



PRODUCTIVITY COMMISSION

INQUIRY INTO PUBLIC INFRASTRUCTURE

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TRANSCRIPT OF PROCEEDINGS

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INDEX

	Page
TRANSPORT REFORM NETWORK:	
DENNIS CLICHE	3-16
DONNA FINDLAY	
ASSURED GUARANTY:	
WARREN BIRD	17-33
JIM METAXAS	
CBUS SUPER:	
STEVE BRACKS	34-47
GRANT HARRISON	
MASTER BUILDERS AUSTRALIA:	
BRENT DAVIS	48-58
AUSTRALASIAN RAILWAY ASSOCIATION:	
LINDSAY TANNER	59-73
INDUSTRY SUPER AUSTRALIA:	
MATTHEW LINDEN	74-87
JANE McGILL	
IFM INVESTORS:	
AZHAR ABIDI	88-100
ELECTRICAL TRADES UNION VICTORIA:	
RUTH KERSHAW	101-114
BTI CONSULTING:	
ISLA KUIPER	115-122
AEC CONNECT:	
DOMINIK HOLZER	123-129
GEOFF HOLMAN	130-138
PROFESSIONALS AUSTRALIA:	
ERIC LOCKE	139-155
BEDE PAYNE	

MR HARRIS: Good morning, ladies and gentlemen, welcome to the public hearings for the National Inquiry into Public Infrastructure. We put a draft report out, as I'm sure all of you know, in March 2014. I am Peter Harris, I'm the presiding commissioner. Dr Warren Mundy and Paul Lindwall are my fellow commissioners. The three of us are running this inquiry.

The purpose of this round of hearings is to facilitate public scrutiny of the commission's work, to get some comments and feedback, particularly to get people on the record as we can which we may use in the final report. Following this hearing there will also be hearings in Sydney and Brisbane. We expect to have a final report by the end of May. All participants in this inquiry will automatically receive a copy of the final report once released by the government but it can take the government up to 25 sitting days to release reports which means later in the year.

We like to conduct these hearings in a reasonably informal manner, but I remind participants there is a full transcript being taken, so we don't take comments from the floor because they won't actually be recorded effectively. But at the end of the day's proceedings there will be opportunities for persons who wish to do to make a brief statement and obviously people are able to submit further advice to us if they choose to do so as a result of things they hear said today.

Participants are not required to take an oath but should, of course, be truthful in their remarks, and participants are welcome to comment on issues raised by other submissions as well as their own. The transcript will be made available and published on the commission's web site, are the submissions.

I have to tell you under Commonwealth Health and Safety legislation you are advised in the unlikely event of an emergency requiring evacuation of the building you should follow the green exit signs to the nearest stairwell, don't use the lifts and follow the instructions of the floor wardens. The assembly area is Suncorp Plaza, 447 Collins Street, which is basically uphill from here. Perhaps I can now welcome representing the Transport Reform Network, Dennis and Donna. Do you have an opening statement or some opening remarks you would like to make.

MR CLICHE (TRN) : Commissioner, perhaps we'll just make the point that we're here today representing the Transport Reform Network which is a group that numbers in the order of 50 members which are both companies, associations and government agencies. We are formed in 2011 essentially with a view to get the topic of road user charging on the agenda, to get it into discussion and to seek ways of improving what we believe to be a broken system of collecting funds to pay for both new infrastructure and as well as maintaining existing infrastructure and, thirdly, to make better use of the infrastructure we have by sending appropriate pricing signals.

We have been involved in this discussion for almost three years now. We welcome your report and your recommendations and particularly the suggestion that a pilot be done. We followed internationally the work that is being done, particularly in the United States but also in Europe and have noted in our submission, as was picked up in your report, about the work being done in Oregon as being a leading example of what we should be striving for.

I won't go through everything we've put in our submission but the one point that I would like to highlight is one of the things we feel risks derailing the debate is the concept of big brother watching and automation and GPS and all of this and I think a lot of the discourse that has come out following your report is focused on that, not on what we're actually trying to accomplish. Just to highlight for the record that Oregon is actually looking at volunteers, 5000, so it's a voluntary program in the trial phase. You can go on roughly three different approaches: one is the full automation with the ability to have time, day and distance charging, those sorts of things, so that's the full technology solution; it also goes the other end where you basically nominate a number of kilometres in a year and you pay a fixed fee and there is no tracking, there is no reporting other than once a year, and there are a couple of models in between that.

I know that in our discussions following your report - and I will come to another report in a second - we have tried to highlight the fact that, "Let's not focus - make this a big debate about privacy and those type of issues because we're missing the point and it's about how to fix this broken system." We would also like to just highlight the fact that a few weeks ago now in Canberra the AAA along with IPA published a report in which it identified the same sort of facts or statements that we've made about the system being broken, about the need to address it and the fact that we now have the road associations, the motoring clubs which collectively represent seven million members on the record as saying that they agree that something needs to be done. We need to look at it. They're not advocating a particular model other than saying quite strongly that the current model is broken and needs to be address. Perhaps I will stop there and happy to take any questions that you have.

MR HARRIS: Just before I let my colleagues stop of this, in your submission you also noted just not Oregon but other jurisdictions in the United States that are also considering some form of electronic road pricing.

MR CLICHE (TRN) : Exactly, yes.

MR HARRIS: So there's a wider group, isn't there, that may be looking at this? In terms of the Australian Automobile Association - so some of them - there's a cross-membership between your group and the Australian Automobile Association

but the Australian Automobile Association is covering every road and motorist organisation in the country.

MR CLICHE (TRN) : That's correct.

MR HARRIS: I will note those for elaboration. Paul or Warren, do you want to start off?

MR LINDWALL: I might ask about the Oregon trial. 5000 volunteers. Are they self-selected or were they asked in any particular way to volunteer or just generally advertised?

MR CLICHE (TRN) : My understanding is it's self-selection, so it was generally advertised and people who were interested put their hand up.

MR LINDWALL: They get to choose three different ways of - - -

MR CLICHE (TRN) : Yes.

MR LINDWALL: They can't change their choice once they've chosen a particular option?

MR CLICHE (TRN) : I'm not sure of the details of that are further on.

MS FINDLAY (TRN): If they choose to change from a paper based to an electronic system later on they can make that decision is my understanding.

DR MUNDY: Just sticking on the Oregon trial for a moment, it has always seemed to me that one of the attractions of electronic charging was (a) to deal with congestion, time and day congestion basis, but also to better reflect road user charges and the costs of whatever the roads are. So how is that being facilitated with these Oregon trials inasmuch - I accept the people who go for the full-blown technology solution are probably confronting prices that reflect those sorts of things. But other than recovering revenue, how does it help reflect costs and also congestion issues if people are just paying effectively a licence fee for the year or just a kilometrage, essentially saying all roads are the same.

MR CLICHE (TRN) : I think there is no doubt the objective is the full-blown technology that will deliver the nirvana, the ultimate outcome of being able to reflect the cost of the asset and drive behavioural change, so it addresses the issue of congestion, proper reflection of the cost of the particular asset you're using. But equally in the US the privacy issue has been raised as one of the barriers and in order to try and reduce the concern around that these various options were put forward,

again, not unlike what you're recommending in doing some trials. So this is basically three trial assessments within the one pilot.

But clearly the objective over time is to demystify it and, if I can draw an analogy with the Myki card when I was in public transport - Peter you would remember those days - there was a lot of concern raised there around privacy and somebody would know where I'm going and the same with tags and mobile phones, it has been a constant thing. So I think progressively as it becomes understood and proper privacy controls are put in, so there's a lot of requirements to destroy data after a certain period of time, it can't be released, so it would be like credit card information. So once this gets known, understood and accepted, then clearly that is where we think the program and the model should go. But I guess it's a question of just getting there.

MR HARRIS: You're saying therefore that the US may provide a good level of advice on how to address privacy issues, acknowledging that their systems and ours will differ a bit and possibly also the recognition amongst their population that, you know, everybody is tracking cell phone use anyway which is possibly not as well respected and understood here as - well, whether it's understood, it's accepted maybe in the US, but they're having a go at privacy issues.

Can I ask you about heavy vehicles. You've got in your consortium at least one large freight group but you may have more than that and may have missed them. But as we know there has been an initiative, if you like, of the Counsel of Australian Governments to examine for a couple of years now - possibly a bit longer than a couple of years - the potential for utilising technologies to identify and support investment in heavy vehicle freight routes in one form or another and driven by, I'm sure, different perspectives and we have read quite a lot about that.

Do you have a view on whether a model should be, if you like, generic in order to, for example, encourage acceptability or sector-specific in order to start it out with perhaps a more willing group, although I don't want to presume that the freight operators are all willing either. Do you have a view on that sort of thing?

MR CLICHE (TRN) : Yes. We think that ultimately we should strive for as common a model as we can. It's a question of how quickly can you develop something that has traction and credibility across the various sectors. I don't know if I pointed it out but I'm also the managing director of ConnectEast. We have different rates for light commercial vehicles, heavy vehicles and cars, it's well understood and well accepted, so that works quite well; a common system of collection, of course, payments. So I think that is the way that we should go. We shouldn't try and have it too complex, too complicated. If we can mirror it across the various sectors, I think we should.

MR HARRIS: That's useful.

MR LINDWALL: How would you go about tying the revenue raised through the user charges to the actual expenditure on road and maintenance and that so that the consumers are confident that it's been done in that way.

MR CLICHE (TRN) : Yes. I think next to Myki the other thing we're not supposed to say is hypothecation. We would advocate hypothecation or certainly transparency. We done work along with University of Sydney with David Hensher, some of the survey work he has done has shown - perhaps willingness is too a term to use, but certainly people feel more comfortable about paying something if they can see that it's directly applied to the cause in question. One of the issues we have with the fuel excise tax is that it's not the case today, that we pay - it's somewhat of a hidden tax, as we all know, but equally important it disappears into government coffers, there's no certainty of funding going forward so an industry body where we're talking about investing in new infrastructure and maintenance which, as we've advocated, is well below the level that we need to maintain the assets that we have, so there's certainty of funding going forward, there is no visibility on where that money goes from electoral cycle to another, it can disappear.

So we would strongly advocated that it be hypothecated or at least set into a fund where it is quite clear where it's going and what it's being used for. We think that will help acceptance a lot more than if it just goes into government revenue.

MR HARRIS: So the sorts of models that we have talked about in the draft report where we've drawn upon the New Zealand experience of having a fund which actually allocates funds for road - so against criteria established by the government but nevertheless does the allocation, provides that sort of mechanism as a way of convincing people that if you put revenue in you get allocated in return.

MR CLICHE (TRN) : Yes, that's exactly the model we looked at.

MR HARRIS: Did you look at the New Zealand at all because the New Zealand model isn't a perfect copy for the way we've done the report. It is exemplified in there, but it's not a perfect copy of the model or potential models. Do you have a view on how the New Zealand system operates?

MR CLICHE (TRN) : I'm not overly familiar with it. Are you?

MS FINDLAY (TRN): No.

MR LINDWALL: Okay.

MS FINDLAY (TRN): We do liaise with New Zealand but we haven't put that in our report.

MR LINDWALL: On the pricing, the user charges, and I know that trials are occurring obviously, but do you see the benefit to having a single price or a two-part price or different ways of structuring it such as an access charge and then a variable charge? Can you give some thought to that?

MR CLICHE (TRN) : Yes. Ultimately, the view would be a variable charge is more consistent with reflecting the variable nature of the costs and you can come back to the time of day charging and this sort of thing. So models that are purely variable are probably the ones that we'd allocate the costs the most efficiently. If you start to get to the fixed and variable, then you start to splinter and fragment a bit.

DR MUNDY: Presumably there would be parts of the network, for example, local government roads, say, around Ballarat that time of day pricing may not - variable pricing may not actually make an awful lot of sense because there is not congestion to manage.

MR CLICHE (TRN) : But that wouldn't change necessarily. You could still have a variable it's just that it's throughout the period. I think for us the notion of having "if you use it, you pay for it" as opposed to a fixed access and then the variable, then you start to get to these inequities as well, "How much is my fixed?" You know, "If it's too large and I don't use it," as opposed to just being able to say, "You drive X kilometres in this area, this is what you pay."

MR HARRIS: As per the model in the US then there's a trade-off between pay-as-you-go as it were via your vehicle, there has to be a trade-off with a tax regime, which is what is proposed in the Oregon model.

MR CLICHE (TRN) : Yes.

MR HARRIS: In that sense, therefore, you are potentially swapping a tax which, as you say, is non-transparent for something which is actually more reflective of your use and therefore puts you with an allocative function as well as just perhaps a fairness or a transparency kind of function as well.

MR CLICHE (TRN) : Yes. One of the things that came out in the AAA report which you would also agree with is it can't be a tax on a tax. So certainly if it's viewed as just another way of raising more money, I think we will be in big trouble right at the get-go. But as people start to understand over a period of time and that's the behavioural change we're looking for with the congestion and I would be remiss

if I didn't talk about public transport as well. The idea here is not just roads, it's not just vehicles, which is another argument we often get embroiled with, you know, "Is it a road project or is it a public transport project?"

But we would certainly see it as being all transport modes. A big ask over time but this is a vision statement as opposed to the immediate application of it. But certainly funding should wind up in public transport as well, some transparency over that, and if we can make it on utility basis, where you pay for what you consume, I think we will see these sort of behavioural changes happen as well. Again, come back to the variable, which is fixed and variable, that would be another reason why we'd advocate variable.

DR MUNDY: Just on the tax proposition it looks like where you're going is a fee-for-service model basically for roads.

MR CLICHE (TRN): Yes.

DR MUNDY: I presume when you say you don't think there should be a tax on a tax you're not suggesting that these fees should be exempt from GST?

MR CLICHE (TRN): No. No, my point was don't add more tax to the existing tax regime.

DR MUNDY: So replace essentially with the excise and other charges at the time.

MR CLICHE (TRN): Exactly.

MR HARRIS: So just back on the fund model which is the way of starting this out but you need an institution. I presume you agree with that, you need an institution to deal with this, it can't just be the responsibility of a femoral group of - a task force or something like that.

MR CLICHE (TRN): Yes.

MR HARRIS: So there have been differing views expressed to us about whether this would be a single entity, a national entity or whether it would have to be jurisdictionally based. The view around it being jurisdictionally based are driven, I think in part, by seeing the revenue come back to our jurisdiction, if you like, which again is a problem potentially with excise, but also potentially with the possibility of some jurisdictions moving in advance of others, depending on their willingness to do so. Do you have a view on any of those choices? I think some submitters favour conceptually the national idea because the Commonwealth could drive this. On the hand, they're not the Commonwealth's roads for a start. Do you have a view on

whether it should be jurisdictionally based or not?

MR CLICHE (TRN) : I think you covered the view with your last statement, you know, conceptually, philosophically I think it should be national. We think it should be national. The type of assets we're talking about and you get into the debate that was run last election as what roads do we fund, what roads don't we fund. So we're connecting bits of the country that certainly is the role of the federal government. How you actually get there and the issues of timing, the issues of almost protectionism at a state level and even third-tier government at the municipal level as well where there is today a lot of debate around the inequities of funding in Victoria - VicRoads versus the local councils, which is an ongoing debate.

So in an ideal world we think it should be at a federal level. The practical implications of getting there, how quickly, how soon, would probably lead you to a more pragmatic starting position at least. Then again I think that's what supports the notion of a state based trial or several state based trials but certainly, you know, ideally would be a federal agency.

MR LINDWALL: How do you handle issues - Australia is a very large country, continent really. How do you handle the model of the proper user charges where there are roads which are very rarely used but if you were to have full charge on those, the users would be extraordinarily high charges. So are there cross-subsidies or do you do it through community service obligation payments or - - -

MR CLICHE (TRN) : I think you would have to look at all of that. The issue is generic, whether it's airlines or whatever else. The cost of servicing remote locations are going to be extremely high, would not be supported by the revenue raised through kilometres used, so there would always have to be some form of cross-subsidy in the national interest and how the mechanics of that would roll out is something to be looked out. But we would argue it's not any different from today.

MR HARRIS: Except perhaps it's more transparent.

MR CLICHE (TRN) : Yes, exactly.

MR LINDWALL: I am interested also about the scope in which we can improve the efficiency of the existing road network. I mean, there is clearly new investment and so forth but a lot of technologies can be deployed to make the existing road network more efficient. Are you able to comment on that?

MR CLICHE (TRN) : Certainly some of the recent work on ramp metering, variable speeds, these type of technologies are showing dramatic improvement in efficiency of asset utilisation today. There is a lot of technology that exists today,

perhaps not as widely used but vehicle to vehicle, vehicle to infrastructure. So you can buy a mid-range car today that will adapt off cruise control and these types of technologies that are - so vehicle to vehicle would be an example of where you can get uniform spacing on a motorway and maximise throughput. Some of the information technologies around congestion and being able to advise, so some of the VicRoads apps that are being deployed as we speak and automatic routing for taxis.

So this is technology that is really there today and I think as we replace the vehicle fleet that we have you will see wider and wider application of them which will lead to greater efficiencies on the road usage today. I also point out that this Big Brother technology, particularly again if you look at North America, there are today in entry level cars where you can get satellite assistance from the manufacturer which will tell you that there is a problem with your engine, you're overheating or if you lock your keys in the car they can remotely unlock your car. That technology is widely used today in North America and that is true Big Brother watching. So we believe it's a matter of time before that technology gets widely applied in Australia. The logistics are a little bit harder, we need more satellites and a few other things but certainly that type of technology will allow us to maximise the utilisation of the assets we have.

MR LINDWALL: Have you any estimates of the potential savings from such measures?

MR CLICHE (TRN) : We haven't actually looked at it, although I'm trying to remember - VicRoads has done some work on the M1 and I can't remember it off the top - but the benefits attributed to ramp metering.

MS FINDLAY (TRN): There should be some benefits for the M80 too, but I can't remember them off the top of my head.

MR HARRIS: But it is true, of course, that there are a number of government entities that have been looking at this for a little while now. I mentioned not just heavy vehicle charging, an issue that has been for a while, but actually in a technological sense too. The roads authorities themselves have quite good knowledge bases on technology options and, of course, motor vehicle manufacturers are, as you pointed out, engaged in a competitive supply of a wide variety of options for people to have identification of vehicles which you can purchase with the vehicle.

MR CLICHE (TRN) : Yes, exactly.

MR LINDWALL: I'm basically saying do you think that it helps the marketing of the user charges by saying the technology can also be used to reduce congestion and improve throughput et cetera?

MR CLICHE (TRN) : Absolutely. The bottom line we're looking for through this is improved experiences for travellers, you know, be it on public transport or be it in your car and so anything that is going to wide up in that space in as socially equitable a way as we could possibly do it would be beneficial.

DR MUNDY: I recall when I lived in Scotland the sat nav service was sufficiently sophisticated to give me breakdown alerts and road traffic alerts, those sorts of things. How far is that technology away from us here on a broadly applicable basis.

