the pants off the average person in the street. What we should be doing is using demonstration, pictures, to talk about how things could be much better. We tend to use 'height' and 'density' and people worry about overshadowing, privacy, ghettos. All these sorts of things come to mind when we use those terms. We should use a different vocabulary when we are talking to the public. I think one of the best ways of talking to the public is demonstrations by pictures or, even better, some locations that you develop that are properly designed such that people say, 'I wouldn't mind living there. That would be a great place.' That is the first point.

The second point I would make is that not everybody is going to want to live in that sort of environment. As the senator said, people worry about open space and kicking a footy, where their kids can play and not be worried about safety issues and so on. We should be assisting people who are attracted to living in that environment. Let's play to them. That might be 15 or 20 per cent of the population. Let's look after them, and that will help the overall. They are just practical suggestions about how to deal with it. We do want density and we do want intensification, but I argue that we should be doing it in a designed way, not a laissez-faire way.

For instance, if you can look at some of the redevelopment areas in Perth, a personal view again is that we have rather left it to developers to decide the sort of building they put up and the blank walls they put on the street frontage. There is no liveliness there; there is no vitality; there are no other sorts of uses. You still have to go to where it is zoned to be entertainment or zoned to be shopping or zoned to be residential, rather than saying, 'Let's make a mix.' It does not suit everybody to have a mix, because there is a bit of noise and a few people around, but a lot of people, as in the Surry Hills example, are quite happy living in areas which are very mixed.

Do not try and convert the whole of the population; play to the people who would like that. Use that to demonstrate that that might be not too bad. People who have families might prefer to live in a particular environment, but for part of their life they might be quite happy to be living in this other sort of environment. Think about the flexibility. I am arguing that it is not one size fits all.

Senator O'BRIEN—Do you have a view on the bus rapid transit concept?

Prof. Martin—I think bus rapid transit is an option. If you want to give direct routes from an origin to a destination and you can provide bus rapid transit, it is an option. It does have the benefit of being somewhat flexible; it does have the benefit of not being as high a fixed cost. It is a matter of what your patronage is, what your demand is, whether you have a route that suits it and what the pluses and minuses are.

That brings me back to the argument. What is your purpose and what is the appropriate technology? I do not think we should get stuck on technology. We should ask, 'What are we trying to do here? What is in the public interest?' and then go down the path of deciding which is the best way to do it.

Senator O'BRIEN—Do you think it is constrained by capacity compared to other modes? In other words, should we use it for less heavy demand corridors or do you think we could spread it more widely than that?

Prof. Martin—It is about what your task is, how many people you have, what the loading is, how many vehicles you can afford to run and so on. Heavy rail is very expensive and not too easy to put in, unless you have planned it from a long way back. We have been lucky here that there have been some obvious routes that they could use, but putting new ones in is not so easy now. It is not through the inner area.

The other thing with buses, of course, is whether you have the capacity to cope. If you have the capacity to cope, then you can do express runs between particular places and then pick people up. In Perth we still have the circumstance that if you are inner city—towards the centre of the city—you can be bypassed, and that really upsets people too, if they are waiting for a bus and then find it has to fly past because it is chockers. They are issues that come back to the capacity. Do you have the capacity even to deal with the demand now, let alone trying to get more and more people to use public transport?

Senator O'BRIEN—And capacity will determine growth in a way, because if people believe that it is a convenient, frequent service they are more likely to use it.

Prof. Martin—That is right. People have become very used to convenience now, so you have to have a convenient alternative. If there is a hike in petrol prices, as there inevitably will be, is there something ready to take its place? That is really the question.

Senator O'BRIEN—Yes.

Prof. Martin—We should be anticipating that. We are having a little holiday with our oil prices at the present time, but I do not think that is going to persist.

Senator O'BRIEN—It is probably fair to say that the great public transport systems around the world have service frequencies that make a timetable unnecessary.

Prof. Martin—Yes, that is the ideal. Whether we can aspire to have that in Western Australia, with low density over a big area, I am not sure. But we do have to think about capacity, and I think that PTA report is a wake-up call in terms of what capacity is required, even if we do not have a mode share shift. Of course, people love talking about increasing the mode share, but you have got a population growth. I was in the department of transport in 1994 when we produced a metropolitan transport strategy—which was an aspirational document, I must say—which talked about increasing the mode share of public transport from six per cent to 12 per cent in Perth over 35 years.

Senator O'BRIEN—You have beaten that, haven't you?

Prof. Martin—When we look at the facts, the population was expected to grow at the same time, which meant we would have three times the number of people to get twice the mode shift, if you understand that equation—so three times the public transport usage in 35 years. The capital and operational investment has to be well recognised, and that is only getting 12 per cent, which is not sort of dominating cars by any means; we still have growth in cars. So there is a big task ahead of us here. That is why I come back to the land use planning, reducing the need to travel. I think that in the second or third generation from now, if we have not solved that problem, we will have a very congested metropolitan area.

Senator O'BRIEN—Given that Brisbane City Council obviously applies some of its rate base towards the provision of public transport, do you think that local government should, by whatever means it can, increase its rate take to improve public transport for their communities, or at least have the debate with their communities about doing it?

Prof. Martin—There is a parking licence fee in Perth. You have probably had that explained to you.

Senator O'BRIEN—Yes, I am aware of that. I am talking more generally.

Prof. Martin—Yes, I know you are. That helps pay for public transport, a Free Transit Zone and a CAT service in Perth. That is part of the pricing regime. I talk about pricing parking, pricing road use and pricing the use of a car, in the sense of that money going towards paying for public transport. It is an option. I am sure it is not going to be popular, and I am sure it has not been tested yet, but it is one of those things in the longer term that we probably should do. Make it a deterrent to use your car and have it so that you focus this pricing on making the peak period by car the deterrent. But then you have to make sure you have the capacity on the public transport system. It is all around that work trip, it is all around that peak period, that we are talking. Whether people drive on Sunday afternoon is not nearly so important; it is more a matter of that peak period.

Senator O'BRIEN—I put that question because in various parts of the world local government bodies do take that responsibility and do make substantial contributions to their public transport systems.

Prof. Martin—I suspect at the same time there is a lot of community acceptance for that. It has either come over a long period of time, or they have said that a better public transport system with more frequency is a real plus that everybody benefits from and can use. I am not sure that our community is in that frame of mind.

Senator O'BRIEN—Perhaps Brisbane is and no-one else has learnt about it.

Prof. Martin—Yes. Brisbane has the benefit of the Brisbane City Council being a big—

Senator O'BRIEN—Big scale.

Prof. Martin—Yes, and I suppose what happens in central Brisbane is seen as part of the Brisbane City Council area. so maybe it is a different circumstance.

Senator BACK—Can I go back for a moment to the importance you were placing on the public consultation process. You may have participated last year in that series of public discussions about the future direction of Perth. That wonderful seminar took place at His Majesty's Theatre, and they were focusing particularly on the 25- to 35-year age group and saying, 'In our generation, once we got job, we just simply went there,' whereas today's generation is saying, 'What city will I choose to live in? What sorts of criteria will determine that?' and, 'It won't necessarily be where my parents are.' I think a woman from the United States—if you were there, Senator Ludlam—was saying that the viability of some cities is now being determined by this factor.

Prof. Martin—Yes.

Senator BACK—I recall that one of the issues was access to safe, convenient public transport. Another one was living in areas where other young people were so that they could intermingle. One of the issues that caused a bit of a furore was when a woman made the comment that younger people like to go around the next corner and be wowed by something, and she asked the audience, 'When was the last time you walked around the corner in Perth and you were wowed?' Since the Eagles have not been going all that well lately, it is a while!

I was reflecting on what you were saying. It is so important, planning today versus the past. Your last dot point related to public versus private costs of travel. Given all these challenges and given the relative incapacity of the governments to be able to fund it, I ask you, in the Perth context now, where do you think there is the opportunity for the private sector to actually be involved in infrastructure planning and investment?

Prof. Martin—That is different to the sense in which I wrote that. The sense in which I wrote that was that the public purse pays for public transport.

Senator BACK—Yes, I know that.

Prof. Martin—And private vehicles are operated at private cost. That was the point. Your question was about how could the private sector be more involved.

Senator BACK—I specified Perth because I know other cities have tolls and all sorts of other things. We are talking public transport now and I am wondering if you have a view on private involvement.

Prof. Martin—I think the mix we have in Perth is good. The system is under the control of a government entity, using the skills and operational efficiencies of the private sector, particularly in the buses, and Mr Alan Bray can talk in great detail about that. I think it is a good system, because Perth is getting the advantage of what were wise decisions in the past about an integrated system, with integrated ticketing, so you could transfer between vehicles without any penalty to the individual. It gives you a lot of flexibility in how you play your pricing strategy and your fare strategy not to the disadvantage of people. You can incentivise or whatever. For instance, you can go down to Mandurah on the train on a day trip on a family pass virtually cheaper than you can buy an individual fare. There are all those sorts of things that give you advantages.

In terms of giving it to the private sector, all I would say is, if you gave it to the private sector, the questions that apply are, firstly, are you recognising they are a business and have to make money? They have to make a profit for their shareholders. Secondly, are they going to be minded to do the sorts of things you as the government want them to do? There is always the issue about what their agenda is and what their business strategy is as against what the public policy strategy is, but I fully support using the private sector where they can add value and when they are serving the public purpose in respect to public transport.

CHAIR—Senator Ludlam has one final question and then I have one.

Senator LUDLAM—We have heard quite a bit about the overlapping responsibilities between state and federal governments, regional councils, local government authorities and so on. If the Commonwealth were to step in again and make a reappearance in urban public transport, what would you see as being the ideal institutional set-up so that we do not just make things more complicated?

Prof. Martin—I think there is a danger with setting up new institutional arrangements, because you still have, as you say, the three levels of government, different agencies and different portfolios. I would say that the best way for the Commonwealth to respond would be to ask jurisdictions to come forward with proposals. In other words, put the onus back on jurisdictions to do an integrated proposal where there is a goal, a purpose, set and then they can demonstrate that they have put things together in order to justify federal government assistance.