MR CLICHE (TRN) : My understanding is the taxi industry uses it today, so it is in use and there are trials where the sat nav is actually sending back that type of information and I believe something that - - -

DR MUNDY: Where is the investment ask? I know the Highways Agency and Transport for Scotland have invested heavily in making sure - is it a hold-up with investment at the end of government? Is it an in-vehicle problem or both?

MR CLICHE (TRN) : Why isn't it more widely deployed here?

DR MUNDY: Yes.

MR CLICHE (TRN) : I could only speculate on that one.

DR MUNDY: Okay. Ultimately, I guess the TRN are supporting this not just because it sees pricing as perhaps a more effective allocation system over time but because you are, as you said at the outset, concerned about potential revenue raising of the existing systems versus potential and future needs. So that says to me ultimately that you are supporting this because you want to see more investment in the road transport infrastructure, although I didn't get you clearly on record as saying this and, therefore, I'm going to bounce that question and see what kind of answer you give me.

MR CLICHE (TRN) : Yes, and it's not just new investment, it's not just new infrastructure. We feel through our members and our association with Roads Australia that there is a significant shortfall in the maintenance expenditure that we see today against the steady state required to maintain the assets and we have road authorities who are members so we know - for example, the earlier reference I made to council roads being returned to gravel because we can't afford to maintain them as bituminised surfaces. So when you start seeing that you know that there are issues. So it's a question of maintenance were we don't believe there is adequate funding. Certainly the pipeline of new investment that is required is massive, as we know, and we don't think that there is enough investment going on, even with the mega projects

that are being announced today.

If you look at the Victorian example, I think it was The Age newspaper six months ago decided that tolling not only the Eastern Freeway, which some of you may recall I bravely said we should do, but also the Westgate Bridge in order to fund Melbourne Metro. So sadly we're in a situation of having to fight and debate is East West of Melbourne Metro? We'd argue we need both. Sadly, we can't afford both. We've had to make a choice or the government has had to make a choice and example - and there are many across all the states - where we think the economy would benefit from having those type of assets sooner rather than later.

MR HARRIS: It's implied in what you've been saying that this will take some time to develop a system. So, for example, even though we have overseas trials and we know there are congestion pricing models in countries that aren't just trials, they're actual realities, but the idea of linking perhaps location technology with charging is in a trial phase. But it is implied that it will take time and that says a transition and some form of ownership has to be maintained throughout a transition over time. So do you have any view on, if you like, how to get the coalition into a form of continuing support through a transition like that, through a coalition such as your own or other parties that are involved here? Do you have any view on that?

MR CLICHE (TRN) : I'm not a hundred per cent - - -

MR HARRIS: Who should lead, is what I get I'm trying to say? Who should lead here? The biggest question in all these models I have asked you about, that Commonwealth versus jurisdictionally based and it is another slant on the same thing, who should lead? Do you see this as being a Councils of Australian Government type issue? Do you see it as being a collection of transport ministers type of issue? Do you see it as being something where the motorist associations attempt to get a wider group together, for example, and who should lead?

MR CLICHE (TRN) : Whether it's COAG or something similar to that it has to obviously be government led. We don't think that the technology is the barrier necessarily to getting a speedy adoption of something like this, it's the politics and the politics are directly affected by the population who, at this point, are not convinced. So the reason it is going to take time is because any politician today who stood up and said, "I'm gunna do this tomorrow," I think one of the ministers quietly told me that it would be the last thing he did in office as he turned the lights out on his way out. Having bravely stood in front of the Herald Sun and said, "Let's do the Eastern Freeway," I know what he's talking about. It wasn't exactly popularly received.

MR CLICHE (TRN) : So I think it obviously has to have a government leadership,

we would argue at the federal level, certainly more than involvement - involvement and endorsement by the states. What we hope we've accomplished through the Transport Reform Network working the IPA and the automobile clubs is giving our politicians messages and signals that there is a groundswell of understanding, hopefully support, that we need to do something and that, "We will support you if you try and do something as long as it's not too dramatic, as long as we can see the benefits, as long as we can see the money is flowing into something that will give us a better outcome."

So we're hopeful that the activities that we have been involved in over the last couple of years and certainly with your report and, I stress, the automobile association because that was an interesting journey to get that report out and we were working alongside IPA, Deloitte and the automobile clubs to get to that point where they would themselves feel that they could stand up and support this type of examination on behalf of their seven million members. I'd argue only a few years ago there would be nobody in that room who would have agreed to stand up and say what they said a few weeks ago. So I don't feel that the technology is the issue, what will take time is getting people to understand accept and support those who want to make this change.

MR LINDWALL: In your submission you have

The TRN believe that Australians will accept the logic of RUC if it's shown to be fair and transparent, addressing privacy concerns and is revenue neutral ...

If we need more money into the scheme, how do you make it revenue neutral?

MR CLICHE (TRN) : I guess the "... " is at the outset.

MR LINDWALL: At the outset, yes. So at the changeover and then, of course, once people are confident and they can see they need more money, then over time you can increase charges.

MR CLICHE (TRN) : Yes. It's the argument that once we made a transition to a new model, then given transparency this is what we need to invest in, these are the choices we have to make and my example of the Westgate and Melbourne Metro. To have a newspaper that was deadset against any charging on brownfields not that long ago come to the recognition that the only way we're going to get Melbourne Metro in this generation is to do something different and that would have been a new tax. That would have been a new revenue raised, independent of anything else, with a direct allocation of that revenue to the Melbourne Metro project. I think that's the process that we need to get to, rather than having everybody debating, "Is it going to

be a road," or, "Is it going to be a rail tunnel," we're missing the point again. We need both. There is no question we need both

Given the resources we have we have to make a decision. So the government has made a decision but that that is revenue neutrality/transparency leading to a more open and mature dialogue on what sorts of things we're willing to pay for to get the benefit.

MR HARRIS: So it's not just an increase, therefore, from revenue neutrality to non-neutral increase, it's an initial payment in return for receiving a new asset.

MR CLICHE (TRN) : Yes.

MR HARRIS: So the logic is, like price, is linked to buying some kind of object in return for it versus a tax which is pay and hope you get something in return.

MR CLICHE (TRN) : Yes. The example is well established on toll roads. Some of the modelling has been perhaps suss but if you look at EastLink today, we're averaging 220, 230 thousand trips a day. People are consciously making a decision to pay the \$5 or whatever to ride on EastLink because it's a much better experience than Stud Road or Springvale Road. So 230,000 every day.

DR MUNDY: So presumably some sort of utility based model then ables the impact of the pricing too over time be to some extent mitigated by the traffic growth and other things, so you don't - you can essentially do it in that way rather than having to take a lot from - - -

MR CLICHE (TRN) : Yes.

MR HARRIS: I haven't got anything else. Have you guys got anything else.

MR LINDWALL: The only other thing that I could think of - is there anything you can think of that might enable new construction or maintenance, other than technological things we just mentioned, more cost effective? Are there ways in which we can build roads less costly than we currently do?

MR CLICHE (TRN) : I think there is a lot of discussion these days around the unsolicited bid process. So Victoria has adopted it, as you know, recently. I think the New South Wales example with Transurban's project appears to be reasonably successful in reducing big costs, reducing time to market, so those types of things. Certainly having a pipeline of projects that allow teams to come and stay in place for a succession of projects will help reduce the costs on that.

MS FINDLAY (TRN): Just better planning for the pipeline. We all know that the more planned ahead you are the better your maintenance and infrastructure is going to be.

MR HARRIS: Sure. A core part of what we're recommending in the draft was based around the structure of that which I know gets glossed over against the sexiness of new pricing regimes and things like that but we agree entirely, I think.

MR CLICHE (TRN) : Yes.

MS FINDLAY (TRN): We would agree with those recommendations.

MR HARRIS: All right. Nothing else from us. Thank you very much for your attendance today and your for your submission and for your assistance with the inquiry. We really appreciate the effort you made. Thanks.

MR HARRIS: I have Assured Guaranty as next. Perhaps for the record if you guys could identify yourselves so the transcript can pick you up.

MR BIRD (AG): Certainly. My name is Warren Bird. I'm an consultant to Assured Guaranty.

MR METAXAS (AG): Jim Metaxas, vice-president of Assured Guaranty Asia Pacific.

MR HARRIS: Thanks for your submissions and assistance with this inquiry. Is there something by way of opening that you would like to point out or should we go straight to the questions.

MR BIRD (AG): I will just make a brief opening statement just to elaborate that Assured Guaranty is a global firm listed on the New York Stock Exchange operating in the financial guaranty for more than 25 years; specialist credit risk manager whose business is to provide financial guarantees in respect of financial instruments; well known in the US for guarantees on municipal bonds and outside the US the focus is infrastructure. Infrastructure debt financing is a growing part of the business in Europe at the moment and in Australia we have about \$6 billion of bonds that are currently insured covering major city airports, regulated electricity and gas entities and PPPs and it's that involvement in infrastructure around the world that tweaks our interest in the inquiry.

In our submissions we refer to ourselves as being AA minus rated but just two weeks ago Standard and Poor's upgraded the organisation, so we're now AA stable which is one of the highest credit ratings within the global financial institutions' landscape. The two submissions that Assured Guaranty presented to the inquiry summarised the role that financial guarantees can play in the infrastructure debt market. We see the ability for an organisation such as assured to intermediate between project sponsors and issuers of debt and investors is a way of creating a win-win for all parties. We are actively involved. We've got skin in the game by using our balance sheet to enhance the credit quality of debt, as well as bringing our global risk management expertise to the table to oversee projects for successful completion. That goes beyond just the financial side of things, Assured Guaranty has a fairly large staff of technical experts who are involved in project management.

Since the financial crisis Assured Guaranty has been repositioning and successfully navigating its way to re-establishing its presence in the UK infrastructure market and some of those experiences were referred to in our submissions and within Australia there seems to have been a perception that the financial guarantors went away, but we never did, we've been here all along. We see

other factors as having inhibited the issuance of longer-term debt and they're the sort of things our submissions have sought to address. So we are very keenly interested in the outcomes of the inquiry and very appreciative of the opportunity to participate.

MR METAXAS (AG): It's important to highlight that the guarantee is very much a form in which enables capital markets execution. We're happy to do 30, 35 years, if not longer, in terms of providing the guarantee so, therefore, in relation to specific infrastructure projects, albeit PPP, we could match asset liability match appropriately which effectively eliminates things like refinance risks in transactions which can be viewed as a material issue in these particular transactions themselves. So in the UK of the several transactions that were completed recently, tenders range from 19 years to 35 years in duration, CPI, nominal, fixed and also in the US market under the municipal bond arrangement that's supported by institutional as well as retail client base.

MR HARRIS: Can I ask just as a threshold before we get onto the submission, so against - you carry a lot of risk as a result of your activities. You're effectively buying risk from projects and improving their risk profile. It must be held against quite a significant balance sheet in some form. So is Assured a stand-alone entity or is part of wider corporate group or - - -

MR METAXAS (AG): We're a Bermuda based holding company and we have three operating subsidiaries which refer to as direct insurers and they're all based in the United States. We also have another subsidiary in the UK which is regulated by the FSA and we have one of the largest reinsurers of the multilines in Bermuda as well. But each particular operating subsidiary has its respective own balance sheet.

MR HARRIS: Right.

MR METAXAS (AG): As I said each of those operating subsidiaries are rated by a rating agency and as a result, you know, the rating agency determined at the time we insure the transaction the amount of capital we set aside for each deal and then that obviously then determines whether we maintain the same rating at that point in time and how the business operates. The claims paying resources and aggregates is over \$12 billion for the entire group.

DR MUNDY: Warren said that you're listed on the New York Stock Exchange.

MR METAXAS (AG): That's right.

DR MUNDY: Is the ownership subject to that listing broad or is it - - -

MR METAXAS (AG): Yes. So, yes, New York Stock Exchange listed.

DR MUNDY: But the equity is widely held rather than being quite narrowly held and still listed.

MR METAXAS (AG): It is widely held, yes.

DR MUNDY: Okay.

MR BIRD (AG): Just to further answer that first question, the key thing is that Assured Guaranty has a fairly diversified portfolio globally and therefore each individual risk that they insure is modest or insignificant, at the portfolio level the diversification and the capital that is allocated provide what the rating agency has judged to be a very strong capital support for the activities.

MR LINDWALL: So that goes to my first question. The premium which the infrastructure company pays to your company, Assured Guaranty to get a better credit rating, is X, say, and the alternative universe for it would be to pay a higher interest rate or higher debt costs. Now, presumably the latter is more than the premium obviously otherwise they wouldn't chose a premium.

MR METAXAS (AG): Yes. So where are the gains there? Is it because of the diversification or other things that allow you to effectively reduce the costs to the company?

MR BIRD (AG): Yes, its essentially the diversification of the portfolio globally and other risk mitigants built into each of the individual transactions as appropriate enables the fee that Assured Guaranty charges to typically be less than the spread differential between a BBB-type issuer issuing stand-alone and being issued with a AA credit rating so that the goal of - and these transactions work for projects where they are able to raise the funds slightly cheaper than issuing in their own name but the investors also get a slightly better yield than they would get from other similarly rated entities. That's sort of why I refer to it as a potential win-win.

MR HARRIS: The other thing, if I understand this correctly - but please re-educate me if I'm wrong - that you're really saying is when you insure a bond issue you don't just raise its credit rating, you're offering the opportunity for it to be a much longer term and you referred to 19 and 24 years and things like that, a much longer term debt instrument than the rapidly refinanced instruments that we see in many infrastructure projects in Australia today. So it's a trade-off as well, not just in terms of the price but in terms of the longevity of a debt - - -

MR BIRD (AG): That's correct.

MR HARRIS: - - - and as a consequence of that elimination of fees that are associated and we have had quite a lot of submissions talking about the fee linkage, if you like, in infrastructure projects that occurs from rapid refinancing which is driven by certain debt providers who are much interested perhaps in seeing a rapid refinancing than in a long-term debt structure. So you're really substituting for that, aren't you? You're trying to say, "If you take our support service, our rating you can go to the market for a much longer term because we're standing in place for that period. We will rate a bond for a longer term period than perhaps might otherwise be able to get it."

MR METAXAS (AG): There are a number of reasons why the product is valued in the marketplace. For example, in this particular market the institutional investor does necessarily want to spend two or three months working on a bid with a potential chance that it won't go through. You're allocating resources, you're spending money. You're conducting due diligence and at the end of the day you've got all these other corporate issuers that are issuing to market that are generating suitable investment opportunities at that same time. So each transaction is very much unique. What we do is - we're a specialist credit risk manager that Warren indicated and then the people that invest in our product rely on the work that we do and that we do have skin in the game which is very important because it aligns interest.

What it does is the higher rating point enables a lot of broader investor base to invest in the transaction. So, for example, insurers may have a different rating requirement from which to invest and it also enables that investor base to then enter the transaction at the appropriate time. They will ask the relevant questions, of course, they won't rely on us and blind faith, and then it also sets an appropriate benchmark, because you have to realise that these transactions are very much unique and therefore the ability to cover every single asset class with a small credit team is not necessarily an efficient use of your own resources.

So it is enabling tenor to come out but having said that it is subject to the requirements of the underlying investor as well. So as you highlighted, 30 or 35 years is something that you know, ideally would love to have in this particular market, however, you know, there are not many 30, 35-year investors.

DR MUNDY: So presumably the cost for guarantee increase with tenor.

MR METAXAS (AG): The cost of the guarantee enables the execution via capital markets which sometimes may not exist. What it does it provides a higher rating point and then - - -

DR MUNDY: If I'm a triple B credit and I come along to you and say, "I've got this five-year bond issue I'd like you to insure. Oh, and by the way, could you give a

price on what it costs me to insure it to issue a 15-year bond." Presumably the cost of the latter guarantee is greater than the prior.

MR BIRD (AG): It would be a similar basis point per annum amount. So, of course, you're paying for more years so the dollars you pay at the end of the day but so are the savings compared to issuing a 15-year bond.

DR MUNDY: It's effectively a call option over your balance sheet.

MR METAXAS (AG): If it's a greenfield transaction there is the construction risk at the start which is always considered higher and we obviously have a minimum level of economics that we need.

DR MUNDY: What happens in a circumstance, for example, infrastructure provider goes out and, for example, does a 15-year issue, interest rates come off unexpectedly, the yield curve was upward sloping. What's the capacity then for - if they refinance their balance sheet, particularly if they're an organisation which has an ongoing capital requirement, so it's not a set and forget capital requirement, it's a ongoing expansion requirement, how does the guarantee work if they basically retire an old piece of debt and then bring on a new piece?

MR METAXAS (AG): Obviously it depends on what's negotiated at the time but generally speaking there is - you can redeem the bonds, there is what they refer to as a make-whole payment that would be applied to the guarantor - because obviously we would have satisfied capital for that 15-year period and then they can reissue subsequent debt if they feel the sale is appropriate.

DR MUNDY: So if I came along and said, "Look, I want to claim my 15-year bond and issue a 10 year," you might sit there and say, "Well, that's - we're exposed to you for 15 years anyway so the costs wouldn't be that huge."

MR BIRD (AG): Assured Guaranty doesn't have the bonds on its balance sheet.

DR MUNDY: I understand.

MR BIRD (AG): They're out in the market, so for that to happen they would have to go and buy the bonds back from investors in the market.

DR MUNDY: Yes, I understand.

MR BIRD (AG): It's a price trade-off.

MR HARRIS: From the question that Warren raised, it's a simple price trade-off in

the end and (indistinct) the rates vary.

MR LINDWALL: Apart from taking a premium - I assume you charge a premium for the guarantee. Do you take a lien over the assets of the company at all?

MR METAXAS (AG): We endeavour to achieve the same rights as any senior lender and actually what we do with the bonds that we insure, we are the controlling creditor of those bonds, so we have all the control rights and effectively that is another reason why the investors like that strategy is because we then manage the transaction on their behalf.

MR HARRIS: In our draft we had three areas which we quite prospective of further examination for infrastructure finance in Australia versus what we can see happening overseas and one of those was the issuance of a bonds or loaded instruments that reflect the project risk rather than the profile of the issuer. So this is the question, should the Commonwealth, for example, issue bonds and lots of submissions talked to us about that. But we can see examples and I think Canada has examples for this sort of thing where the bonds are issued according to the risk profile of the project itself rather than the entity that might otherwise have been assumed to want to issue them.

If I understand your model correctly you're really saying, "We could support that kind of activity because a foreign institutional investor" - they may not want to accept the full, as it were, risk of the project but you can assure them by effectively offering them an insurance policy against possible loss of that asset over time. You can make project - if I can assert this and hear your correction or other clarification - you can make project risk based bonds potentially acceptable in the marketplace where they may not be currently acceptable.

MR METAXAS (AG): That's right.

MR HARRIS: That appears to be the case here. We don't seem to have a lot of that kind of debt activity.