Senator LUDLAM—Purpose set by whom?

Prof. Martin—The purpose could be set by the federal government if they have some views, policy directions or national goals or, alternatively, you would look at the merit of what was put forward to you and whether that was acceptable and agreeable.

Senator LUDLAM—It does sound a bit similar to where the Infrastructure Australia model is heading.

Prof. Martin—Yes. I think that is a good model. It puts the onus on people to put forward a proposal. The only comment I would make is that you need to give states and local government sufficient warning that that is how you are going to go about it. So you give them a period of time with what the writing instructions are—whether it is 12 months, two years or something—and then come forward with proposals. I like that idea rather than not have a level playing field to start off with. If people put forward a good proposal, they deserve support. If they put through a lousy proposal, then they do not get support.

Given that the Commonwealth is now potentially moving to this territory for the first time for some considerable time, I think inviting people to put forward submissions that really are a good case makes sense. A business case is going to have social objectives and all those sorts of things in it and it is going to have health and other objectives that are not necessarily economic objectives in terms of benefit cost. There is an element for benefit cost, but there are other arguments you can make as to what the benefits of this are which are non-quantifiable. I would be keen to encourage people to make submissions, but give them time and give them enough understanding of what you are really looking for.

Senator LUDLAM—Great, thanks. Those are my questions.

CHAIR—In conclusion, Professor Martin, a lot of witnesses have said to us, 'It's just not a case of building roads, because every time you build a road, cars will fill it up.' Is it your fault we have so much traffic here, from your last role when you were the director-general of main roads? No, that is loaded! You do not have to answer that, but you can feel free to.

Prof. Martin—It just so happens there is freight that needs to be on roads and a number of other things too: emergency vehicles and even public transport.

CHAIR—I am really happy to hear that, Professor Martin. That is great!

Senator MILNE—You mentioned there was an institution here in Perth looking at the built environment and health.

Prof. Martin—Yes.

Senator MILNE—Could you just say at which university and who is the academic?

Prof. Martin—It is at the University of Western Australia, the Centre for Built Environment and Health, and the head of the centre is Professor Billie Giles-Corti.

Senator MILNE—Thank you for that.

CHAIR—Professor Martin, it has been a pleasure having you in front of us today and we do thank you for your assistance.

[4.16 pm]

BRAY, Mr Alan James, State Manager, Australian Transit Enterprises

CHAIR—Welcome, Mr Bray. Is there anything you would like to say about the capacity in which you appear today?

Mr Bray—Thank you, Senator Sterle. We run the company Path Transit. We are one of the private operators in Perth.

CHAIR—Thank you. Do you wish to make a brief opening statement before we go to questions?

Mr Bray—I know there are bigger issues in terms of policies, planning issues and so on and so forth. Our industry body, the Bus Industry Confederation, has put out a significant paper which you would all be well aware of, so I am not here to talk about those things. I am probably not qualified to talk about some of them anyway. I am an operator. I have been running bus companies for many years in Perth. Therefore, I am really here to perhaps put an operator's perspective in relation to various issues: what is it like, what is actually happening to the public transport system as we see it, as one of the three significant operators in Perth, and what affects us in our job in delivering the system?

You know how the system works here. You know that the PTA is the regulator. It does a really good job, as far as we are concerned as a supplier of public transport, but there are considerable constraints that are placed not only on it but whatever constraints are placed on it are therefore placed on the operator in being able to deliver the level of service which it would wish to deliver.

In Perth we have experienced an enormous growth in public passenger transport—not only in the bus industry but rail as well. I am sure Reece Waldock would have put some figures before you this morning in terms of those, so I am not going to go into that sort of stuff. We as the operator find we have to deliver that service on the road and increasingly that has become more and more difficult, generally because of a lack of funding. That is the main issue—lack of investment in public transport, in buses themselves. There has been a considerable investment in trains, and that is already running into trouble, although I am not qualified really to speak about the trains. In our particular area, we are increasingly facing difficulties of overloading, late running and congestion. We have grown by nearly 12 per cent in our patronage over the last few years. In this year alone we are up nine per cent in just a little over six months, which is unprecedented.

Many issues relate to growth. You would have read about things like the TravelSmart program, which is a fantastic program. We participated in that. We funded part of that in our areas. The results? Too good! We cannot deliver, quite frankly. One of the areas in particular I have quoted as an example is City Beach. The City Beach services have grown and grown. We cannot keep pace with the growth that goes on from those sorts of things. Funding becomes the fundamental issue. The PTA restricts it. I understand the economics. I know what is going on in the state and the country; we understand that.

By the same token, though, with a lot of the issues which you have talked about today, if something does not actually happen, we will not be in a position to deal with those issues in public transport that we should really properly be dealing with. It will be a third rate system. The PTA do a public marketing exercise. It is a research exercise which is called the Passenger Satisfaction Monitor. They survey through a private research company which asks passengers what they think about what is going on, and in one of our contract areas we are in trouble; we cannot provide capacity. In turn, the PTA are struggling. They have got a wonderful 10-year plan, lots of very good projects, but are unable to deliver on some of those, fundamentally because of funding. That affects us dramatically.