MR METAXAS (AG): That's right. So if you think about it, a lot of the PPP transactions that is one of the reasons why we are discussing this is that they issue debt at the start of the transaction, of course, five years down the track they'll go for another refinance, five years down the track thereafter. So then it's not a - you're not seeing repeat issuance like an airport or something like where they will continue tap the market and, therefore, the level of work that these institutional investors will do will be different to what they will do to the repeat issuer.

Then their assessment of that risk and assessment of that return will be totally

different as well. So by enabling us to get involved in the transaction, we are covering that particular project risk and we are "homogenising" particular infrastructure issue in some ways. But we're enabling that particular transaction to go to market with effectively our stamp of approval.

DR MUNDY: Effectively you're enhancing liquidity because what they're buying is your credit risk rather than road X or hospital Y.

MR BIRD (AG): It's a bit of both. When we speak to investors we tell them that they should be understanding and comfortable with the underlying credit because it's going to generate the cash flows. Assured Guaranty's insurance policy is there if something goes wrong and so the financial exposure of the investor is to loss given default rather than to the full underlying but if something goes wrong, Assured Guaranty, because they will have to pay up is going to be in there acting in the investors' best interests to try and maximise the return, keep the project going, get in early, identify any problems and that sort of thing.

MR LINDWALL: So what are the barriers at the moment to you operating in Australia to a greater extent? I mean, the examples in your submission to my mind appear more like property deals of some form, they're not traditional PPPs, like a road fund or something and everything you have said so far is high value but why isn't it being more used?

MR BIRD (AG): There are a couple of reasons. The main one, as we see it, is there is disincentives in the bid process for projects to government to seek alternatives to the lowest short-term cost of funding which is bank debt because the banks are very aggressive in their pricing for three and five-year financing. We have an upwardly sloped yield curve so longer-term debt is at a higher yield and governments just don't actively encourage bidders on PPPs to seek a diversity of funding. The UK model that we've referred to changed that several years ago and it suits certain transactions to have the longer dated credit-wrapped capital markets issue.

There are plenty of other PPPs that have gone out in the UK that haven't had an Assured guarantee involved or any other guarantor involved, bank funding suits them better. But it just means that each project can work out what's the best value for money for it rather than just simply having to lock in to a committed funding level and a committed funding rate up-front which really only the banks can provide that because, as Jim said earlier, it takes a lot of time to get out to the investors to rouse up interest and they don't want to pre-commit to funding levels because they're all benchmark aware and all that sort of thing.

DR MUNDY: So the issues are in relation to the structure of transaction rather than

any regulatory issues that we could make recommendations about? We will make some recommendations about structures of transactions, be assured, but it's not as if there is some for of regulatory barrier or capital adequacy or some licensing issue that obstructs this.

MR METAXAS (AG): It's the bid process is the major concern.

DR MUNDY: No, that's fine.

MR HARRIS: When you say "bid process", so let's get - I always like to get down to the brutal, pragmatic bits. So a number of submissions have asserted to us the bid integrator has an incentive to approach institutions which go for early refinancing and that therefore is the model, if you like, that has grown up in Australia for these things and therefore, under the model, there is a presumption of that model in the bid documentation that's issued by the project initiator, the state or possibly the Commonwealth, I guess, but primarily the state and that's squeezes out potential alternative financing options. That has been suggested to us. We're not saying we have accepted it but you're playing in this space. Would you say that that is a reasonable contention?

MR METAXAS (AG): I think so. Why it's important to highlight is that the particular model that we have in Australia differs significantly from other jurisdictions which we participate in and the governments in the UK, the US they do need - they look for term to maturity funding at financial close. So we see situations in the Australian market whereby bidders are very much incentivised to look at the lowest cost of debt as Warren alluded to and not only are they looking at the lowest cost of debt, they're happy to have the concentration of refinancing at the earliest possible time to obtain that.

So left unchecked or the assumptions used in the model at that time can cause issues and we have seen that with crisis when there were transactions that were, you know, guaranteed by our competitors and they assumed 30 basis points or whatever the number was, refinancing margin and the refinancing margin came out at 200 or 290. The government in some way says, "Well, that's an equities issue. Why is it our problem?" But then overall you have the circumstance where you have superannuation funds that are investing in retail money that are using - that are very much backstopping these things which are arranged by institutions that have no skin in the game. So left unchecked, as I mentioned, that can be an issue.

So when these bidders are looking at long term, they're looking at a financing package, they continually talk to us about, "Can we do five, seven, 10 and maybe 15 years," as you alluded to and they will always benchmark that against the five-year cost of debt and then they will take into account a refinancing assumption.

However, it's very rare that that will stack up under the current arrangements because there's a market risk at its close.

DR MUNDY: Historically when it has been normally shaped our yield curve has been typically steeper than European economies in particular and often theirs were certainly very flat. Is that part of the story or is it just a function of the institutional characteristic of the bid rather than what the structure of interest rates might look like?

MR BIRD (AG): I'm not sure that it's accurate to say that we're typically steeper than Europe. I know from managing global bond portfolios over the years that often the global portfolios are fairly attractive compared to domestic bonds because when you hedge them you're picking up quite a hefty premium and their yield curve is steeper than ours.

DR MUNDY: That's not a yield curve shape issue.

MR BIRD (AG): I don't think it's a yield curve shape issue.

MR LINDWALL: Could you go so far as to say that the current bidding process which focuses on the short-term cost of debt is actually a long-term cost to the taxpayer?

MR METAXAS (AG): I'm not sure we can make that assumption.

MR BIRD (AG): Yes, I haven't thought that through.

MR METAXAS (AG): As we alluded to, you're not looking at a whole of life value for money in these PPP projects and now that we are moving towards these multibillion dollar transactions which you're not going to get 20 banks for every single bidding group to finance these things. There needs to be more of a constructive method in which to assess at what point are we asking these bidders to get a fully-funded bid.

At the risk of taxpayers? The problem you have is - and we have seen it, for example, in the Reliance Rail project whereby if things do go wrong and you're subject to refinance event then government has to make a decision about what it does with the particular project, whereas what we do with the long-dated bond is we have time to resolve the issue and time is a critical element in particular when you're dealing with complex projects, you're dealing with different contractors, counterparties and so that's when it becomes a material risk and that's when the refinance element highlights itself the most is that when there are issues that arise how do you resolve those issues in an efficient manner?

MR HARRIS: One of you made an interesting comment in passing a little earlier when you were saying that government would view the problem as an equities problem but, of course, equity is inherently essential for these projects to get away at all, so it sounded to me like there's an assumption in the design of government documentation that would say, "We don't have to worry about this. We will always get equity participating," whereas currently there is a problem getting equity participating if we follow the views that have been given to us by, for example, some of the superannuation funds. Would that be right?

MR METAXAS (AG): With a PPP capital structure you're looking at 80 per cent debt and 20 per cent equity so the bulk and majority of these things are debt and so, therefore, from our understanding there is a lot of equity out there searching for a home, however, they're all specifically related to returns et cetera and the offshore bidders that are looking at these transactions obviously look at a number of factors before they participate. We, from our interpretation, the debt is - looking at alternative forms of executing the debt is the more problematic part.

MR LINDWALL: But the premium you charge for the guarantee would vary by the gearing of the infrastructure project?

MR METAXAS (AG): There are a number of factors, including what we're insuring, the economics that we require, gearing is one element, we look at the amount of capital that we're required to set aside for these particular transactions as well and then ultimately a set level of project risk that we're willing to accept.

MR LINDWALL: So the gearing is quite high, this is typically for infrastructure projects throughout the world, on my understanding. Why do you think that is so?

MR METAXAS (AG): It's an optimum outcome. So the more debt that you have that's cost effective relative to equity the better the returns are and the better bid price that you can submit.

DR MUNDY: Warren before made the observation that monoline insurers never went away, they became less prominent perhaps and since the GFC there has clearly been a return of activity, perhaps not to pre-GFC level yet but it's hard to say. Some people have suggested to us that government should - possibly based on a false premise that multiline insurers have gone away - but there have been suggestions made that government should step in and start effectively providing the sorts of services that you provide. Governments probably don't have a track record of valuing guarantees but what would be the impact on the recovery of the market if governments did step in and start to provide guarantees and what sort of what of risks would there be in terms of creating distortions within that market if they didn't and

what perhaps should they avoid?

MR METAXAS (AG): I'd be speculating.

DR MUNDY: That's all right. We do it all the time.

MR BIRD (AG): I don't see a need for government to step in and guarantee a whole range of infrastructure projects and then if the private sector isn't prepared to do some evaluation of risk and take on the risk itself, then government should just be doing the infrastructure up-front. If a government guarantee is needed then in my personal view the government should just borrow in its own name and fund it. That would create a distortion to me.

MR HARRIS: An interesting part of your original submission and it's repeated in the final submission here is the possibility that the Reserve Bank may accept instruments that were credit assured at the repo counter and we did look quite closely at this because it's, I think as you have suggested, a potential contribution to what is said to be a liquidity problem for certain equity providers and under different guise obviously people holding bonds as well. The feedback around this that we received related to the continuous broadening of that window as an opportunity therefore for perhaps lesser quality assets to be backed, it's an implied form of guarantee. It suggests that the instrument should be accepted because, of course, the Reserve Bank will ultimately take it from you in a difficult liquidity circumstance.

I guess naturally speaking we'd be loath to play with the overall financial system balance that's managed by the Reserve Bank. But do you know anywhere else in the world where this might occur or is being considered or has been at least thought of?

MR METAXAS (AG): No.

MR HARRIS: So this would be us being pretty much unique.

MR METAXAS (AG): I mean the rationale for the idea of repo eligibility is that we have Australian financial institutions that are APRA regulated that have the ability to repo the existing paper and so the current requirements for the RBA is a AAA-rated institution can be repo eligible. Anything under AAA is very much outside the requirements. So exactly what you said, it's a liquidity thing by creating by enabling a highly rated institution to guarantee - it doesn't necessarily need to be Assured Guaranty, it can be a bank or whatever else but there's the same rating requirements - an infrastructure and know it's PPP provides greater comfort for the investor that if they ever need to liquidate it can be repo eligible and that would be not just through the institutional landscape but then also on the banks as well. They

are looking for liquid assets and there is a widely held view there is lack of government securities from which to satisfy their Basel III requirements that they could use effectively infrastructure wrapped, if you want to call it that, paper which could then become repo eligible.

DR MUNDY: Correct me if I'm wrong, and it's a while since I worked at the RBA, but my understanding was that the repurchase arrangements, particularly post the float, the primary purpose of the repo arrangements were to provide liquidity and security markers because at the time they were just government bonds and they wouldn't take state government paper but it was for the purpose of managing domestic cash liquidity because of the need to - once the currency was floated - to manage daily flows and indeed that's why the bank, when it first started to run out of government securities for the purpose of repo activity turned to the foreign exchange market.

So what you're proposing here is actually a new purpose for the repurchase operations of the RBA when it deals with bank paper - and supranational AAA paper from the World Bank and others - my recollection was it went into that space because of contracting - well, pervasive government surplus, that there wasn't the Commonwealth paper around and the transactions costs of trading in securities that's why the foreign exchange market. So what you're actually proposing is a new purpose for the repurchase operations of the RBA over and above the management of the domestic liquidity issues and, to some extent, although they ever did it, the management of the exchange rate.

MR LINDWALL: The interesting thing about these would be that in the case of APRA, the existence of which is about the prudential regulation of systemically important institutions should not and therefore you argue that if you repos extended to non-APRA corporate issuances they should actually then become APRA regulated because you're adding an extra risk to the financial system otherwise?

MR METAXAS (AG): It would be prudent to assume that the insurer or the guarantor would have some sort of supervision.

DR MUNDY: But presumably the supervision comes out of the US or the UK, wherever the insurer is domiciled.

MR METAXAS (AG): Correct. At the moment we're regulated in the United States. We have a separate insurance entity in the UK which is regulated by the FSA and being a New York listed entity there is the SEC et cetera and things like that.

MR LINDWALL: The repo is a way of obviously improving liquidity into the market but it's an indirect way of doing so. Isn't there a more direct way which you

could increase the liquidity in the infrastructure market? I mean, it is highly illiquid obviously.

MR METAXAS (AG): That's right.

MR LINDWALL: Why is that so and what could be done to make it more liquid which would solve a lot of the problems.

MR METAXAS (AG): Exactly. We are talking to pension funds, we talk to life insurance companies, fund managers and one of the key considerations that they have is that with MySuper and we need to press the sell button, how do we sell it? How do we know at that particular point in time there's a buyer for this infrastructure paper.

MR LINDWALL: We also don't know the price because it's not traded so easily so - - -

MR METAXAS (AG): That's right. It was just a thought.

DR MUNDY: So why should we consider this sort of arrangement of illiquid infrastructure investments but not, say, illiquid commercial property investments which are quite strong within most super fund portfolios. What's the difference or logically should we extend this arrangement to both?

MR METAXAS (AG): Given the essentiality of infrastructure - we're talking about PPP in particular and the need for government to - they're wanting to create a number of new infrastructure projects in the pipeline, there would be a prudent way to address to liquidity.

MR HARRIS: You can see liquidity as an issue, we can see liquidity as an issue, everybody is struggling to find a solution to liquidity.

MR LINDWALL: We just tossed it in the ring to - - -

MR HARRIS: There are some unusual ideas in some other submissions, frankly much more unusual than even this idea. But I primarily said if there were any precedents because if there were precedents there is probably going to be, therefore, structures around this and the hardest thing to envisage is the structure that would keep this, as it were, to a limited level of functionality.

MR BIRD (AG): Liquidity is not as critical in a couple of other markets because there are more natural long-dated holders. The life insurance industry with full whole-of-life endowment policies still exists in Europe. In Australia it's almost dead

and almost all life insurance is term life and so it's all short-term investments and that sort of thing. So they are the sort of factors that create the need for liquidity and we also mentioned in our first submission the fact that investors have a fairly short-term horizon for debt and how can we address that.

I think you alluded to a couple of other proposals and we noted, for example, Maritime Super's suggestion based on a JANA paper. Really when we look at what that idea of an infrastructure debt authority was, there was a presumption there that there is an investor base that wants to invest long term and not necessarily have the full liquidity and that they need long-term assets. When we looked at what the proposed IDA would do, a lot of it is exactly what Assured Guaranty already does and so we're trying to have conversations with those other organisations. We don't expect the commission to make recommendations or whatever on that but I think it has been a useful process getting all these different views in public so that other private participants can start talking to each other as well.

MR HARRIS: We do see that as singularly of value which is why I wanted to actually ask questions about it. We all know liquidity is an issue, it just may not be an issue that's amenable to regulatory kind of solutions. That's inherent in my overall question and I think Paul asked it before I did but on your submissions I have written in both cases, the first and final one, "What stops this happening naturally?" and that's what we've been asking you about and you've described market circumstances but some of them at least are relatively - appear to be unique to Australia but, nevertheless, if infrastructure is to be invested in long terms by institutions that are interested in longevity of investment but are exposed by structures which require them - very few defined benefit schemes by comparison with Canada or Europe and that sort of thing. So we know it's an issue, we just not sure whether it's solvable by regulatory structures.

MR BIRD (AG): I guess if there is a regulatory issue it's the whole structure of bank regulation post-GFC which is forcing banks to be much more short-term focused and to have smaller risk balance sheets themselves so that they're not prepared to have trading books. It's a problem for corporate bonds generally rather than just simply infrastructure. But if there is a regulatory issue, that is probably it. The world is trying to make banks safer which means they're not prepare to support as wide a range of activities as they used to, so the industry has to try and find ways of replacing that.

MR LINDWALL: So is it, just for the record, that Basel III is part of the reason for as increase in short-terms focus?

MR BIRD (AG): I think this sort of infrastructure debt market is possibly collateral damage from Basel III and it's those sorts of things.

MR HARRIS: Although this focus on short-term debt in Australia by comparison with PPPs we see overseas has predated Basel III propositions. We do seem to be a short-term debt market - we just seem to be one.

MR BIRD (AG): I suppose it's partly because Australia historically was such a high and volatile inflation country and it's just taking a long time for people to start realising that as an investor you can take longer-term debt without having to worry about inflation as much as you used to. I mean, I still encounter that with some of the other professional hats I wear as an evangelist for fixed interest that equity people keep on saying, "But inflation will come back and you can't invest long term because you're locked in."

MR LINDWALL: Inflation has been stable in Australia pretty much since 94, I think.

MR HARRIS: Yes.

MR BIRD (AG): That's just a personal view, I'm not speaking for Assured Guaranty on that.

MR LINDWALL: So basically what you're saying is that the private sector has the capacity to issue bonds that are guaranteed by organisations such as Assured Guaranty provided the bidding process is fixed, that's the principal - - -

MR HARRIS: He means "allows this".

MR BIRD (AG): I knew that's what you meant.

MR HARRIS: But fixed not as in rigged.

MR BIRD (AG): That is the heart of the Assured Guaranty submission.

MR HARRIS: Very good. So we're at the end of our allocated time period for this but it has been a very useful discussion. Is there anything that we've missed that you really wanted to pick out from the submissions?

MR BIRD (AG): Not that we need to discuss here, I don't think.

MR HARRIS: I appreciate again the effort that your organisation has made. I think the value that you noted that we have can the discussion and that maybe some - well, certainly I think you have succeeded in drawing attention to this at a number of levels amongst institutions who are engaged in this marketplace and we hope to do a

bit more of that in the final report. Thank you very much.

MR BIRD (AG): Thank you.

MR METAXAS (AG): Thank you.

MR HARRIS: I think morning tea is outside. We will be back at 11 o'clock.

MR HARRIS: We're restarting with Cbus Super. If you gentlemen could identify yourselves for the purpose of the record.

MR BRACKS (CS): Steve Bracks, chairman of Cbus Super.

MR HARRISON (CS): Grant Harrison, investment manager private markets.

MR HARRIS: Thank you to both of you. So the way we have been running this is you would like to make a few opening comments we've certainly got scope to do that or we can just jump right into questions.

MR BRACKS (CS): I might just make, if I could, a couple of opening comments. Thank you for receiving the submission and for your clarification of some of those matters. The point I would like to make is that industry superannuation of the three superannuation classes, that is, industry superannuation representing industry funds and government funds, compared to retail and self-managed funds, has the greatest appetite for non-liquid assets, long lead investment of a return of 9 per cent plus under single-purpose test, of the order, if you like, of a \$600 billion funds under management of about \$150 billion per annum which has to find a home in any one year, either in property or infrastructure; roughly about 75 billion in infrastructure per year.

At the moment - and I know it's been said a lot - but we don't have a home for that totally in Australia. We have a significant and increasing amount of that going overseas. For example, our private equity investment in Pacific Hydro which has its majority of activities in Chile or the \$2 billion in the US through IFM Services, of which we're a shareholder, and you would expect with the super guarantee increasing and funds under management increasing that that likelihood is that that percentage of overseas investment, the home which this capital needs to find, will be increasing and greater in the future. I guess that is the first point.