That is the base you come from as an operator. As an example, I will get a penny's worth in as well, in terms of bus supply. One of your committee asked the question earlier about bus supply, current infrastructure and so on. We are in the position here where one of our associated companies that owns a bus manufacturing business—which is Volgren—could be faced with having to shut that facility down because there is no funding to provide for the continuation of supply of the bus building contract. That contract runs out, I think, in 2010-11. They have delivered 850 new buses—fantastic—and they have been fantastic. But come that time, unless some sort of funding arrangement is arrived at, there is a good chance that that facility may disappear. It is not our direct company but we are directly impacted by the fact that the supply of vehicles is a serious issue. That is not an infrastructure issue, which again is an impediment.

The other issue which I will briefly touch on is technologies. I know your committee looks at different technologies that are going on. We have been involved in—so have the PTA—looking at solutions. We are not wedded to one thing or another. We are a bus operator, yes, so therefore we favour buses obviously. But by the same token, it is horses for courses. Professor Martin talked about a potential link between universities: you could do that with light rail and you could do it with other technologies as well. There are studies going on. There are capacity problems which we experience and that I have briefly described, particularly if you look at Perth. You can see the rail network up on that map; looks fantastic. In fact, it is a good rail network and does a good job, and it is in trouble.

If you take a look at the north-east corridor, you will see a big gap. Alexander Drive goes up in between those two spines that are going this way and that, straight up the north-east. There is a gap which is not conducive to rail because they just could not put a rail line up there, so therefore other technologies are being looked at. Parsons Brinckerhoff are doing an exercise for the PTA. They are looking at a master plan—which you may well be aware of—of what sort of technology should go up there. We have a suggestion. We put forward proposals to government to say, 'Here's an option you can look at,' which is a vehicle which we can manufacture, deliver and put on the road in times much shorter than any of these other projects and which can carry 200 passengers each; if you want to be comfortable, 180, 160. But it can deliver that. It is a hybrid vehicle.

That is the other issue which I will touch on briefly. In technologies, hybrid technology is becoming far more prominent now than it used to be, and we believe that hybrid technology will become the issue, particularly with all of the environmental issues which we face at the moment. If the solution comes out that the most cost-effective way to do it is 'this way', well, so be it. Our job then is to feed that network. In a number of these places, public transport systems need

to be redesigned to feed as well. We do a lot of feeder work up that northern line. We do all the northern suburbs.

Ray Cochrane was listed and I managed to jump into his spot. His company does all the south. They do a lot of feeder work now too. So we are into the feeder work, and that whole gap that you see in the north-east corridor really needs a redesign. There was a proposal to put a railway line up to Ellenbrook. That may well be the long-term future for what should go up there, but there are many technologies that could do that far more efficiently, quicker, and get on the road a lot quicker than that.

I know the senator is very much into the public transport side. We call this thing a light tram. It is on rubber wheels, it is a double-artic. It is a very efficient, very flexible vehicle, and can do a lot of jobs. It could even do the university job, if that were the case.

Another constraint that we face is on the labour side, because we are a big employer of labour. We employ bus drivers; we have got a lot of them and we have got some good deals going for them. I think they are a happy lot right now. I am not too sure.

CHAIR—My information tells me they are.

Mr Bray—Thanks very much, Glenn, because they should be. My goodness, they got the best deal of the century, so they should be a happy lot!

CHAIR—All I can say is that they must have a good union representative, Mr Bray.

Mr Bray—We have no trouble with you guys. That is an issue which increasingly, as you get congestion, overloading—all of those sorts of issues—spins off on our ability as an operator to deliver. We would be encouraging anything that can help at a federal level. Moneys that are going into different places perhaps could be channelled into projects like that north-east corridor, projects that can deliver really quickly and deliver significant benefits. They do work hand in hand with other simple programs and sometimes need a bit of a push.

Look at priority programs. There are a lot of bus programs and these sorts of programs would apply also to light rail and whatever. Priority systems are not well developed in Perth. There is a long list of them. I have probably overstepped the mark.

CHAIR—No, you have not, Mr Bray. I am going to thank you, firstly, for turning up, because this committee was very keen to hear from bus operators, and we do appreciate you coming in here today. I must say—and you have given us a lot of food for thought, and I am sure there will be a range of questions put to you in the last 35 minutes that we have with you—that, as we have travelled the country, a lot of operators, a lot of witnesses, have said, 'Have a look at Perth. It's a great system.' It is fantastic to hear your interpretation of 'a great system' because, quite frankly, it seems like the envy of other states has been the one-operator PTA mode, where companies have areas that they operate in and the three are not seen as direct competitors.

One of the biggest things that I took out of Sydney was light rail versus heavy rail—I am using 'versus' in their terminology—versus buses. They are all seen as competitors. The three shall never meet and integrate their timetables. I will not say a lot more; I am sure a lot of the

other senators will have questions. But we really do appreciate your honesty and thank you very much. I am getting the stare from Senator Milne, the deputy chair, telling me that she has really got some questions.

Senator MILNE—Mr Bray, I wanted to follow up this question of the ability to provide the infrastructure.

Mr Bray—Yes.

Senator MILNE—I would like to tease out a little bit what you said about the bus manufacturer here in Perth only having orders until, I think you said, 2010-11.

Mr Bray—Yes.

Senator MILNE—After that there are no more orders, so they are in danger of closing. And you talked about funding. Can I understand how that arrangement works? Is it the private sector ordering the buses from them on the basis of promises of money coming from somewhere? How does it work? What do we need to do? It seems to me that, if we accept the peak oil argument—and I do personally—and we are going to need a lot more public transport infrastructure, whether it is rail carriages, whether it is buses—whatever it is—we have got to make sure that the manufacturers that we have now stay in business and get the long-term investment signals so that they know they have got that long-term horizon and therefore can expand capacity, take on more people, because right at the moment we are desperately trying to maintain the employment that we have, if not grow it, in the face of the global financial crisis. Could you take me through how you would give an investment horizon to a company such as that, and others like it around the country? Can you give us any sense of how many people are making buses around the country? What sort of employment are we talking about? I do not know that.

Mr Bray—I can speak for what is happening in Perth primarily. Very briefly, Australian Transit Enterprises is an overarching company. The Grenda Corporation from Melbourne own half of it and the Hornibrook management group from Queensland own the other half of it; all family owned companies. The Grenda side of the business also owns what is known as Volgren, and Volgren build buses. They have got factories here; they have got factories in Melbourne; they have got an arrangement with the Brisbane City Council where they build buses in Brisbane. They are just opening a factory in New South Wales as well. They have some other facilities offshore, but we are not particularly interested in those at this point in time.

It is the onshore ones that we are interested in. The way the Perth system works is that in Perth, unlike Melbourne, we do not own our own infrastructure. We do not own our own buses. The PTA owns the buses. It is government owned. We own some of our depots but the PTA owns the bulk of our depots. But if you just stick with the bus side of it, the rolling stock side of it, we do not own them. The PTA actually orders the vehicles. It is their responsibility to supply the vehicles. They do the specifications; we participate in the process.

Does it work well? Yes, it does, and it has done. It has served us pretty well to date. We understand the arguments that government have as to why they wish to own the infrastructure. At one stage we argued to and for against it, but we understand exactly why they are doing what

they are doing. But it is not through a lack of will or foresight, I would say, from the PTA's point of view. It is the economic circumstances that have come around.

I know that our minister is also involved in this process. I know that he is well aware of this process and I know that there is stuff going on behind the scenes. What we would be fearful of as an operator—forget about the fact that we own the factory—is the fact that, in the fleet itself, you stop getting new vehicles. That is never good policy. We fought for years. I have worked in the Perth public transport system since 1997, I think it is. I spent a few years with the MTT, as it was in those days, and that was government owned. Even then, I do not know if we ever got to the stage where we got long-term contracts with bus supply. I was involved in one and it was cancelled at the last minute—economic issues again.

Eventually that long-term contract that sits there now was to deliver something in the order of 850 buses, give or take. Do not hold me to the figures precisely, but it is about that number. That figure will be up sometime in 2010-11. The main supplier for that contract was Mercedes and the body supplier was Volgren. On the strength of that contract, a factory was built in this city and employs 100 people in the factory and of the order of 100 plus in the supply chain that goes with that. Who knows? You probably have another 200 people employed that support that, because most of our stuff is local industry and local supply.

It would be a tragedy, quite frankly, to lose a facility like that. If a large order like that did not go back through there, the only other way to survive locally is getting orders from elsewhere. That has happened before but it is very difficult because, once you shut a factory down, you never get it back.

Senator MILNE—What you are saying is that, if we are doing the integrated planning properly, we should be able to foreshadow now where we need the new bus capacity, work out in an ideal world which corridors would need that support and be able to place an advance order—

Mr Bray—Yes.

Senator MILNE—but that essentially depends on the state government financial capacity at this moment.

Mr Bray—It does, absolutely. The current position, as I am sure you are all well aware, with the turn of the economy is that WA is still not doing too badly by comparison with some but there has been a considerable cutback, and government spending has been cut back considerably. One of our biggest fears in that is government funding being withdrawn, because when you start to cut back on public transport, if you want real money and real cutbacks, you have to dig into services. Again, that would be a tragedy.

Senator MILNE—Just to finish that off, has the transport authority here got a figure on the number of new buses?

Mr Bray—I am sure they have.

Senator MILNE—But you do not know what it is?

Mr Bray—No. They would have projected forward, because they do have a 10-year plan. They do have detailed plans. I have a copy of a detailed planning schedule, and we work with the government on that. Primarily they are responsible for saying what they want us to deliver. They consult us, and it does work well. But they will know, from their projected plans, where it is going and what they would like to see.

Senator MILNE—Maybe, Chair, if we could take on notice that we send a question to them about what their projections are, because it would be very interesting to see, in terms of employment in that factory and the supply chain and so on, what we are talking about.

CHAIR—Yes. I do agree with you, Senator Milne.