The second is we are a fan of investment in brownfield infrastructure assets and recycling of assets. We have undertaken that already in the purchase of the port of Brisbane, in the purchase of Port Kembla and Port Botany and the capability in the latter one of the New South Wales government to reinvest that in other greenfields projects. We, obviously through our infrastructure manager, IFM Services, were successful in those two bids and we would have an appetite for those in the future in purchasing and operating on a long lead concession deed and we think we have a great expertise and ability to do that. Not only that, there would be a competition for that, not only from Australian funds but internationally and we know that that will sharpen up the proceeds and the opportunities.

The third point, I guess, and just to - I don't think it was covered for probably good reasons in the draft report - but if there was an appetite for the government to lift the capacity of industry superannuation schemes to invest in infrastructure, that is, in illiquid assets then we would be prepared to look at entering into an arrangement with the government for a liquidity guarantee. We have to hold something like 60 to 65 per cent of our assets in liquid assets, including on the share market. If you were to relax that and offer a guarantee which would be paid for by the industry super funds, in a similar way that we say the four banks guarantee and enable them to have a liquid supply of capital after the financial downturn, then you would be able to lever up a greater amount than \$150 billion and a greater amount for infrastructure as a component of that, if that was the appetite.

At the moment I don't think it is required because there is not enough projects for that capital to find a home with but if that was to be levered up and I would argue strongly that any mandating of infrastructure for superannuation classes, whether it's retail, self-managed funds or industry funds, would be ultimately detrimental for the sole purpose test which is that we're honour bound to be trustees of people's retirements, the accumulation of their wealth and their accumulation of their retirement and that could, in certain circumstances, and certain times of the market mitigate against that if there was that structure. In any event it is not needed. There is available capital for which there is not enough projects and I am happy to come to some of the pipeline issues as well. After those comments I am happy to take some questions.

MR HARRIS: Perhaps if I can just ask you to start with pipelines. In the draft report we've suggested that a pipeline would become visible if governments would commit more strongly to publishing their initial analyses and then their subsequent detailed analyses of project propositions, thus via a transparency mechanism potential investors would see projects in their early stages and be able to express interest and particularly, as is now the case, both in New South Wales and Victoria - and I think other jurisdictions are developing - unsolicited bid proposals so that, if you like, the pipeline itself is not a mandated entity either, it's not a, "Please submit us a list of your latest projects," it's an entity that develops naturally via something that in itself is healthy which is transparent consideration of the costs and benefits of particular infrastructure proposals.

Notwithstanding that and although submission in the subsequent guise didn't really go to this, since you've mentioned pipeline I would be interested in getting your views on whether or not that form of pipeline is sufficient for your purposes in potentially identifying future projects and maybe addressing this funding which you, as you have observed, have available but doesn't have a home in Australia.

MR BRACKS (CS): I think goes some way, but not all the way, in that it's one

thing to say that governments have an interest to look at the feasibility of a project, but whether that comes to book, whether they have the appetite either in equity or debt to proceed if there is another matter. So, yes, it would be helpful, it would be as helpful to know the priorities of each of the governments if there was available capital, which is probably the same thing. So assuming there was capital for projects in each of their states, what is their highest priorities, that would help somewhat in the preparation of bids around the country in a precautionary way to identify that these may come to market. So that would be of some use.

What would be of more use would be sequencing. You can reduce big costs by having a flow of projects sequentially done which don't crowd out the market at any one time but are done over a period of time. So you move your big teams from one to the other. That would help enormously. That requires coordination, not just a look through on publishing what might be coming up, that requires an actual coordination of those projects when they come up. If they're coming up, what sequence would they be in state to state, Commonwealth and over what period and that would be probably of more use to some extent.

MR HARRIS: But my perception currently - and it's a perception and I'd be interested in your correction of it - is when people talk about pipeline they appear to be implying a nationally constructed pipeline where the sequencing then would be in the hands of an entity that I am quite uncertain about because the initiators and investors are primarily states but the national entity would be creating this list and somehow prioritising on behalf of individual state jurisdictions which would seem a little problematic.

MR BRACKS (CS): It's true that the Commonwealth has very few infrastructure projects. Most of the projects are with the states. Most of the assets are with the state, either held as brownfield assets or the proposal is to look at mass transit and a whole range of things, they're with the states. There's no question about that. But that doesn't preclude the Commonwealth for playing a coordination role which you can see in other countries, including Canada, that it has undertaken. It's hard voluntarily for states and territories to themselves coordinate without impetus, without a push, without some incentives such as financial or other tax benefits which might be a part of that. But coordination would be very, very important.

But the two things that restrict states from bringing projects to market are pretty obvious, that is, debt and equity. Equity is crowded out because of the churn of funding services, particularly health which is rising 3 or 4 per cent above CPI. The room for equity for capital is limited and the room for debt financing is limited too because of the concern on credit rating of each of the states. So they are the two things that are most important and we think we can help on that. I know if you're coming to the procurement model we think we can help on reducing bid costs on

providing an equity partner by inverting the bid and not having the fee clipped at every step of the way which it is currently on procurement models where financing, development, construction is all mixed together. If governments were prepared to look at an equity partner, for example, a superannuation fund and then we undertook the work in operation and construction it would halve probably the bid cost and also provide an equity base which they don't currently have. We think there is a model for that to be achieved.

MR HARRIS: Just before we get to those sorts of bid arrangements, if I can finish on this pipeline query. Coordination does actually imply then a sequencing which says to one jurisdiction, "You wait until another jurisdiction is finished," finished its tender process, for example. It seems again - this is the source of my concern about whether this could ever be made to work effectively - and we have had submissions obviously on sequencing from not just the investment point of view, from, for example, the training and skill shortages point of view and things like that, and so I'm just trying to get some feel for whether this again could be nationally organised or whether it isn't the sort of thing that whilst in principle it would be nice to have a coordinator, in practice it's hard to imagine how that coordination would actually be applied.

MR BRACKS (CS): It is difficult because each state have their own time line imperatives, whether that's the electoral cycle or just the need to undertake work at a particular time. I can't speak - obviously I could speak to that in the past - but I can speak from the investors' point of view that we would reduce our costs if there was a sequential process for bidding. For example, when we handed over the \$5 billion cheque to the New South Wales government for the Port of Botany and Port Kembla, we were ready to go on the next project. There was no project to bid for around Australia. Nothing. Where is that capital going to go? It's not going to go to Australia. So it's ready to go. The bid team was ready to go.

MR HARRIS: So part of your answer - - -

MR BRACKS (CS): I don't have the answer for you.

MR HARRIS: - - - is there a shortage rather than perhaps an overlap of competing projects.

MR BRACKS (CS): A shortage is probably a bigger issue than the pipeline.

MR HARRIS: Yes.

MR BRACKS (CS): I would agree with that. I don't have an answer on your latter point I must admit.

MR HARRIS: But then the implication of that, if I can just finish off, is so we should be able - the coordinator might be calling for the next project, as it were, which is again an interesting thing, calling to a state jurisdiction to sell something next from a nationally coordinated level is again - still looks a little problematic to me.

MR BRACKS (CS): Federal governments have often used sticks and carrots to achieve those aims in the past and states who are starved of capital funding would be enticed by a carrot, I would have thought.

MR HARRIS: So incentives, in other words, are required to make this work?

MR BRACKS (CS): Yes, I would think so. The Commonwealth would have to have skin on the game for that to occur, I would think.

MR HARRIS: Okay.

DR MUNDY: Steve, you mentioned that you didn't see that there was any merit in having infrastructure limits or requirements on different types of super funds which is good to avoid the old harking back to the "you will hold so many percentage of your assets in government securities" days. But there are a number of organisations and in the public domain have been talking about the merits of industry based super funds in the privatisation context increasing community acceptance.

MR BRACKS (CS): Sure.

DR MUNDY: Would it be Cbus's view that when governments come to sell assets they should simply sell them, subject to the bidders being fit and proper people and having the appropriate resources, or should we be looking at requirements? Should we be restricting bidders? Should we be saying, "Well, only industry based super funds can do this"? If that is the case, how then do we do with the likes of Hastings who provide services to people like yourselves but also the Victorian government, for example, and a range of others and presumably some of your business partners from overseas who you have bidden with.

MR BRACKS (CS): Yes, and the Canadian funds. No, we don't support a model which gives preferential treatment to industry funds or any other class of superannuation. We accept an open and transparent bidding process. But the argument we would have is that by its very nature and structure in investing in asset classes which return for our members over a 20-odd year period 9 per cent we required to therefore invest in illiquids more than a retail fund that is probably going to be on listed markets more or self-managed fund which will tend to be a smaller

profit.

So by our very definition we are investing in infrastructure. We believe we have something to bring to the table in a change procurement model which would, by its nature, favour industry funds and probably some of the international government or industry funds as well. If there was a streamline to phase procurement model which governments in the first instance selected by tender an equity partner and that equity partner acted in concert with the government in the development and the operation of that infrastructure in the future, we believe that would reduce the bid costs by half. It would stop the clipping of the ticket at every way which it does for extraction of fees which is significant and it would provide an equity base which the government doesn't have in that process. Now, we're not asking for preferential treatment in a preferred bidding process but a structure which by its very definition would probably lead to that anyway.

MR HARRIS: So it would naturally lead to people who were longer term in - - -

MR BRACKS (CS): It would lead to investors who are longer-term, patient investors investing in infrastructure which industry funds are one of those categories.

MR HARRIS: And presumably the defined benefit funds and the Canadians - - -

MR BRACKS (CS): The defined benefits internationally, the Ontario Teachers and others would be very, very competitive in that market. It would be an international market. It would be a significant competitive market.

MR HARRIS: So there would be no fear of the lack of competitive - - -

MR BRACKS (CS): No, there would be competition within Australia within the funds themselves. You might find that some of the other sectors and superannuations re-examine their asset class investments and they might be in the - that is those that are vertically integrated for the banks already will probably start to tend towards that and internationally the market is very, very strong and robust. It's already in our market and it would be into our market even more.

MR LINDWALL: How would you just take out the risk of trying to negotiate the internal rate of return early when there might be risks that become apparent later?

MR BRACKS (CS): Well, that is really the task. That is the key task. We would say we bring the skill to bear on that, that we will be able to identify and look through that on the operation of that infrastructure over the period. That is, determining whether it was sensitive to growth, whether it was sensitive to population increases, how that rated in terms of a long-term return. We believe that's

the sort of skill we bring into it and we could do.

For example, on the Port Botany and Port Kembla, we looked through that over a 25-year period and looked at the correlation between that asset and gross state product and it was largely very, very closely aligned. Others like a toll road, if you had one of those, probably have a greater emphasis towards population pressures and increasing population, whilst there is still a strong economic factor. That would be the skill we bring to the table on that.

MR HARRIS: Have you had a chance to look at any of the current state government unsolicited bid proposals? If so can you tell me - - -

MR BRACKS (CS): Well, we offered a unsolicited bid for the east-west project through our infrastructure manager IFM services.

MR HARRIS: Yes.

MR BRACKS (CS): I think they're coming here later. I'm sure they could amplify that. We thought we could do it cheaper and more efficiently with lower bid costs than anyone else, but that wasn't accepted.

MR HARRIS: But New South Wales, and I think very recently Victoria, adopted unsolicited bid proposals.

MR BRACKS (CS): Yes.

MR HARRIS: We see them as being again a positive as to - it belongs there, a way of improving the information flow and the transparency of infrastructure investments; both very worthwhile objectives. The model - the inverted bid model, the idea of selecting an equity partner first, seems to me to be quite a sort of natural follow-on from that because it does suggest rather that you're relying upon an equity entity to potentially identify an opportunity.

MR BRACKS (CS): Yes.

MR HARRIS: That may not necessarily be an opportunity that's put to the market at a time when a formalised tender process is in place, because otherwise that's going to be the current construct, isn't it, and therefore equity becomes just one of many entities that is integrated into the bid and result in these fee-oriented structures that you've alluded to.

MR BRACKS (CS): Yes, I agree with that.

MR HARRIS: That's the reason for my question. I was going to ask you if you had have a chance to look at either of the unsolicited bid proposals, whether you thought they were a natural ally of this proposition or whether in fact the unsolicited bid proposals had a weakness there, for example, in a sense that it did not allow for such a proposition, for an inverted bid for an equity provider to put a proposition to a government, even when a government hadn't considered it.

MR BRACKS (CS): I think it lends itself towards unsolicited bids and provides a solution for governments which it doesn't already have, and an equity partner which they needed at some point in time to lever up their capital spending. I would have thought that would be a great advantage, so I would have thought the former.

MR HARRIS: So you're thinking that perhaps we should look at the unsolicited bid proposals to see whether they do allow for such an option?

MR BRACKS (CS): Yes, I think so, yes. Coming back to the previous question, I didn't answer it fully, sorry, the - so industry superannuation is about five and a half million Australians who are members of it. So holding an asset is probably an easier policy fit for governments that might be divesting that asset; but it's still held by Australians but in different forms for their return and retirement, so it does have a significant reach in the community.

MR LINDWALL: The internal rate of return of course is about profit to the project.

MR BRACKS (CS): Yes.

MR LINDWALL: What if the guarantee was on the revenue rather than in the profit? Would that make a difference to the inverted bid model?

MR BRACKS (CS): Might defer to Grant on that.

MR HARRISON (CS): Yes. The allocation of risk is a very important component in this determination of IRR at the end of the day to an equity investor. So a guarantee on revenue where you're still exposed to the underlying profit risk would probably have some problems.

MR LINDWALL: Okay, yes. Is there anything in the superannuation law or APRA regulations which affect the acquisition of debt? We've been talking here about the super industry, super funds taking equity positions in infrastructure. What about debt positions as well?

MR BRACKS (CS): No, we can take debt. There is nothing - - -

MR LINDWALL: On the same project can you take debt and equity?

MR BRACKS (CS): Yes, we can. You can make it a mix of equity and debt. There is nothing preventing that. We have the same sort of prudential standards as say a bank would on that in looking at what is appropriate in terms of debt servicing and have the return.

MR LINDWALL: We don't have any questions on that?

MR LINDWALL: No, we don't.

MR BRACKS (CS): We do debt finance some projects, yes. But we do have significant inflows which we need to find a home to. So we are natural equity investors because we need to - we're going to disadvantage our members if that - I think in our case it's 100 million a month or something. If we don't get that out we are significantly disadvantaging our members, so we need to find a home for that - - -

MR LINDWALL: I mean I was just thinking that, of course, we have issues of short-term bank debt which has been discussed in the previous conversation, and you could be issuing long-term instruments, debt instruments, to the infrastructure projects.

MR BRACKS (CS): Yes. Yes, we could. I mean our preferred position with debt is to find a distressed organisation that we can offer a good return back on. We did that post the global financial downturn, we were investing in debt once some bank covenants were broken and yet there were strong guarantees that they would pay back significant returns, going back to the front of that period.

MR HARRIS: So I guess one of the worries with the idea of the inverted bid is that you're pretty much establishing this internal rate of return at a point where the project - and I think Paul referred to it earlier - isn't properly scoped. I mean by definition you haven't gone to the market for a constructor and so there are degrees of uncertainty at that point. Now, I have seen in IFM's propositions, and therefore I'm presuming this is inherent in yours, that there is potentially some truing-up that might occur perhaps at the end of the process. So would the IRR contest, if you like, at the start of the process - would it be to select a preferred equity partner but that would be subject to the proving-up of all of the scoping issues, if you like, that would occur through the subsequent tender process?

MR BRACKS (CS): There would be conditions similar to those before you had financial close on that matter. Grant, I think that's right?

MR HARRISON (CS): Yes.

MR BRACKS (CS): Yes. It's not much different to the financial close you'd have anyway if it wasn't a equity partner. You'd still have some of those conditions precedent which have to be met before you did finally - - -

MR HARRIS: But this would be a significant one. If we decided to pare back or the state decided - - -

MR BRACKS (CS): Yes, because your anticipation is greater, that's correct.

MR HARRIS: Yes.

MR BRACKS (CS): Yes, I understand that.

MR HARRIS: But in principle, as we refer to IRR as a form of profit guarantee, so if the state decided having viewed now the results of the process run jointly between - you know, holding hands as partners but nevertheless decided to vary its perspective on what was an acceptable internal rate of return, you'd have to accept that at that point or walk away.

MR BRACKS (CS): Yes, correct, before you secured - - -

MR HARRIS: So that's some kind of security, is it not - - -

MR BRACKS (CS): Yes.

MR HARRIS: - - - for the state which says, "We're not completely exposed to something where we agreed for the purposes of selecting a partner internal rate of return but what's subsequently proven-up in the project is different."

MR BRACKS (CS): Yes, I agree.

MR HARRIS: Can I ask about your liquidity guarantee options? A number of industry superannuation funds, possibly some of the private superannuation funds too, certainly have - or liquidity is a generic issue, and we were discussing it a little earlier. In your original submission you put down what I wrote in my shorthand notes as a sort of "the put", the ability to put the project back to a government entity to obtain liquidity in certain circumstances. Varying submissions have raised varying versions of this kind of arrangement, which would certainly provide a guarantee of liquidity, but the circumstance in which you could draw upon it would need to be very tightly defined, one would assume, otherwise it could just become an exit strategy for an investment you no longer wanted?

MR BRACKS (CS): Yes.

MR HARRIS: So has any thought been given to the circumstances in which such a thing could be triggered? Like, for example, I know there's an allusion in some of the submissions to the global financial crisis and the difficulty of holding illiquid assets in a circumstance where perhaps you were unable to dispose of a highly illiquid asset at a time when you most needed to find funds because of the general turnover in our superannuation system by affordability. I know it's alluded to that, but none of the submissions really gave us any detail on how you could limit it from going from being a liquidity guarantee to frankly an exit strategy for an unhappy investment.

MR BRACKS (CS): We would see this as a trigger for an event or a crisis, but largely a capacity issue. That is, that if we felt that the investment in an asset class infrastructure was providing a return superior to other returns but we've reached a liquidity position where we couldn't invest in it, then we would be seeking from the government in those circumstances a guarantee, which we would pay for, to relax our 60, 65 per cent liquidity guarantee to say 55, 60, which levered up the amount that we could then invest in infrastructure to greater than the percentage class we had already.

MR HARRIS: So this wouldn't therefore be a cash-oriented put, it would be a variation in your APRA limitations?

MR BRACKS (CS): Correct.

DR MUNDY: Wasn't it the case - certainly there were some illiquid property funds during the GFC.

MR BRACKS (CS): Yes, sure.

DR MUNDY: So APRA does have statutory capacity - - -

MR BRACKS (CS): Yes, it does.

DR MUNDY: - - - to waive liquidity rules for super funds and indeed for other - I think that was the problem, a number of super funds were stuck with - particularly property-based - - -

MR BRACKS (CS): We wouldn't see it on that basis at all.

DR MUNDY: So you're seeing this more in a case of enabling you to continue

to - it's not a dealing with a crisis issue?

MR BRACKS (CS): No, not at all. It's dealing for capacity issue.

DR MUNDY: Yes.