Senator MILNE—Thank you, Mr Bray.

Senator LUDLAM—Following on from that, just to confirm, you do have bus routes in Perth that are at capacity already?

Mr Bray—Absolutely, yes.

Senator LUDLAM—So we are at capacity. The demand is clearly there, and we are looking at closing the only factory that puts them together.

Mr Bray—Our worst area for capacity is that north-east corridor.

Senator LUDLAM—Where there is no heavy rail.

Mr Bray—Where there is no heavy rail, but where there is a proposal for a light tram, or call it what you will. Are you familiar with that proposal?

Senator LUDLAM—It was thrown into the state election campaign without much warning, and that was the last we heard of it.

Mr Bray—Yes. In that corridor, up Alexander Drive we have a thing called a city link service, which is high capacity. It is already run with articulated vehicles and it is a fairly frequent service as well.

CHAIR—What do you call fairly frequent, Mr Bray?

Mr Bray—In peaks, it would be at least 10 minutes in between and it gets down to five at certain times. It depends where you are on the route. But the issue is that the only way to solve a problem like that is to either thrown more buses at it or to throw a different kind of technology at it, which is what Parsons Brinckerhoff are looking at. We propose that a thing like the light tram would be an ideal solution, because it can duck off the route when it gets outside. Those vehicles are actually operating in Switzerland. They are like a trolley bus but they do not have wires. They operate on a hybrid, they regenerate electricity and they work on that basis.

Senator LUDLAM—Do you know when that PB study is due to be completed?

Mr Bray—On my way here I rang up to find out where it had got to, because the draft report is already with the PTA. It is sitting there right now. There is some modelling work which is still being done by local government departments here in terms of capacities and all those sorts of issues and what happens if you do this, that or the other. But that report is all but there now. I think the final report will be available in a couple of months.

Senator LUDLAM—There is still a wait. That is presumably feeding into the 20-year study that we heard about.

Mr Bray—It would be indeed, absolutely.

Senator LUDLAM—I am interested to talk with you about outer metropolitan areas that are not well served by public transport or served by buses that are on wriggly little reticulated routes that take a while to get to where they are going. Is there a reason why we do not run small buses on some of those routes and why it is one size fits all?

Mr Bray—We do have two different size vehicles. We have what we call a minibus and what we call a normal bus. The minibus these days is an 11½ metre bus and the other one is a 12½ metre bus. Even the capacities in those cause us grief from time to time. This is an old argument. I have been in this game since 1970 and so has the issue of minibuses versus others. Yes, horses for courses sometimes, in certain circumstances, they are good.

But generally speaking, as I think Greg said earlier on, your peak capacity determines your fleet size. In peak, you require the maximum capacity for your fleet. If you are then going to operate smaller vehicles in other outlying areas and you require a full bus during that period, obviously you are going to have two buses, two drivers, two issues that go with all of those; twice the capital investment. Well, not twice, but a minibus is not that much cheaper than a full-seater and not that much cheaper to run at all.

I have been involved in services where we have run very high frequency, high capacity minibuses, but it was uneconomic to do so, because the peak demand is what determines the size of the fleet. There may be some applications where you can use them. We actually have done that, even here in Perth, where we have used a minibus as a front-runner or a pathfinder. It goes into an area and runs the system in the area until it builds up and then you fill it in, and then you move it to somewhere else.

CHAIR—This is your 11-metre bus?

Mr Bray—No.

CHAIR—This is actually a minibus.

Mr Bray—I am going back. When I was still with the MTT we did that. We used to have a couple of these minibuses, like 20-seaters.

CHAIR—Coasters.

Mr Bray—Yes, that sort of size. The problems you have with those is that, these days, they have to be accessible, with a low floor and all those sorts of issues. By the time you have finished with the thing, you might as well pay for what we call a minibus.

Senator LUDLAM—As an operator, how sensitive are your operators to fuel costs? How big a deal is that?

Mr Bray—Fuel?

Senator LUDLAM—Fuel. Relative to all your other running costs, how big a deal is that?

Mr Bray—Fuel is the third biggest cost in our business. Labour obviously is your main cost, maintenance is your next biggest cost and fuel is your next biggest. Fuel is now almost on a par with those. It is a big cost in the business. As an operator, we are hugely sensitive to what we do. We run programs where we actually de-rate vehicles, because we do not need the full power on some of these vehicles, in an attempt to keep fuel costs down.

The way these tenders work is good and bad. There is more good than bad, I would say. The way that some tenders work is that you put in a bid on the basis of the fuel price you believe you can negotiate with a fuel supply company. That becomes the basis of your bid. That is also premised on what you believe will be the average fuel consumption in that vehicle. Then that is indexed in your contract by the Singapore spot price of oil. If fuel goes up dramatically, you get recompensed. If it goes down, you lose it. But if you get your contract deal with your supplier wrong or if your fuel consumption—litres per 100 kilometres—is wrong or out of whack, you take a spin. Therefore, we are very sensitive.

Senator LUDLAM—But in terms of the spike that happened in 2007-08, your contract is elastic enough that those costs are passed on through?

Mr Bray—Yes. That sort of stuff will put people out of business otherwise.