MR BRACKS (CS): But only if the government was of a mind that they wanted to lever up the amounts of available capital for infrastructure to a greater amount, then that comes with a cost. If they provide that benefit, which we would pay for, we could deliver it. That's the issue. Now, I don't think it's arising yet. I don't think that we're - we're not at - - -

DR MUNDY: No.

MR BRACKS (CS): It would be great if we were at that point. We've got to remember too that with the super guarantee increasing, with the funds under management increasing, the percentage I talked about - the amount I talked about, 75 million for infrastructure, 150 for illiquids, will increase anyway. It has got a significant organic growth within it. So the point - it would have to be a significant pipeline of projects which did have a good return. If that was the case and the government was of a mind that they wanted those funding - there is a mechanism they could undertake.

DR MUNDY: So this is a very different notion of liquidity from a circumstance which we presumably - you know, the investment is illiquid and we are trying to get rid of it, as opposed to a - - -

MR BRACKS (CS): Totally and utterly different.

DR MUNDY: Yes. It's a totally and utterly different proposition to say there's these projects out there, your regulatory requirements and our obligations are such that we cannot get there.

MR BRACKS (CS): This would have to be supervised by APRA under the sole-purpose test, that is, that the infrastructure that we wish to invest in which tips over a bit on illiquidity provided a greater return than any other investment such that it was a good proposition for the members of the fund. So that would be the criteria. It would be an APRA-governed criteria.

DR MUNDY: Presumably in that, the administration of that criteria, you would have some forecasts that, "We think we will need this for six months," because you've still got - it's not because you're short of cash.

MR BRACKS (CS): No.

DR MUNDY: So it's just to get around the regulatory restrictions?

MR BRACKS (CS): Correct, that's all it is, yes.

MR HARRIS: And in a defined set of circumstances?

MR BRACKS (CS): Yes.

MR HARRIS: Because it couldn't just be undefined and able to be triggered at any point in time, because then effectively all you've done is changed the quantities that you're allowed to invest in. It would have to be in a defined set of circumstances. So it's a variation to a regulatory standard in a defined set of circumstances to deal with a liquidity issue which APRA accepts; on examination says, "The fund is not in jeopardy but the standard needs to vary for a temporary purpose."

DR MUNDY: So it's really a timing problem between your portfolio meeting the normal prudential requirements and because the investment program might be lumpy - - -

MR BRACKS (CS): Yes, correct. The way we get around that timing problem at the moment is to bulk up our large funds investment in shareholdings in vehicles, so we do get round it already and we can still get around that.

MR HARRIS: But in a future when there is a decent pipeline of opportunities - - -

MR BRACKS (CS): We're looking forward well ahead, yes, that's right.

MR HARRIS: - - - and with this money available and nevertheless there might be a liquidity threat - - -

MR BRACKS (CS): Yes.

MR HARRIS: - - - this is, you're saying, an example of how the thing could have symmetry between the regulatory structure and the intention to see greater investment - - -

MR BRACKS (CS): Yes, because we could see an advantage, for example, in our members getting a return over 25 years at 10 or 11 per cent from a piece of infrastructure compared to, let's say, the market which is returning about 5 or 6 per cent. So we're prepared to pay for the difference, which might be a liquidity guarantee difference, to service that.

MR LINDWALL: Looking at it from the other direction - - -

MR BRACKS (CS): Yes.

MR LINDWALL: - - - the whole market in infrastructure is quite illiquid, as we've been discussing.

MR BRACKS (CS): Yes.

MR LINDWALL: Is there any reason for it to be more liquid? Are there barriers to actually becoming more liquid, on that same account?

MR HARRISON (CS): I think that the supply of capital and the willingness of that capital to go into this market, and it is illiquid. I think that answers the question for itself in that regard. There's no shortage of capital looking for an illiquid home.

MR LINDWALL: No.

DR MUNDY: But I guess the interesting question is why is it that we see - I mean, for example, Australian Infrastructure Fund which was happily chugging - never was priced at its asset value, and listed infrastructure investments which presumably are somewhat more liquid than the trust arrangements which you have - - -

MR HARRISON (CS): They are.

DR MUNDY: - - - with some perhaps notable exceptions - AGL, Transurban, perhaps - don't seem to have been profoundly - many have tried and few have succeeded. Do you see any - I mean because you have the option to invest in both and that would solve at least the traditional notion of a liquidity problem.

MR BRACKS (CS): We do invest in both already. So we don't solely invest in our direct holdings for our investment managements, our infrastructure managers. We also invest in the listed market in these areas too, so we do do that already.

DR MUNDY: But why do you think it is? I mean the vast bulk of mining investment, which is highly capital intensive, is serviced by the listed entities broadly held. It doesn't - it seems over time, if anything, the share in listed vehicles of infrastructure has contracted over time. I'm just curious, as a fund manager, why you think that isn't - is it a - could it be a manifestation of anything other than preference?

MR HARRISON (CS): I think there's probably an embedded perception of risk attached to mining projects versus long-term, lower-risk, income-generating

infrastructure assets.

MR HARRIS: So definitionally listed entities are attractive because the opportunity lies in the risk? So the higher the risk the more likely it is to be listed and the lower the risk the more likely it is to be a dull, non-attractive entity?

DR MUNDY: So it's really like small-scale commercial property in that regard?

MR BRACKS (CS): Yes, it is, yes.

DR MUNDY: Those risk characteristics lend them to be not listed.

MR LINDWALL: Because of the excess it allows liquid to be premium, obviously.

MR HARRISON (CS): That's right. We do believe as a long-term investor that we can achieve an illiquid premium on - - -

MR LINDWALL: Which is why you presumably own buildings in your own - - -

MR HARRISON (CS): Correct.

MR HARRIS: So I'll probably have to ask that we stop at this point, given the group of other people that are to follow on. But again, can I thank you for your submissions and for your elaboration today, particularly, I think, on the liquidity issue. That was quite helpful to my thinking. Obviously we will need to discuss this further. But, you know, very useful for you guys to support the inquiry, so thanks very much for today.

MR BRACKS (CS): Thank you. Wish you the best, yes.

MR HARRIS: So we need to swap to Master Builders. Okay, perhaps for the record if you could identify yourself today, thanks?

DR DAVIS (MBA): Thank you. Dr Brent Davis. I'm the national director of industry policy with Master Builders Australia. We have about 33,000 members who are the backbone of the building and construction industry, Mr Chairman.

MR HARRIS: So Brent, do you want to give us a bit of an opening pitch before we get down to questions?

DR DAVIS (MBA): Thank you, Chairman. Look, we welcome the opportunity to appear hear today. I will probably focus my remarks, if I may, probably in three points. Firstly, about our interest largely in small-scale infrastructure, especially that relating to property development. I will focus my remarks largely on residential property, particularly the issue of infrastructure charges, sometimes also called developer charges which are quite important in housing supply and play a role in the current housing affordability challenge that we face as a nation. Also touch upon some of the issues in your draft report on land supply and training, if you will. I won't touch on industrial relations. I have colleagues who have expertise in that and they're working through some of the matters you've raised in your draft report.

In terms of our observations of your report I have to say we were hopeful for a more expansive treatment in the report of the infrastructure charging and developer charging issue, four pages; we thought, probably could have been more depth and breadth. We believe such charges cost the industry or those - requires of the industry somewhere between about 2.2 and 2.8 billion dollars a year, so they're not inconsequential. For some house buyers they can add between 27 and up to 41 thousand dollars to the price of a new build. So for the ordinary consumer they are, especially first home buyers and for some downsizers they are very large elements of the buy price.

In terms of another area we would like to see in the final report is what we call competition payments to local governments. The commission would be well informed, of course. We had competition payments to state governments 20 or so years ago. We have a proposal which we can share with the commission on how that could be applied to local governments because in residential housing supply local governments are probably one of the biggest players, certainly more so than the federal government and arguably - probably at par or even more so than state governments. We believe an initiative like that could help us break through some of the barriers we're seeing at local governments, for example, development applications. We know in a case study we did of New South Wales can be as little as seven or eight days in some local governments and up to 117 days in another one and

so obviously carrying charges for a builder or a land developer at 117 days just precludes a lot of developments and compound our housing supply problem.

MR HARRIS: Let's start with developer charges then since that's obviously of significant interest to you. In your submissions you did talk about the differences between jurisdictions as to how they're applied and you seem to be suggesting - perhaps "seem" is too soft a word - perhaps you were strongly suggesting that there should be some greater national coordination of policy on this otherwise it's difficult to see how a jurisdiction by jurisdiction reform process could unfold because, as you note in your submission, a number of jurisdictions have had reform processes and yet they haven't necessarily satisfied the industry's interests. Can you just explain a little bit more about what you can see as being a future in that developer area.

DR DAVIS (MBA): The old model, chairman, was simply local government struck an amount for a per lot development and applied it and it was a take it or leave it basis for the builder-developer and that was largely the case in the 90s up until the early 2000s. We then, as you rightly point out, saw a series of reforms where state governments brought in some caps and constraints and greater oversight of these local governments and it did get better. The message we continue to get back from our members is it's still not transparent enough. The worst cases is of really getting told what the charge was after you put in your development application and progressed the other way are over. You'd now get better information up-front. But the message we get back is it's still not good enough.

The simplest model that one member suggested is, "Well, why can't every local government have a dedicated page where they list this all out? What are we up for? When? How do you do it? Is it a flat price or is based on some scale of metric proportions," or this or that. Then, of course, the state governments could do the same. We're not proposing the federal Department of Industry, for example, to maintain a web site with 576 councils reporting, that could be dealt with by state government. Having said that, we are a big supporter of your report of government services and we would like to see that emulated at local government level. I could imagine the big groans from your staff at that.

MR HARRIS: That's an interesting thought.

DR DAVIS (MBA): Because for the building and construction industry that's where we hit the barrier and we have looked at some of the options, for example, the number of days to process a development application by a local government. We can find it out for Queensland and New South Wales but then Victoria reports it publicly in a different manner. South Australia didn't report it at all and West Australia, well, with a bit of work you can sort of hazard a guess at the number. Now, for a lot of builders and developers that sort of information is terribly important because, of

course, state governments are quite discrete. But a local government can be one side of the road to the other side of the road and in a greenfields development if I take the left-hand side of the road I'm dealing with council A, if I take the right-hand side of the road I'm dealing with council B and it could be a fulcrum element of a decision and again the builder-developer has to go through the whole process two times over, once with each council.

MR LINDWALL: So the issue is not just that the developer charges are too high in some cases but they're arbitrarily applied and - - -

DR DAVIS (MBA): There's a lack of transparency and a lack of certainty and they both come together. As we've said in our submissions, we quite readily accept there is a need for proper infrastructure charging and transparency. We recognise the avoidable cost approach proposed by the PC and Treasury before them is quite appropriate. Now, the measurement in applying avoidable cost approaches is a bit more challenging than the principle and the PC in the draft report quite rightly pointed for some elements it is clear-cut. But then you have sort of network issues and shared networks and, of course, some local governments say, "Well, not just the current development but the one that comes after," because a lot of infrastructure related to residential development is networked, the sewage mains, the water mains and so on especially.

DR MUNDY: I think the commission did at some length look at development charges for water infrastructure in its Urban Water Inquiry which I worked on and Dr Salerian was the assistant commissioner of and I think given we've done that work in the last couple of years is probably one of the reasons why we didn't move on that. Similarly why didn't discuss at length issues about building approvals because we have only just recently done a report on local government as a regulator and we would just be really going over new work. There are a raft of recommendations in there which, if governments took them up, would address the issues that you're referring to.

I guess the question perhaps more broadly is - certainly in relation to water infrastructure - we actually thought there might be some options in opening up - rather than have developer charges, have obligations on the developer to do it themselves and then hand it - is that a model which would - because part of the challenge of feeding developer charges is, say, for example, Sydney Water which covers a huge area of metropolitan Sydney and Wollongong, what might be an appropriate price in Surry Hills might not be an appropriate price on a Wye Escarpment.

DR DAVIS (MBA): That's correct.

DR MUNDY: So if developers were to take these one, would that be a better model?

DR DAVIS (MBA): That's always been a question of angst with our constituency because there is almost two models in the developer charges. The dominant model has been for a long time quite simply the local council prescribes the charges, sets out essentially an invoice and says, "Right, well, for 20 blocks of land it's going to be X dollars," and then the builder developer has to hand over a cheque and the local government provides it. The other model is the local government prescribes what is required and as long as the builder meets the requirement to the standard specified then they're happy with that.

As a general rule the industry would probably prefer the latter one. I'm aware of a case study where a local government in a more rural area in the Murrumbidgee irrigation area, there was a proposal for a property development. To cut to the chase, the water pumping station was of great vintage and had to be upgraded and the model offered was that the developer could either give a cheque over for the development to upgrade the pumping station or build it. They offered to build it themselves because they worked out that they could probably do it more cost effectively. They were somewhat annoyed, I'd have to say, because the requirement was in excess of the avoidable cost that they accepted as part of the proposal.

DR MUNDY: I guess the challenge in that is for large scale developments and new housing developments, that's probably easier to get your head - if you're doing a duplex block development it's more difficult to quite understand what's going on. For example, one of the issues that are confronting urban infield developments is that no new infrastructure is technically put in, particularly in sewerage infrastructure and massively greater loads are placed on what is ageing infrastructure which could continue. So is that a case by case negotiation for large developers - not two houses or something - but like what's going on in Broadways.

DR DAVIS (MBA): Most of our members that we have been speaking to have been at the smaller end of the range. The networking infrastructure is the very hard part. I know of one member who was looking at developing in a greenfields area and he was, if you like, the next block along so to speak and the expectation was that he'd augment a major waster sewerage system and he said, "Well, for 20-odd houses which would take about 70-odd people this was ridiculous what they were asking me to do but it was logical because it was part of a growth plan." With infield it is problematic because the implication of remediation and replacement is much different. If you're ripping out old factories, say, in somewhere like Zetland in Sydney and you're going to put up 300 apartments that's a different proposition than if you're, say, knocking down an old school or a health care centre that's not needed because of gentrification and you're putting in 12. So it is a case by case to a point

but there are still some fundamental principles behind it like avoidability.

MR HARRIS: Is it clear that the funds, even if a developer does have to undertake the signification augmentation part of a network that the funds are actually devoted to the purpose?

DR DAVIS (MBA): That's the grey cloud that always holds over many of my members, chairman, which is, "What am I actually paid for here? Have I paid for the road system that's commensurate with the build and development that we're doing or am I paying for future developments beyond me? Am I now starting to pay for social infrastructure and is that cross-subsidy property?" There is amenity value in having parks and gardens and libraries and swimming pools, we don't cavil with that. But we come from probably the first principle that the builder-developer pays for the economic infrastructure that's avoidable and local government which has its public good function funds for social facilities and it can be curious sometimes when you have modest-sized development and you're mandated to have, say, a playground or a park and there is another one quite similar quite nearby.

MR HARRIS: Yes.

DR DAVIS (MBA): So we're sometimes curious as to whether the industry has been (indistinct)

MR HARRIS: Right. You mentioned this other idea about incentives for local government to improve housing supply. Housing supply, as I recall - but I'm no expert in this area - is quite a chain. First off I assume that the presumption can't be that local government is solely responsible for delays in getting blocks to markets, there is a rural land issue, there are other issues as well. But you're suggesting, if I understood you correctly, that some incentive for local government to improve and have perhaps targets for its turnaround times for final developer approval, "We're at the point of where a lot of the preliminary work has been done and this is my application, my final application has been put in and now I expect to see a quick turnaround." Is that the sort of proposition you had in mind?

DR DAVIS (MBA): Essentially, chairman, that's it. You benchmark, say, all 560 councils by a set of criteria. They could include, for example, the number of working days to do a development application, the proportion of what's called code complying, they should go through fairly quickly, the proportion that are subject to successful challenge. Then how would the system work? Essentially it would be based on improvement, those councils that make the largest improvement would probably get the greater reward. We accept there is probably a need to provide some reward already for the best performers but as a general rule those sort of incentives. We do have a list of these criteria for our industry but again that's not necessarily

solely building and construction, there are probably some other interests who may well also gain from it.

DR MUNDY: Knowing a little bit about the regulatory capacity of councils, there are councils in Western Australia that have 46 ratepayers.

DR DAVIS (MBA): That's right.

DR MUNDY: They are unlikely to meet the same standard as the city of Brisbane which has 1.2 million residents. So I'm not necessarily certain - I take your point that there might be a horses for courses comparison. But I guess the other question is - I mean, how would you deal with the benchmarking, I guess, in the first instance. The planning and zoning rules are different for different jurisdictions and that may affect approval times. I guess the other question is what would your members' attitude be towards increased fees and charges that reflect the regulatory costs that are required because it's evidence in the commission's work that the general rate base is subsidising regulatory activities, they're not fully recovering through fee for service basis, so how would you get them into a position then where the benchmarking would be fair and reasonable?

DR DAVIS (MBA): I think this is why we're proposing a report on government services at local government to bring many of these issues just to fore. Those of us that followed the development of ROGS would know that it started out with many of these issues at its front end and by bringing them to the surface it helped us to get us to where we are now which is a terribly useful document. We would see a simple evolution taking time with a ROGS for local government, so it would probably take three to four years to get started. In terms of fee-for-service charging, again, as long as it was transparent and well set out and it was based on true cost, I don't think our members would object. I think they would see it as probably a worthy expense. But again that transparency could well see in fact a reduction because there is probably substantial cross-subsidies within local government between the regulatory elements of services and some other.

MR HARRIS: That's not the evidence that's in our local government report, so you might want to have a look at that.

MR LINDWALL: I just want to change quickly to building information modelling. Is that something you comment on?

DR DAVIS (MBA): Sure.

MR LINDWALL: If someone's submissions are strongly in favour of it, can you suggest to us the benefits and maybe the costs.

DR DAVIS (MBA): I'm a very strong supporter of BIM. It's being taken up at the moment progressively by the industry. There is much training taking place, so it's a matter of just capacity building with those at the front line. Conceptually it's very well accepted. It's just a matter of now rolling it out through training programs through associations like ours, some of the TAFEs and others. So it is very much being embraced in principle and we're just now converting that to practice.

MR LINDWALL: What are the types of benefits that you expect to gain from a widespread use of it?

DR DAVIS (MBA): Clarity of understanding is probably the first. The ability to crystallise the build at hand, to understand what variations might mean and to price them. So, no, I can't see there is going to be any resistance. It is just a matter of rolling out a new product and concept.

MR LINDWALL: Are you able to comment on anything on industrial relations issues?

DR DAVIS (MBA): That is outside my brief. My colleagues are preparing a second submission and we will be engaging with - - -

MR LINDWALL: We look forward to the promised microdata that I think is suggested that could be coming forward which would be very helpful to us.

DR DAVIS (MBA): We are working on that at this very moment and hopefully get it done at the earliest possible time.

MR HARRIS: We appreciate the inquiry, for us anyway, at quite a rapid pace. Perceptions from outside may be somewhat different but this is a very swift inquiry.