Senator LUDLAM—That was kind of my question.

Mr Bray—As a business, you would be looking at a lot of hedging exercises to be able to counteract those costs. It becomes very complicated and very messy.

Senator LUDLAM—Have you done any thinking on the impact of the CPRS, which will be attempted to be legislated in the latter part of this year and which will hit bus operators who are diesel and CNG fuelled before it will hit private motorists?

Mr Bray—This is carbon trading?

Senator LUDLAM—That is right. Are you looking at what the impacts are on operators against different carbon price benchmarks?

Mr Bray—Again, our contracts are sensitive to those sorts of issues. Within the contracts, if there are legislative issues foisted upon us, there are methods of dealing with those in the contracts, but we participate with the PTA to try to minimise that impact. It might not impact us

to the same degree, but, if it impacts them, we would like it to impact them as little as possible, because otherwise that drains funds away from providing public transport. It is as simple as that. So we end up in a partnership arrangement.

Senator O'BRIEN—Mr Bray, how long is the vehicle from Switzerland—the tramcar—that you have been describing?

Mr Bray—We call it light tram.

Senator O'BRIEN—The light tram double-articulated vehicle. How long is that?

Mr Bray—It is 24 metres long. It has three sets of wheels and it has, obviously, a couple of turntables. It goes around corners like you would not believe. If it went around this circle here, it would have the front touching the back and will go around it. It is a very flexible vehicle. I have seen this thing on video.

Let's go back to where that vehicle originated from. It is Hess and some other German name that I cannot pronounce right now. Hess are the people who are also involved with the provision of aluminium extrusions and the technology which builds aluminium buses, which is what our Volgren people do. The connection is that Geoff Grenda, who is the chairman of Grenda, is married to Hess's daughter, so there is a connection in terms of how that all began. That was years ago. But Hess have been running and building trolley buses in Europe for years and years—forever—and they came to the conclusion that they needed more flexibility. These wires are expensive, they are cumbersome, they are unsightly and all those things. How do we get rid of them?

Technology, of course, has moved on. Hence, they developed what they call the light tram, which is the same concept. It has all the same electric motors around the wheels. It does all the same things. It has a donkey engine down the back, which is a much smaller version, because it could never drive that vehicle anyway; it is too small. Its sole purpose is to top up the energy source if needed. As the vehicle travels and brakes, it collects heat and energy in what they call supercapacitors that sit in the roof, and that is what propels it by and large. The format of that vehicle has been on test in Switzerland. I have seen it in Italy too.

Senator O'BRIEN—When you say 'on test', you mean it is operating in a city?

Mr Bray—In service. It has been in service for well over a year, so it is proven technology. The technology itself is proven totally.

Senator O'BRIEN—In what sorts of streetscapes would that operate? Does it have to have a dedicated route?

Mr Bray—No, not at all. You can operate it on normal streets. It has the same characteristics as our normal articulated buses that are downtown—our 18 new artics. Where those can go, these can go. In fact, they can almost do better than that, because the wheelbases are a bit shorter. It is an amazing vehicle. We were hoping to get it into Brisbane, but there was an issue there between Brisbane City Council and the Queensland government—TransLink—in terms of who owned what, how, why, where. It gets a bit complicated.

We believe eventually that vehicle will go there. We would certainly advocate it for particular issues, and one of them is the north-east corridor. We think it fits perfectly, but that will be up to Dick Fleming and his team from Parsons Brinckerhoff. They will come up with a recommendation in terms of what they think is the applicable technology for them.

Senator O'BRIEN—Is that the solution for some of the capacity constraints we have been talking about?

Mr Bray—Absolutely. What you have there is the capacity of two buses in one. With an ordinary artic, you have a capacity of 1.1-and-a-third. With this thing, you have a capacity of 2.0. For example, we are running 10 vehicles up and down there right now, which are normal artics, to give us the 10-minute frequencies, or whatever it is. If you put 10 of these in their place, you will almost double the capacity. You will increase the capacity considerably—one driver, no different. The only thing which needs consideration with these vehicles, obviously, is that, with anything you do to that corridor, you do need bus priority to speed the journey, to get maximum benefit out of it.

I think the PTA are in the process of developing a master plan out of all of this—if that is the technology, that is fine; if it is not, whatever the technology is—which would look at redesigning the public transport system completely, because you cannot put rail in there right now, and not for the foreseeable future either. It would probably also service the Ellenbrook line out there, where they were going to put a rail line, which is premature at this point in time. But it is quite an extraordinary vehicle.

Senator O'BRIEN—What does it cost?

Mr Bray—They are probably about $2 million each now.

Senator O'BRIEN—Gee!

Senator BACK—The comparison with an articulated bus?

Mr Bray—Artic buses would probably be getting close to $1 million. Buses are expensive things now. In our Melbourne operations, and others, we buy our own buses, but that is all linked into the contract anyway. It is an extraordinary vehicle, and if you compare its cost to light rail and train, we are not even in the same ballpark.

Senator O'BRIEN—In terms of city rather than interconnecting highway and main routes, what limitations exist for them at the moment?

Mr Bray—For that type of vehicle?

Senator O'BRIEN—Yes.

Mr Bray—You have to bear in mind, of course, that it is long and it has the same characteristics as an artic. You would probably have to give it special consideration. You would have to look at the bus stations, the platforms and issues like that. Nothing is insoluble, but you would have to take those things into consideration. They have done that elsewhere. Our proposal

also suggests that they redesign all the feeder services in that corridor to feed into this and have proper collection points, which would be more permanent points. So when you do that design, you would have to take into consideration those sorts of issues. We have a whole document on this one, which has all the usual questions that people will ask, and the answers.

CHAIR—Table it, Mr Bray.

Mr Bray—We could provide you with a copy.

Senator MILNE—Thank you.

Senator BACK—Through you, Chair: I would like costs per kilometre travelled et cetera.

Mr Bray—It does not go to that length, but it does have a projection which says that the vehicle probably is one of those things that will last. It will run for 25 years, so it is almost like a railcar. With the electric motors, you do not have as many wearing parts; it is all driven by electricity.

Senator BACK—You can provide that through the chair? That document can be tabled?

Mr Bray—I can get a document, which I will provide through the chair, which will spell out what this thing is all about.

CHAIR—Thank you.

Senator O'BRIEN—It would be interesting, given our conversations in other parts of the country, to have an understanding of that—

Mr Bray—Absolutely.

Senator O'BRIEN—and to be able to put it to officials to see what their consideration is of that as an alternative to some more expensive technologies.

CHAIR—Very helpful.

Senator BACK—This is possibly a difficult question for you to answer, but is there anything available that can give us advice on the cost and the benefit to the community as a result of this mix we have of buses owned and delivered publicly but operated privately versus had they continued to be operated publicly?

Mr Bray—I do not personally have it, but there has been a lot of work done on those sorts of issues. Reece Waldock would be able to provide that to you because they did those exercises in what public transport was costing, what it is costing today, what it was delivering and what it is delivering today. Also, I do not know if Professor Hensher has made a submission.

CHAIR—Yes, he has, in Brisbane.

Mr Bray—He started the Thredbo series of conferences, which is a series of international conferences which looks at the whole business of contracting out and what has been achieved, and they have tracked it for many years now. It is named after Thredbo because that is where they held the very first one. They meet, I think, every second year. They have a conference every second year—or is it every fourth year? They have it internationally in different centres. I have been to one of those. It is one of the best conferences that people can go to. It is a real working conference, for starters. You get really tired, I can tell you.

They have regulators, policymakers and operators, and every day subjects are dealt out, they are broken into very small groups, and they have to go away, then come back and re-present, looking for solutions to certain issues, but the main purpose of that exercise has been to track all of that. Professor Hensher has got all of that information. It deals with the sorts of issues which you are talking about as well and, because there are some academics involved, there will be some very specific papers on those sorts of issues. So I point you in that direction as well.

Senator FARRELL—I am just interested in what deal you did with the Transport Workers Union.

Mr Bray—We did a good deal. Let's put it this way: I think we have a fairly unique situation in Perth in terms of how we operate. We have got businesses in Adelaide as well—similar sorts of businesses, run the same. You would be familiar with our company SouthLink there, and Transitplus. South Australia is different. The relationships are different.

We regard ourselves as being in partnership totally and absolutely with the Perth PTA people. As far as labour relations is concerned, we and the TWU have been in this business together since we started, and we understood that the issues have to go this way and have to go that way, but at the end of the day a proposal was put up which had input from us and the TWU, and the PTA themselves also did a lot of work on it because government, obviously, was looking at it. It was Labor government at the time, and Labor government got to the edge of the precipice, the deal was nearly done, when—bugger me!—they lost government. That caused a bit of grief, I have to tell you. The new government came into power and, to their credit, they had a look at it and honoured the process.

You had a situation in Perth where you had regional operations, and wages were diverging because of different interfaces, although they were aligned at one point in time. That created differences in what was happening and the whole exercise was looking to rectify that problem as well. It was phased; it was not a big one-off. It was a responsible exercise on everybody's behalf, and the TWU—I do not know if you are still involved with them, but—

CHAIR—You never leave them!

Mr Bray—They responded very well. It certainly turned around the labour situation for us. The economy happened at the same time, so there was a bit of this and a bit of that. But thank God for that: we can now get fussy again about who employs bus drivers. Labour and labour supply are major issues, too, in this business. As the economy grew rapidly, it caused us great grief. As the economy shrinks, it is to our advantage. Yes, it was a good deal.

CHAIR—If I can help you out there too, Senator Farrell: there was a difference in the school bus and the passenger transport bus because there was a young go-getter organiser who used to do the school buses but he left to pursue a career in politics!

Mr Bray—He shall remain nameless.

CHAIR—Mr Bray, thank you very much for your assistance to the committee. We do appreciate your time.

Mr Bray—No problem. If anybody has anything else, we will be more than happy to assist.

CHAIR—Thank you very much, Mr Bray. That concludes today's hearing. The committee now stands adjourned.

Committee adjourned at 4.55 pm