DR DAVIS (MBA): We will have something to say but not in this place.

MR HARRIS: Just on BIM before we get off it, the number of submissions that has raised this - it's very interesting. So here is, you might say, a technologically based innovation that you would have expected if its benefits had been so obvious, as submissions keep saying to us, that it would have rapidly infiltrated the industry and yet it hasn't. Now, the implication is that we should do something about that. Of course, we're naturally loath to impose regulatory obligations on businesses to adopt particular technologies but we'd like to make more transparent the obvious benefits that have been stated there. It was a query that we all had, I think, when we saw how often this did turn up in submissions as to why, if this thing is so beneficial, it hasn't just automatically been abroad - by the industry.

DR DAVIS (MBA): I guess it's hard to say. One argument I've heard is, "There are several different platforms I can use. Which one should I use?" Again, it's a bit like the old VHS versus Beta argument. If I use the wrong one, then I'll be hanging out there.

MR HARRIS: "I'm stuck with the redundant technology."

DR DAVIS (MBA): Again, I don't see any resistance, I think it's just a matter for the frontline builder who works 60 hours a week in the build, does about 10 hours of regulatory compliance, form filling and so on and then to find that little bit extra time to do it. That's not an excuse.

MR HARRIS: No.

DR DAVIS (MBA): But they do also have a substantially regulatory role. The National Construction Code is essentially the guide book or the Bible by which we have to provide and builders spend an awful lot of time making sure they're spot on with the NCC, so that consumes some of their time. I guess some of them would probably say, "Beyond that I don't have much time to teach myself - - -"

MR HARRIS: Sure.

DR DAVIS (MBA): Having said that there is strong industry interest in it and it's just a matter of - - -

MR HARRIS: Your association does educative - - -

DR DAVIS (MBA): Absolutely.

MR HARRIS: It just struck us that perhaps it's just that it's the time, in other words, it's now becoming so widely accepted that the submissions are all noting it as an innovation and therefore it's not necessarily something that is amenable to a policy solution but it's something that should be recognised.

I mean, we did think initially that perhaps some of the tender documents amongst the larger projects were discouraging the adoption of technologies like this because they're also a sharing mechanism between consortium participants. In fact, one of the significant benefits, as suggested, is just that, and perhaps tender documents had discouraged that. But we couldn't find any evidence to that effect either, to this point.

DR DAVIS: You may see government taking a leader role where, I know going

back into the 90s, they mandated electronic submissions of various paperwork.

MR MUNDY: I mean, it's a bit like when CAD came along and then for a while people insisted on having paper plans and others insisted on having CAD plans and eventually everyone thought it was normal to have CAD plans.

DR DAVIS (MBA): There is a good reason for having a paper plan because if there is a dispute you've got an agreed document in front of you, whereas if you've got an electronic you can get debate about, "Well, which is the true one for the deal?"

MR MUNDY: The extant that we all work on, yes.

DR DAVIS (MBA): With home builders' warranty issues and insurance availabilities - I think it's just a matter of rolling out but - - -

MR MUNDY: But our primary interest in this inquiry is public infrastructure rather than home building. So in government-based procurement presumably that wouldn't be so much of an issue.

DR DAVIS (MBA): So even small infrastructure suppliers like local pumping stations, small wind turbines and the like, public housing - the tender process, government could facilitate it by encouraging participants to submit their bids in a BIM-compatible format.

MR LINDWALL: Should it mandate the submission in that format?

DR DAVIS (MBA): No, because I think that would probably end up skewing the market towards some who are probably information-technology positive. It would probably disadvantage some who are information-technology challenged, although - - -

MR LINDWALL: What about mandating it from a particular date in the future which gives sufficient time to adjust to - - -

DR DAVIS (MBA): Again, you'd probably end up skewing the market and excluding some, and you may not end up getting the best-value-for-money option, because what we've been trying to impart at our hearing today is, yes, we understand Mr Bracks plays at one end of the market but many of my members - - -

MR LINDWALL: Exactly, yes.

DR DAVIS (MBA): - - - participate at the other end of the market - the pumping

station, the small windmill. You know, infrastructure people, as you would probably appreciate, think of bridges and airports and seaports, but there is a vast amount at the other end of the spectrum.

MR LINDWALL: Are you able to comment on the capability of government procurers? We have had some evidence to suggest that they've deteriorated over time. Do you have any thoughts about that and does it vary across the country?

DR DAVIS (MBA): We had some internal consultations before our appearance, and one jurisdiction said that the bane of their existence is the high turnover of government officials. They stay so little time, by the time they're on top of the brief they're rotated out again. They weren't clear whether that was just normal government policy in terms of staff development or it was an area of high attrition. I think there's probably skills in there that do appeal to the private sector so there may be some head-hunting going on, but, no, there was very strong voice who said this high churn factor in a state government was deeply frustrating.

MR MUNDY: And particularly local governments.

DR DAVIS (MBA): That may be the case but - - -

MR MUNDY: The good ones go or get promoted and you're left with the not so goods.

DR DAVIS (MBA): I might let that one pass to - - -

MR HARRIS: No, it was an observation from a commissioner. We'll just note it and move on.

MR MUNDY: There's plenty of evidence of it.

MR HARRIS: Okay. Do we have any further questions?

MR MUNDY: Can I just ask one more - I mean, it comes to that point it then goes to a question of training and skills, not only for the people who are doing the work but the people who are doing the regulating. If you what you want is quicker turnaround times - I mean, what does your organisation feel about how do we - you know, more skilled regulators tend to be more efficient regulators who will turn your stuff around quicker. What's your view on that? I mean, it's a conundrum that we come across all the time.

DR DAVIS (MBA): There's a strong view amongst our membership that regulators tend to start with the suspicious mind, and I can understand that: there's a difference

between being an auditor and an accountant. There is a strong interest amongst our membership to go to what's called code compliance. ASIF is fine; the ASIF rule is to be supported. But I think some regulators probably think that, "I need to find an error in this just to be doubly sure," as distinct from the person saying, "It is now code compliant," and there may just have to be a turning around of approach, and that is that the submitter says, "This is code compliant," and then, if not, then responsibility falls back onto the submitter to remedy. So therefore that would reduce the burden on some overstressed local government officials and shift the responsibility back onto the builder or developer seeking the approvals.

MR LINDWALL: Who has the expertise.

DR DAVIS (MBA): Yes, I read the government's guide book for government officials on regulation reform and there were several pages in there that said risk should be placed where it's best able to be managed. Following Dr Mundy's question it would seem to me that the best place to manage risk would be with the developer-builder because if they understand the risk falls to them for misstatements or inadequate statements then I'm sure their attention to detail will go up.

MR HARRIS: It's one of the things in our draft report. You won't have gone through and looked for this, but that statement is often used nowadays as a slogan rather than a reality and so we try, at every point where we have identified the utilisation of that concept, to be far more specific than simply stating it and moving on - which is an observation from me rather than a question. So if there are no other questions, thank you very much for your time and again your effort in making submissions today and for the assistance you're going to provide us with, further microdata on issues in industrial relations which we think will be probably quite useful in the final report. So I appreciate your support here today. Thank you.

DR DAVIS (MBA): Thank you.

MR HARRIS: Sorry, we're running a little ahead of schedule, which is something I'm always keen to do - add small amounts of productivity to the day. Could you identify yourself perhaps for the recording and then we'll get on.

MR TANNER (ARA): Lindsay Tanner, chairman of the Australasian Railway Association.

MR HARRIS: Lindsay, thanks for your submission and for the ARA support throughout this inquiry because we've had a number of useful discussions with you as well as formal support from the organisation. Is there any specific you wanted to say at the outset or we'll move straight into questions - up to you.

MR TANNER (ARA): I'll take your guidance, Mr Chairman, but probably there's a couple of themes that I think I can contribute some thoughts on the wider themes.

MR HARRIS: That would be good.

MR TANNER (ARA): One is the barriers to infrastructure financing generally and the other is the question of the weakness of the corporate bond market in Australia, both of which I've done substantial work on in recent years, not with my ARA hat on, but they are pertinent. Obviously, the text of the ARA submission stands for itself so I don't see much point in me reiterating that. So I'm certainly happy just to go straight to questions on the content of the submission but if you wish me just to - - -

MR HARRIS: Sure, just those couple of points if you like, yes.

MR TANNER (ARA): Okay. Well, very - and apologies for the shorthand language but I'm conscious of you'll need to maintain time. There are a range of complex intersecting issues that are in play in the problems of infrastructure financing in Australia, some of them obvious, some of them less obvious, so let me very quickly run through them. The political tug-of-war over badging between state and federal governments is a serious problem. Politicians these days now are regarding the expenditure of public money in the same way that businesses regard investments in projects, so they are always looking for a return, a political return, from the investment of money, and it tends to be a bit of a zero-sum game. So you get outcomes, for example, in the 2010 election of the tug of war between New South Wales and the Commonwealth about whose rail project is going to get funded, which is ultimately all about who is in a position to claim political credit for the expenditure of what is a large sum of money. The disparity between responsibility and power is a problem. The states have most of the relevant powers but the federal government has most of the money. The endless search for announceables and the fact that politics

has essentially become a virtual reality game that is increasingly disconnected from the substance of what governments do is a particular problem in this area as well.

There are wider structural issues here that have been insufficiently explored. One of the problems in our major cities is that we have burst beyond the efficient limits of monocentric cities but the structural economic dynamics of modern western economies are pushing the other way, so there are now more people, more jobs, more economic activity crowding into the inner parts of cities like Melbourne and Sydney and Brisbane at the same time as population is spreading laterally further and further. So, for example, in Melbourne we've had huge population growth, the fast growing local government areas in Australia now, to the west and north-west but nothing like the same job growth. The end result is you get massive pressure on the West Gate Bridge.

Now, this is a very difficult problem to solve, because ultimately it is a question about where people work, which is very difficult for any government in a market economy to seriously manipulate. There's been insufficient examination of the impact of that dynamic, in my view, and no matter how you play around with the cost and arrangements for development of far outer suburban property, whether it's user pays or collective government contribution, it still doesn't alter the fact that the wider geography, the economic geography, of cities like Melbourne and Sydney and Brisbane is essentially breaking down.

There's a list of fairly obvious and fairly well-known issues, some of which are canvassed in the ARA submission. Tendering costs is a genuine problem, particularly as some of the consortia that are involved in structure projects will contain smaller specialised companies for which these kind of costs can be a very serious burden. Insufficient competition in the construction sector is, I think, a problem. There have been positive signs on that front. Various state governments, about four years ago, did try and get together to actually work to bring more overseas competition in the construction sector for big infrastructure projects, but apparently that fell apart from reasons I don't quite understand, but there seem to be some positive signals emerging on that front.

A problem that was particularly strong earlier on with public-private partnerships was the structural arrangement of financial originators in effect packaging up deals and extracting the bulk of the available benefits or returns up-front early on through management fees and commissions, therefore leaving insufficient returns for longer-term investors. Now, to some degree time and markets and better practice are curing that, but nonetheless it does tell us some very important things about how deals are structured. I think it does raise a very important point about whether governments should be literally taking these deals and handing them over holus-bolus to the private sector and saying, "Well, somebody can come in and

organise everything and we'll just do a deal with you" - whether government needs to be more involved in that financial originator role without necessarily doing anything like the amount of the total activity that might have occurred in the past.

There's been all sorts of examples that you'd be as well aware of - the commissioners would be as well aware of as I am of poor contract terms in PPPs, instances of governments repudiating PPP contracts, which frankly, I consider outrageous but it has happened, all of which, of course, undermine investor confidence and therefore increase the price that people will be prepared to pay.

A critical issue which I think - if you ask me to nominate one recommendation you should pursue above all others it would be to do with this, and that is, the lack of a pipeline of projects which is ultimately a factor of the inability of the major governments concerned to collaborate, obviously influenced by politics and the need for politicians to have rabbits to produce out of hats at certain times. But particularly as our super system is still relatively fragmented and there are quite a lot of super funds that simply cannot afford to have the in-house capability to make investments of this kind because it requires specialist skills and capabilities.

Even though we have industry funds management which plays a very important role there it's obviously sub-optimal for that organisation to have to herd 10 or 15 super funds into a collective investment. That's a very messy process. So anything that can be done to produce some kind of national collaboration, which in my view is ultimately New South Wales and Victoria, would have a very significant impact on the behaviour of the private sector and probably be beneficial on things like labour and material costs as well, if you have greater predictability and smoothing of projects too.

One that has been mentioned to me which I haven't had a chance to explore but you may want to note is that change of control clauses in some of the PPPs apparently disturb investors and that they entail certain risks that they don't like. I apologise, I haven't had a chance to check that out but a lawyer who has been heavily involved in these matters just mentioned it to me recently, so you may wish to probe into that further.

So where does that take us in terms of what should be pursued? My first very strong point would be that part of the problem with these projects is that governments approach them with what I call a procurement mentality, as if they were buying a dozen photocopiers or something, when in fact what you're talking about is very big, very complex deals that by definition are unique in each case. It would be far better if governments for these big, really big, projects - not the \$50 million Dandenong Courthouse kind of PPPs but your billion dollars plus kind of projects - it would be far better if governments started with the mentality of, "We are going to be

a key player in a deal here. We have a certain amount of money, equity and debt; debt, of course, which I can borrow cheaply and use that as a way of subsidising a project by effectively contributing to the project's debt at a lower cost or direct equity," and then use that muscle and their public policy objectives as a way of shepherding the various potential players into an overall deal. It's hard to pin down but that's a mentality question. While governments keep thinking of these things as, "We are going out to the market to buy a new freeway," then you are going to get sub-optimal outcomes.

It's also increasingly felt that disaggregating risk is going to be better. Now, that's obviously involved some frictional cost. One of the ideas that seems to be becoming more particular is for governments to take early patronage risk, maybe for three years or five years, so structure a deal where you are not hostage to outlandish traffic forecasts and you don't have people bidding on the basis of who has got the most ridiculous traffic forecast. That strikes me as a sensible proposition. I've mentioned the pipeline question. There are some obvious streamlining of tendering and issues of that kind. The other interesting thing that is starting to emerge is the phenomenon of unsolicited bids. On the face of it that looks like a worthwhile proposition to explore and it fits neatly with my point about deal-making.

Finally, on the corporate bonds front, I've done a lot of work on this issue over the last three years for Lazard and it's very complex. There are a lot of moving parts. The question of regulatory hurdles and prospectus requirements, it's an issue, but it's a relatively minor issue. The fact that people, partly because of interest rate differentials, who are large companies can access capital fairly easily and cheaply in the US, private placement market, EU and so forth is important. The rating process, which is not essential but desirable, for companies seeking to issue a bond is a bit of a problem in terms of cost but is a particular problem in terms of process because it means that you've got a gang of people going through your company for X period of time and the disruption and distraction is a serious issue for companies.

The bank guarantee by the government did distort the market a bit and pumped up, in particular, term deposits as an alternative investment. So the bonds that are currently listed on the stock exchange, typically the margin between those bonds and the best available deposit rates you can get is 100, 150 basis points at the moment, which for the hassle and the additional risk is a pretty fine margin. So in part there's simply a price problem here. Investment bank underwriting fees are seen as excessive. The distribution network is very equity focused. There's also a pattern of short-term-ism in companies.

So I've actually dealt with a real life situation of this client with a company which we were seeking to advise considering wanting to diversify their debt, wanting to reduce their reliance on banks, but the price is a bit higher but they get longer

tenure, whereas the banks typically won't give you anything longer than three years, but the price is higher. The CFO was keen but the board literally took a quarterly results perspective which said, "Well, three, five years' time rollover risk, all those things, we'll worry about them then, but at the moment how can we justify paying X basis points more for our debt?" So, you know, the lessons of the GFC have apparently been forgotten.

MR HARRIS: Then we heard this morning that it's a government problem as well.

MR TANNER (ARA): Yes.

MR HARRIS: So you've got the government and the private sector both acting in a manner which potentially discourages the creation of longer dated instruments.

MR TANNER (ARA): Yes. That doesn't surprise me in the slightest. Finally, on that front, I think there is a problem, although it appears to be improving, with the way that our superannuation system regards asset distribution and its notorious overemphasis on equities. It was very interesting the debate that emerged, with minor contribution from me but much more serious contribution from people like Ken Henry and David Murray early last year. The super funds' response was to talk about rolling 10 year averages for the last 100 years and saying, "Well, equities have always beaten bonds." Well, yes, they should, but there is this little thing called risk which is important. But what they were also forgetting is that they are not responsible to their members as a group, they are responsible to each individual member. If you're on the wrong end of the collapse of the equity market, at the wrong time as a super fund member, it is no comfort that the 10 year rolling average looks good.

MR HARRIS: Yes.

MR TANNER (ARA): So now, to be fair, I think the super funds' perspective on this is changing. They do have some alibis: the ratio between contributors and pensioners, the relative sort of limited maturity of the system, all those things. The final thing I would say on corporate bonds is I think it's fair to say that market forces are actually starting to solve the problem as well. So you've now got a reasonably diverse range of corporate bond products listed on the ASX from a wide range of credible, well-known companies; again, query whether the price is attractive enough. You've also got organisations like FIIG, the Fixed Interest Investment Group, that package up slightly riskier - the bonds of non-listed, in some cases listed companies, where they will offer you 6 per cent, up to 8 per cent packages; but by definition these are riskier instruments. So it is true to say that there are signs of the market starting to solve the problem. I'll finish there on my contribution and return to my ARA hat.

MR HARRIS: No, it's been very interesting, particularly on the bond market. We may come to it if there's time at the end. Paul or Warren, do you want to start with anything out of the ARA sub itself?

DR MUNDY: I think we actually - figure 3 in our overview has quite a wide disparity of costs between different rail projects which we tried to get some consistent similarity over. Is the ARA able to throw any light on what might be driving these cost differentials? I mean are there competition issues in different markets, is it time or what is it?

MR TANNER (ARA): Look, my understanding is not yet. But there is a piece of research going on which I gather is being conducted with some degree of liaison with the commission. It is expected to be completed within the next couple of weeks, so I would certainly hope that that would throw some more light on that. My guess is that part of the issue would be differential impacts of the mining boom on labour markets, on regional labour markets; would - if you're able to dig into the data sufficiently that would be the first question I'd be asking, because by definition the impact of the mining boom on certain engineering and similar skills is not uniform across the country but it has occurred across the country. There may well be other issues but that's a starting point.

DR MUNDY: I guess what I'm on is this costs question. To the extent that your members are both procurers of railway engineering services and providers of them, one of the issues that the terms of reference invite us to bring our mind to are labour market issues for the construction of public infrastructure. Now, a lot of the debate gets conflated with debates about erecting large buildings in metropolitan areas.

MR TANNER (ARA): Indeed.

DR MUNDY: Someone needs to represent workers in a small regard. Does the ARA have a sense of the extent to which different unions that do work within the industry behave differently or the extent to which there are geographical variations in industrial behaviours?

MR TANNER (ARA): Look, the ARA generally doesn't fulfil industrial relations functions for its members. In a formal sense it is not qualified, really, to hold forth about IR issues. Obviously at an informal level people talk and so forth, and it's no secret that there have been industrial relations challenges in the operation side of parts of the rail sector, such as the Hunter Valley and so forth. That's been a matter of public coverage. As for projects, I don't think we're sufficiently qualified to comment on whether there have been - - -

DR MUNDY: Is it a big issue, is it a moderate issue?

MR TANNER (ARA): Look, I couldn't really say. I've been in the position now for about a year and it hasn't really figured strongly on discussions over that period. However, it's important to say that that doesn't mean it's not a big issue because of the fact that, I think, people understand that the ARA is not - you know, it's not the Australian Industry Group. We do not fulfil a role for these members on those issues.

Just as a much wider observation I think one of the mistakes that is typically made in people approaching these issues is to understate the importance of the market, so that some of the high costs that are emerging in parts of the Australian economy are basically driven by market forces and the mining boom and the fact that by definition the kind of skills that are involved do not materialise in large numbers anywhere near as quickly as iron ore prices go up. You get the spillover effect rippling through the economy. So I can't say whether or not that has happened in any specific instance in the rail sector but I think for the kind of heavy engineering sorts of skills and technical skills that are involved, the market impact of the mining boom across the board I think has been quite significant.

MR HARRIS: You raise competition, or the lack thereof. In our submissions - this is not just of rail or that it's just current in rail - there seems to be a generally-held view that we have two kinds of competition problems, not just one kind. We have concentration amongst the tier 1 contractors: there's relatively few of them and it's very hard to break into the tier 1 level and all that. Then we have the relationship issues between those contractors and subcontractors.

The two problems are apparently inverted, because the suggestion at the subcontractor level is tier 1 contractors underbid: propose cheap arrangements and then force prices down with the subcontractors in a way that makes life very difficult for subcontractors to cope with. But the alternative is that the tier 1 contractors are effectively a club and therefore we get very high prices for rail projects or for road projects, by comparison. We can't get any better than example after example of each, but none of them add up to a particular summary, as far as we can see, of the problem being more than one than the other. It appears just that we have examples of both and both continue to be problems in the marketplace, but neither appear to be amenable to the sort of policy solutions that we might be able to come up with here, or indeed that the ACCC might.

But what's your view on that sort of area? There are the two and I'd be interested in both.

MR TANNER (ARA): Look, I doubt whether I know enough to really be able to

comment on those questions, and I suspect to get a clear picture of the issues would require a very detailed analysis, including comparators with other comparable countries, that probably would require the PC's full budget for the year to be able to do. So I think it is a very difficult question. In a sense my observation is really relaying the view that I know state governments have held and I think that there can be a problem in getting competitive tension and innovation in the bidding process for these giant public-private partnerships. Of course, there is a bit of a chicken and egg problem as well, that the costs associated with tendering and being a serious player in these processes are so big that that in itself becomes a barrier to having a multiplicity of players.

Australia has this natural duopoly tendency, as you would well know, which in some cases is probably more serious a problem for our economy than others but it appears to have emerged here. I'm afraid I don't know a great deal about the dynamics of the head contractor versus subcontractors. The tricky thing there, of course, is that economic theory would tell us that that is a more efficient arrangement than having one giant behemoth that has within its own house every conceivable activity that's involved yet, by definition, once you move to that more disaggregated framework there is potential for all kinds of unfortunate things to happen. But I just do not know enough to really say whether or not those things are happening and what they are. But I think it's an important area of examination and in truth the best qualified people, I think, to give you a view on that will be the key people in various state governments who have actually had to deal with these things.

MR HARRIS: But this analysis that you're conducting, you may be able to provide to us on these rail projects that we mentioned previously that go to some of these issues.

MR TANNER (ARA): That's right. The research that the ARA is doing may well produce some insights into that but, of course, we don't yet know.

MR LINDWALL: Could we touch on some funding issues. The submission from the ARA provides quite a lot of evidence about the savings that could be achieved to consumers by using public transport, for example, and yet fares are, as far as I understand, fairly low by world standards for public transport. Why do you think that people aren't embracing public transport to the same extent that would make it more optimal to them as suggested here? Are there barriers that can be addressed et cetera?

MR TANNER (ARA): Here's a fairly straightforward example: the Melbourne commuter rail system is, if not at capacity, it's not far off and the fundamental reason is antiquated infrastructure, particularly the signalling infrastructure, so therefore if you wander around Melbourne you won't see a great deal of marketing for "catch a

train" because there's not much point spending a lot of money persuading people to do something if the train is already full. You've also got, of course, the proliferation of level crossings. Something I've advocated for years, long before my ARA responsibilities, was that rather than giant signature projects you would have huge benefits in Melbourne to adjust - grade separate everywhere because that speeds up both the road and the rail networks.

So there are some reasonably obvious kind of flaws in the system. By definition there will be advantages and disadvantages comparing the road and rail, given they're the primary choices. More people are cycling, so that shouldn't be ignored. But comparing the road and rail or road and rail and tram options - you know, being able to go door to door is obviously better than having three different stops and walking the last half a K or whatever. Price becomes a significant contributor to those. But clearly one of the key factors I think is that the footprint of the public transport system is now much narrower as a proportion of the totality of the greater Melbourne metropolitan area than it was, say, 30 years ago.

Meanwhile the whole society has got more affluent and, as a result the capacity to make an individual choice that says, "Well, even if it does involve me indirectly spending more money, I will own a car, use the car, pay parking," et cetera. One of the interesting dimensions of this, of course, is the CBD parking tax which, as far as I can see, hasn't had a huge deterrent or market-diminishing effect on demand for CBD parking. So partly a capacity to pay issue's here - just wider affluence - so the great heyday of passenger rail, of course, was in the middle of the 20th century when most people couldn't afford to have cars.

MR LINDWALL: The submission also touches on things such a tax incremental financing.

MR TANNER (ARA): Yes.

MR LINDWALL: In the United States there are example here and I've read elsewhere where it's been voted on but by a particular council or local government area and the citizens - more than 50 per cent on it and then they have a tax incremental financing option. I'm not sure, do you think there is scope for doing such a thing in Australia and moreover how do you protect the government balance sheet from contingent liability if you take on that type of thing?

MR TANNER (ARA): The second point is a very important point and I think the difference about the US is that the kinds of initiatives you mention are reasonably suited to medium-sized cities that are reasonable discrete economic ecosystems where the difference between who benefits and who doesn't benefit is reasonably obvious and so it's possible, not precisely but with some sort of commonsense

resonance to draw a line and say, "If you're inside this area you will get a benefit, so you should pay, but if you're not, then you don't have to pay." The problem for a city like Melbourne, of course, is that it's much, much bigger than most of these middle sized US cities, so I think the sheer scale, the spread of the city and the governance arrangements - Australia is saddled with completely not-fit-for-purpose governance arrangements. None of us are going to change those in a hurry.

There have been periods, to the credit of some of our political leaders of both sides in the past where people have reached beyond those, for example, to create what is now the National Transport Commission and a uniform set of road rules. So these things, in spite of the government structures have been achieved. One of the ancillary issues that I don't have a huge amount of expertise on but I think is a question that I pertinent to this inquiry is local government reform. Naturally being from the Labor Party I'm not Jeff Kennett's number 1 fan but I'd have to say that his local government reform in the 1990s was a giant positive for Victoria and a very big positive for the Victorian economy and there are several states around the country where the local government landscape resembles the pre-Kennett reform landscape in Victoria.

In my electorate, for example, prior to the Kennett reforms we had one council that had 13,000 people living in it in the middle of one of the world's major cities. Completely ludicrous.

MR LINDWALL: But I'm protecting the government balance sheet.

MR TANNER (ARA): I think this is an important point more broadly and it's one of the issues that goes to risk allocation. Underneath the wider enthusiasms for PPPs and this applies to that and it applies to those other alternative financing models that are referred to in the ARA submission is that there are certain risks that ultimately cannot be outsourced to the private sector so that if the trains stops running that is a probably for the government of the day and the citizens will look to the government of the day to fix it, no matter what and will not be interested in fine print of contracts. If a privately provided and delivered hospital ceases to function, no government will be able to say, "Look, it's not our problem. We've got this contract and the private company has failed to deliver."

So I think that's an important lesson from recent history that there are certain parts of the picture that ultimately will always be a government responsibility in some form and that if you pretend that's not the case then you are probably going to get a nasty surprise at some point. So you are better off to be honest and acknowledge that as a government. The responsibility for having a train system that works is yours. My impression is that the Victorian model that operates with a contracting arrangement, on the face of it I think there's nothing obviously wrong

with that model for the delivery of train services but at the end of the day you've got Public Transport Victoria which is responsible for the wider outcomes and private contractors that deliver large discrete chunks of those things but the government of the day ultimately carries the can and that's how it should be.

MR HARRIS: Just in terms of your descriptor of grade separation projects in Melbourne and Paul's question about land value capture, there is no perfect system for saying, as you rightly point out, that, "The beneficiaries are this and the line stops on this side of the road." It's quite difficult. But if you had a relatively comprehensive section of a city where a series of grade separations were to be undertaken and thus all of the local government areas that were covered by that would be deemed as potential beneficiaries and contributed through, for example, some additional land - equivalent land tax charge or a tax on rates or something like that. You would have a model there. These are the models that have been put to us in various submissions that do apply in other jurisdictions but they don't appear to have been tested at all in Australia.

There are limited examples, so we've had a submission and your own talks about Gold Coast light rail and things like that. But you wouldn't say this is a common model that has been attempted in Australia. Is there a reason why this is the case.

MR TANNER (ARA): To be honest, I don't know. I suspect the complexities of drawing the boundaries across beneficiaries is one. Effectively if you think about the kinds of projects here, particularly rail and tram, we went through and extended period where there was very little new rolling out of infrastructure a sector. So if you look through - obviously I'm knowledgeable about Melbourne than other major cities, but Melbourne with a tram system is more of a public transport oriented city than some of the others. If you look through from the 1950 through to probably 1980s there's actually very, very little new rail or fixed rail infrastructure.

MR LINDWALL: Eastern suburbs railway line in Sydney has been - - -

MR TANNER (ARA): Yes, there are one or two examples. But in effect that's the heyday of the car when you had limited congestion, rising affluence and so forth. Then, of course, you get to the 1980s and the limits of car transport are starting to be felt. The natural demand for public transport start improving so you start to get that change in. For example you get significant stuff happening in Perth. So I think in part the reason is that we went for an extended period without there being much action on this front. The wider problem here, I think, is that I don't think that value capture model in our submission is really focused on individual smaller projects like grade separations, although it's - - -

MR HARRIS: Even though they're \$200 million a go.

MR TANNER (ARA): Well, they don't necessarily need to be quite that expensive. Some will be, some won't. But nonetheless that is significant.

MR HARRIS: Indeed.

MR TANNER (ARA): Of course, the problem is that what you are effectively doing is improving - for example, think of the Springvale Road crossing with one of the suburban lines and then think about the traffic flows along Springvale Road, north-south, and where they are originating from and going to all over the place, the whole span of the Eastern towards the south-eastern suburbs and then think about the railway line and it might go out to Lilydale or beyond or whatever. So the actual specific benefit that materialises in that location is being enjoyed by a very wide, diffuse range of people. By definition the value will be greater to people probably closer to the location but that's sort of hard to capture.

MR HARRIS: I wasn't trying to solve it, so much as saying I can see the boundary issue with a specific single location.

MR TANNER (ARA): Yes.

MR HARRIS: But if you committed to convert 12 or 15 across the entire south-eastern suburbs, for example, then there's a case for the entire south-eastern suburbs to be seen as beneficiaries and yet that project has never been - I'm not here to advocate obviously for specific projects but since your submission did talk about value capture, it didn't though address directly in it why, if this is clearly known, the model has existed globally, it doesn't seem to have been utilised in Australia very much.

MR TANNER (ARA): I think probably the answer is a culmination of a prolonged period of time in our history where not a great deal of new investment was occurring in fixed rail infrastructure and where it did occur it was relatively isolated, for example, the extension of the Burwood tram line, the light rail to St Kilda which was in effect a replacement of heavy rail. I think it's interesting that the Gold Coast light rail project has got this element in it and to me what that really says, and I'm not expert in that project, but there you've got a regional economy that's reasonably definable. You know, you can actually have a reasonable sense of what the Gold Coast is and it's got a clear, distinct economic focus that is obviously different from greater Brisbane and northern New South Wales. So if I were living in that area I would see myself as being benefited by that project, irrespective of who I was, and I probably, depending on how much I was being expected to pay, I'd probably accept that, "Yeah, well that's a reasonable thing," because there's a reasonably definable

economic region and therefore people within it see themselves as part of that economic ecosystem.

The problem in many parts of Australia would be that, of course, you don't have the equivalent. Your hypothetical about the eastern suburbs of Melbourne bears some thinking because it may well be that a kind of eastern suburbs transport package which could involve a range of things which then fits the natural economic unit a bit better, maybe that will be more susceptible.

MR LINDWALL: I was going to ask about project selection. We can point to many examples in history where governments have reserved a corridor, another government has sold it off, a government proposing to build something and another government has chosen a different project. In our draft report we said that there should be transparent cost benefit analysis and ex-post benchmarking which is all published as well. I'm not sure if that's sufficient. Is there any other thing that you could suggest to try and get a better consistency in project selection?

MR TANNER (ARA): One of the things that we put in place - not without internal discussion I might - in the Infrastructure Australia Legislation was a provision that effectively required the Infrastructure Australia tick to a project at least being not ridiculous before the federal government might put money in to. The bar that was set was relatively low so it didn't effectively say, "The federal government will only contribute finance to a project Infrastructure Australia says is category 1, the most important priority." It was a more a negative bar of saying, "Well, if Infrastructure Australia says, 'This is a dog, don't go near it,' then the government, by the legislation, is precluded from being able to finance it."

That may seem relatively minor but it's actually quite helpful because I think it then does impose some filtering process. I think even though the political obstacles are very high, I think some effort to agreed collaboration across the key governments would make a significant difference. It would make a real difference and voters in many states have become so cynical, for good reason, about endless re-announcements and repackaging of things that sometimes don't even happen that the view that somehow political benefits are delivered from playing this game I think is erroneous anyway. I would like to think there is a straightforward solution to this problem. It is quite serious.

The project that's worth keeping an eye on on this front is the Regional Rail project in Melbourne. That's a project where both sides of politics have had and have got some ownership of the project. It is a really big and really important rail project. So it will be very interesting to see in X years' time what the sort of political learning's are once that is up and running and delivering benefits for both the freight and passenger rail systems and the regional economies that are connected to it

because in effect you've got something which both sides of politics have got a bit of a stake in. That might change the mentality - obviously not necessarily in other parts of the country but certainly it could be a very positive thing for the way people approach these things in Victoria.

DR MUNDY: I'm just mindful of the time but I did want to ask you a question about privatisation. There has been during the course of this century an increasing level of privatisation of both above rail and below rail activities and you may well have reflected on these issues in your previous role as well. But can you perhaps give us any guidance about what's worked well, what hasn't worked well in rail privatisation and what of those learning's might be applicable to any consideration of the privatisation of the Australian Rail Track Corporation.

MR TANNER (ARA): You will no doubt be amused to hear given one of your former roles that a certain shadow transport minister criticising the Howard government's rail industry reform package in 1997 got it wrong.

DR MUNDY: Must have been poorly advised.

MR TANNER (ARA): Possibly poorly advised. But I take full responsibility. In retrospect I think that was a good package and a good reform approach and it has stood the test of time. So the ARTC I think is a really good public sector business. That doesn't mean it shouldn't be privatised but I think it's a really good public sector business. I think it's notable that the project money that in government we put into it, particularly in the context of the GFC - my impression is that broadly the projects were well managed and delivered. Although no organisation is perfect, I think that organisation, the restructure of the industry that occurred in 1997 I think we well done and that was in effect part-privatisation.

There have been different versions around the place. Of course, there was a considerable debate about the privatisation of QR, nor Horizon, and in particular vertical integration with respect to the coal lines at the time. Whether or not the criticisms of that structure at the time were valid it's too early to say because you really need probably several cycles of the commodities price cycle to be able to assess whether there is in fact a pricing issue. I'm not aware of there being any evidence thus far that suggests, "Hey, this was a bad idea." That doesn't mean it wasn't but I think probably it's too early to say that vertically-integrated model in private hands has turned out to be a bad idea.

On the question of ARTC privatisation it's important to note that notwithstanding speculation in certain media that it might be worth about 4 billion if it was privatised, I think that figure is probably a fairly hefty multiple of the real figure, partly because, of course, the benefits of the additional investment that have

been put in in recent times. Part of that is still proceeding. Of course, you've also got lingering in the background the Moorebank project and the additional complexity of the Inland Rail project which both sides of politics have signed up to and there is initial work going on which is obviously a critical priority for the ARA.

One of the things I think the government needs to do or should do is to try and think about these three questions together because part of the Moorebank project, of course, longer-term interstate traffic. The purpose of the inland rail is to in effect free up Sydney and to free up the north-south corridor to make it vaguely comparable to the east-west corridor, the rail corridor and therefore to substantially lift the productivity of that transport corridor as a whole and to shift the balance away from road transport which is massively skewed at the moment, as you would know. So if I was sitting around the cabinet table now looking at these things I'd say, "Look, there's got to be a lateral solution to this that involves getting the inland rail built, getting the ARTC or some of its assets into the private domain and getting the Moorebank project completed and, in addition, looking at an equivalent in Melbourne as well.

The ARTC is one of our main members so we don't have a view on privatisation, for or against, as far as I'm aware. But I think my main view would be if something was to occur of that nature it should be cognately with those other major products to produce an aggregate outcome that's good for rail, good for transport and good for the economy.

MR HARRIS: Okay. We should let people have a bit of lunch before we start again. We are due to start up at 1.30 or thereabouts, so I will hold over further proceedings until then. Thanks very much for your time.

MR TANNER (ARA): Thank you very much.

(Luncheon adjournment)

MR HARRIS: So, Matthew and Jane, could you identify yourselves for the recording.

MR LINDEN (ISA): Matthew Linden. I'm the director of government relations for Industry Super Australia.

MS MCGILL (ISA): Jane McGill. I'm a consultant to Industry Super Australia.

MR HARRIS: Do you want to make any opening remarks or should we launch straight into questions?

MR LINDEN (ISA): There's maybe a few things - - -

MR HARRIS: Just a few quick things, yes.

MR LINDEN (ISA): - - - I thought I might highlight and might help focus some of the discussions that we might have. Taking into account we've made three submissions now to the process, and we're very grateful for that opportunity obviously, I guess we'd emphasise there's no real silver bullet to these issues around infrastructure that we face but they're not necessarily unique to Australia. In most advanced economies they're dealing with many of the issues that obviously the Productivity Commission is attempting to address.

We certainly don't advocate a one-size-fits-all model and believe that better outcomes will result if governments consider carefully where economic incentives lie in project delivery and are prepared to try some new approaches which opens up the infrastructure financing process to a more diverse range of players. With this in mind there are perhaps four areas where I might make a few brief comments and it might help in focusing the discussion - that's basically around the role of long-term equity and proposals for an inverted bid process, public sector asset recycling, early constructor involvement and liquidity issues.

In relation to long-term equity, as we've noted in our submission industry super funds have typically not participated in greenfields projects due to the involvement of short-term investors and fundamental misalignment of interests that occurs when they exit early with expected fees. We've suggested a model for early equity involvement through an inverted bid process where governments partner with a long-term investor. We believe it has five key benefits: more accurate pricing of long-term risk; greater competition and better pricing of debt finance; greater competition and better pricing of construction; potentially faster project delivery; and a reduction in bid costs.

We sought in our submissions to clarify how this process would work in practice, taking into account concerns how risk would be transferred and governance issues. Again, we would emphasise that the model is quite flexible depending on the nature of the project and the objectives of government and risk-sharing requirements. We would encourage the commission to recommend in its final report that early equity involvement through an inverted bid process is trialled. We would emphasise that it would most appropriately be deployed in projects where a full private sector solution is sought - that is, design, finance, construct, own and maintain.

Turning to recycling, we're strongly supportive of the model that has been put forward and articulated in the draft report where governments assess that it's in the public interest to privatise existing assets in order to fund the construction of new infrastructure. Industry funds of course have been key investors before, most recently in the Port Botany and Port Kembla deal, and the way in which that has helped to finance the first stage of WestConnex. There is evidence that super fund involvement helps ameliorate community concerns, as the public in a sense retain ownership through their super funds and the funds themselves act as responsible, long-term investors and we'd note that an inverted bid process could be adapted to our brownfields investments.

In relation to construction, in our supplementary submission to the draft report we've recommended that early equity involvements are perhaps more important than early constructor involvement, especially where the private sector is long-term owner-operators. Finally, on liquidity issues we've included in our most recent submission an excerpt from our submission to the financial systems inquiry dealing with liquidity. These issues perhaps extend beyond just necessarily infrastructure and more broadly to those systemic issues which the financial systems inquiry is assessing around the role for short and longer-term transformation, maturity transformation. So we'd suggest that the Productivity Commission perhaps refer to the financial systems inquiry for their deliberations and conclusions in relation to liquidity facilities, but we'd be happy to answer your questions about those topics and others.

MR HARRIS: Okay. Well, perhaps we could start with liquidity because we had an industry presentation from Steve Bracks on behalf of CBUS this morning and his version of a liquidity support facility was actually a regulatory reform model, not a support facility. Your presentation and a number of others we have received have, as I think I put it in my questions to Mr Bracks, are more along the lines - or appear to be more along the lines of an arrangement in which there is actually some cash transfer occurring between some party managed on behalf of the government and an equity holder.

We would like to get greater clarity around this because the proposition

Mr Bracks put forward was one where effectively he was talking about relief from regulatory standards for a temporary period, as held by APRA, and that would enable funds to potentially not need to liquidate the asset but actually hold the asset beyond a standard, or so as we interpret. Anyway, we will be doing further investment of the proposition that he put forward because in principle it certainly answers some questions that we had about this. But your own is still very much more along the lines of this proposition that supports liquidity by effectively taking an asset back.

MR LINDEN (ISA): There's potentially a number of approaches here, and I think in the course of our submissions certainly regulatory relief is one approach. The funds of course worked through, mostly on a fund-specific basis with APRA, those issues during the course of the global financial crisis. Most funds were able to quite adequately deal with the liquidity demands at that time; others less so, and they worked through with APRA around the details of how they could address redemption requests in an orderly way.

There's a couple of different approaches here, which we've done some work for, certainly on behalf of our member funds. One is the capacity potentially for an interfund liquidity facility. That is an area where we think there may be potential, although less so in potentially systemic events. But nevertheless there are potentially some regulatory changes which might need to occur in respect to the SIS Act in particular to enable that to occur. In the longer term, however, a committed or central liquidity facility might be advantageous.

We do believe there's further work that's needed to properly assess the costs and benefits. I think it's still quite early in the process to assess those. Obviously we've suggested that at the moment trustees may be maintaining overly-conservative positions in relation to asset allocation on the basis of regulatory oversight from APRA and the issue there, or the long-term impact that that brings to members is obviously a trade-off between long-term returns and what might be achieved through an illiquidity premium on an illiquid asset.

So our view would be - and we appreciate the Productivity Commission's interest in the issue - there's obviously some broader systemic considerations that need to be taken into account and the financial systems inquiry - - -

MR HARRIS: There's little doubt that liquidity is an issue because it has been raised consistently by parties who otherwise might have positions that will be substantially at variance with each other. So it's a common position that one of the issues facing long-term equity is a question of liquidity, given the nature of our superannuation system's structure and by comparison with the advantage held by defined benefits schemes overseas.

That said, I guess the problem with some of the models - and it's not specifically necessarily yours, although some of them that have been proposed by superannuation funds have been very specific about the idea of liquidity facilities which effectively enable a formal put - also potentially creates the opportunity just to get rid of an unhappy investment. It becomes a form of guarantee and therefore has all of the potential problems associated with governments effectively both selling assets and then guaranteeing to buy them back at a particular price.

That's why we were interested in what was said this morning, but I might let my colleagues - - -

MR LINDWALL: Well, only on liquidity while we're at it. I mean, all of these methods to me are a form of indirect way of addressing the issue of liquidity. Is there a way of actually making the market more liquid in itself and therefore actually reduce the liquidity premium? I mean, I'm not sure. Is the liquidity premium relatively high in Australia compared to overseas?

MR LINDEN (ISA): Look, in our follow-up submission to the draft report it was suggested in the draft report that perhaps funds make greater use of listed vehicles, infrastructure investment vehicles. To date, that hasn't been the approach of industry funds for a number of reasons. One of the key ones obviously is the funds are seeking to achieve the best returns which they can for members. The listed vehicles typically involve a high degree of intermediation - ticket clipping, for want of a better word - which means that the value delivered to members is less than it could have been.

The other substantial reason is that there's a less clear line of sight compared to the structures which they use at the moment for unlisted infrastructure investment, particularly in relation to ownership and management rights of those assets. The funds take very seriously their view that they're long-term investors and they wish to maintain the capability through their managers - and IFM Investors could probably expand on this point - to have ownership and management rights over assets and obviously influence the value in respect to those assets in the long term. That's critical really.

MR MUNDY: Look, I've got a few questions around this. First, why should we prefer infrastructure - give preference to infrastructure as an illiquid asset as opposed to some sort of property?

MR LINDEN (ISA): As opposed to property - - -

MR MUNDY: Because that was the issue in the GFC - it wasn't a problem with liquidating infrastructure investments, it was actually a problem with liquidating

property assets. By and large, that's where the illiquidity problems occurred.

MR LINDEN (ISA): Yes.

MR MUNDY: So should we extend this to all illiquid assets and should we extend a similar framework, I guess, to retail funds who will also have liquidity obligation? I mean, who's the scope of the beneficiaries here?

MR LINDEN (ISA): Sure. I think that there's a number of issues in that. The issues around the time of the GFC were different for different funds. There's a range of factors which affect the liquidity of the funds: their demographics, the engagement of their members. In relation to some of the events around the time of the GFC, a lot of the issues actually occurred in relation to property or around listed property trusts where those were effectively frozen and investments couldn't be redeemed.

You are quite right, the issues are perhaps more acute in the retail sector, understanding, I guess, the structure of the superannuation industry. Industry funds traditionally have been able to invest the way that they have because the demographics are different, the cash flows are different, our distribution model is less retailised, I guess, for want of a better word. They're challenges which the retail sector face, particularly with members, under advice, switching investment options quite frequently in and out of different products. So the liquidity requirements and the approaches will vary, I think, across the sector and from fund to fund. Trustees ultimately will make the best decisions based on the profile of their funds.

In relation to infrastructure, I guess in a sense as an asset class it is different from property, particularly because of its economic functions. Obviously they have a tendency to be monopolistic assets. Often they have inelastic demand associated with their use, so they're actually high-quality assets.

DR MUNDY: So Cbus is building up on the corner of Bourke and William Street.

MR LINDEN (ISA): Sure. I mean there will be instances where there's property - I mean there's obviously some property assets which have similar characteristics.

DR MUNDY: Shouldn't the market sort this out?

MR LINDEN (ISA): Look, there are reasons why markets, I guess, particularly when there's systemic events where markets mightn't necessarily behave rationally. It doesn't necessarily mean that the quality of those assets isn't there. There are challenges there for funds. What we would suggest is that there's more

work that needs to be done to assess the benefits and the cost around liquidity facilities, particularly in light of the financial systems inquiry consideration of these issues. We'd probably suggest that a detailed consideration of those issues and potential mechanisms - maybe it would be helpful for the financial system inquiry to work through those issues, particularly the systemic impacts.

DR MUNDY: I'm sure they will. But Mr Bracks's description of what he had in mind was profoundly different. He made it clear that this wasn't an issue about systemic risk in the system or some sort of crisis response. This was a circumstance that he had in mind, and I think it was pretty clear that his view was more in a circumstance - because of the lumpy nature of infrastructure investment in a normal environment, that there may well be - and because of the need to meet liquidity requirements in the normal course of events that there may be some relaxation of normal liquidity arrangements, perhaps by payment of a fee that would then enable a fund to invest in assets which they mightn't otherwise be because of the constraint. I think that's a reasonable characterisation of what he said, so I'd like your view on that.

MR LINDEN (ISA): Yes.

DR MUNDY: Then my second part of the question is given that not all funds are the same size and not all of them have the investment capacity. Cbus, for example, have super, it has got about \$5 billion of assets under management - small industry fund. By creating this arrangement, that would facilitate the sort of arrangement Mr Bracks had in mind, would we run a risk of advantaging those larger funds over the smaller ones who simply aren't going to be able to do that, or do we then need to extend this arrangement to IFM or any of the other funds managers who provide funds management services for smaller funds?

MR LINDEN (ISA): Sure. I guess there's a lot in all of that. As I said, there's a number of approaches which could be used or a number of mechanisms which could be used to address those issues.

DR MUNDY: Yes, I'm particularly interested more in what Mr Bracks was talking about.

MR LINDEN (ISA): I wouldn't disagree at all with what Mr Bracks has put forward as a potential solution. It may well be that these issues for most funds could be solved through a fairly light touch approach. It's important to make sure that there's appropriate - the incentives work correctly in relation to that. A number of the - maybe to expand a little bit further about the liquidity arrangements for larger and smaller funds and how they might be managed in the context of infrastructure, I guess in relation to industry funds it's useful that many of them do choose to invest

through IFM Investors. That's in fact a mechanism which was put in place nearly two decades ago to enable smaller funds to invest in quite significant projects. There's a hybrid alignment of interest between those investors and those funds. So IFM Investors might be able to talk a little bit more about what arrangements they have in place if smaller funds might wish to exit and what arrangements they have in place. But there's a high degree of alignment of interest between those investors which means that often they can cope quite well, though there are those challenges. So I wouldn't necessarily foresee that there would naturally be an extension across the board.

DR MUNDY: But some of your members presumably use other funds managers. Certainly in the past a number of super funds invested through Hastings, for example.

MR LINDEN (ISA): Yes, that's correct.

DR MUNDY: I presume some of them have mandates with people like Colonial First State and others. I mean we saw in the GFC, and public policy since that time has been very - you know, with regard to the bank guarantee and the potential distortions that may have created between small and large banks. I guess what I'm concerned about is this sort of proposal which is - well, all of these proposals seem to - I understand why they're attractive to very large super funds, particularly those who have capacity to undertake doing analysis themselves. But I'm wondering whether we run a risk in this of - very much in the way that the bank guarantee may have distorted competition in the banking sector between small and large banks.

MR LINDEN (ISA): Yes.

DR MUNDY: I'm just trying to understand that problem. There's an issue.

MR LINDEN (ISA): Yes.

DR MUNDY: So it's not clear to me, and I think there are real risks in it.

MR LINDEN (ISA): Sure. Obviously at the moment APRA engages very closely with all of the funds around their liquidity management. The funds are required to have liquidity management plans. There may be some room there to look at what flexibility there might be. It's one approach, and there are several approaches, I think, potentially to address the issues.

DR MUNDY: We should probably go on from liquidity.

MR LINDWALL: Could I, yes, talk about - well, the inverted bid models.

DR MUNDY: Yes, I think the inverted bid model, probably.

MR LINDWALL: In particular - well, Assured Guaranty this morning told us that the fact that a consortia needed to have fully-funded bids before they go into the market to tender, if you like, is a significant bias towards bank debt. In other words, if you could separate out the financing requirement from the actual bidding process, if you like, or do it afterwards, would that address your concerns or would you see it as a complement to the inverted bid model that's proposed or an improvement on the inverted bid or could it be a separate stand-alone or - - -

MR LINDEN (ISA): Yes, I mean I think it's fair to say that it's a feature of it. We've tried to, I guess, in the course of our submission look internationally at some features which are similar to the proposal that we've put forward. There's obviously within the UK instances which we cited in our submission where they've used similar processes. The UK treasury in particular has used and has reported on the use of both debt and equity funding competitions. I think they found in the case of debt funding competitions there was a positive impact in terms of the capacity to obtain a better price for debt which is being sourced, I think in the order of about 7 per cent less.

So I think what they've put forward is certainly consistent with what we've suggested, and that is that there's a potential, because there's such a limited pool of players who typically are in the space of significant greenfields infrastructure bids - there could perhaps be greater competition. The way that those consortiums come together mean that there's perhaps less competition than would be optimal or in - and finding fit-for-purpose construction and finance solutions that you could get through an inverted process where you could tender for each separately.

MR HARRIS: Can you explain the construction element? I see the competition that you might run as an equity - I'll just pick you as the submitter here. I can see the competition that you might run for financing being different to the competition that's currently run under the standard tender process where effectively it's the project integrator's responsibility to get a constructor and a financier and all that, or a set of financiers, and exclusivity being an issue. So I could see how equity could run perhaps a different contest for debt funding and possibly a better one. But I don't see how you could run a different contest for contractors than the current tender process, and yet your submission says clearly you expect to see a costs saving in the contractor area. Can you tell me how that would happen?

MR LINDEN (ISA): Yes.

MS MCGILL (ISA): Could you repeat the last part of what you said?

MR HARRIS: How do you expect to get a better price from a contractor than the standard tender process?

MS McGILL (ISA): The tender process for construction under the inverted bid model is actually approximately the same as it is under the traditional process. The cost savings in the overall bid costs come from the financing tender rather than the construction tender.

MR HARRIS: Right. So financing, definitely, which I can see more of than construction. Okay, that's fair enough.

DR MUNDY: I just note that in the document we received yesterday you suggested we change some language to talk about equity involvement. Now, I think there might have been - some of those comments that we've made in the draft report actually are as applicable to whether there's a PPP structure or government are just procuring themselves. So you're not suggesting that all government procurement should be done by PPP, presumably. So to the extent that it's relevant to PPPs that's one thing, but you don't have an objection to those observations if governments have decided to go and do these procurements themselves?

MR LINDEN (ISA): No, that's correct. As I mentioned in my opening comments I think the inverted process is particularly suited where governments are seeking a private sector solution.

DR MUNDY: No, I'm just dealing with those specific recommendations you make in points 4 and 5. Okay, thank you.

MR LINDWALL: So the inverted bid model, which is about agreeing a rate of return for profitability rights ex ante, that's very early on in the stage. What happens if you find new information out that make a significant difference to the assessment of risk that the government therefore might be finding that it should be changing that quite significantly, the IRR agreement. Is this a locked-in IRR agreement or is it subject to negotiation over a period and revision?

MS McGILL (ISA): There's a initial IRR established as part of the bid process, but before the project proceeds that IRR is converted into a dollar-based figure. There could be emergent risks that hadn't been anticipated, but that's the same as the traditional approach; risks can also subsequently emerge that weren't taken account of in the early bid process.

MR HARRIS: I think the question we're really asking is because it is a best-guess IRR at the start of the process where your project costs are at P50 kind of levels and

things like that, whereas at the end of the process they're P90 or better, plus you've identified a whole bunch of scope changes, probably, and God knows what else. So I think what we're trying to get a better handle on is even if you selected an equity provider at the start based around what I'd call a proposed IRR, it wouldn't be a final IRR and it really does - so you'd need a second go at this, either by negotiation or potentially even again by some form of contest, I don't know. But you'd need some confirmatory activity, wouldn't you, before you start - - -

MS McGILL (ISA): Some of that could be achieved by the adoption of interactive tender process so that things that - can be refined through the course of the tender process.

MR HARRIS: Right, okay.

MS McGILL (ISA): I don't know about if you wanted to add.

MR LINDEN (ISA): I think there's a number of potential ways which an inverted process could be structured, but we've suggested an approach where there's interactive tender process, there's a number of decision points for government to say - to go or no go or revisit a number of the features of the deal. Obviously in the realm of risks construction is a significant one. We've tried to bring forward some evidence, and certainly from some other equity investors and owner-operators how they deal with those issues around adopting a design to cost approach.

MR HARRIS: That's right. But scope creep is probably a bigger risk even than contractor risk, because in your submission you are definitely talking about something which is a concept design. In fact, you're actively encouraging that we desist from arguing that government should firm up on design. You're actually saying, "Don't firm up on design. Run concept design because we can add value at design phase," which we wouldn't disagree with in principle. We see the value that you can get from involving private bids in design, but that definitely says you're establishing an IRR on a concept, which any rational person would surely say at best it's a guess. Therefore at some later point, as these things get refined by selecting a contractor and by agreeing a scope after a design is determined and a whole bunch of - I would have thought further risk analysis, you then say a final IRR, which is almost certainly going to be significantly different from your initial one. Presumably you couldn't expect a government to just stick with something that's established as a outset on a concept, could you?

MR LINDEN (ISA): We think there's ways that it could be - I think through the process we've articulated there's a number of sort of gateways in terms of the way the process works.

MR HARRIS: Yes, you've got no-go points.

MR LINDEN (ISA): So, you know, ultimately - - -

MR HARRIS: They're quite binary. They're not negotiating points.

MR LINDEN (ISA): Yes. Well, I mean it always - I think the intention is to allow for a more interactive process between the proponent and government. Ultimately there's points along the process where the government can decide one way or the other how it would like to proceed as more information is brought to bear.

MR LINDWALL: Now, the inverted bid model is based upon an IRR agreement, correct? What about a revenue guarantee of some sort, would that be - you'd consider it equivalent or would you dislike that type of approach?

MS McGILL (ISA): It would be our intention that the IRR would be translated into a revenue equivalent, and that revenue would be payable to the private party subject to their delivering on required outcomes and outputs.

DR MUNDY: So presumably that means effectively that unlike say if you buy a brownfields port asset, for example, where part of the return to equity reflects the volatility of revenue, what you're basically saying is at least perhaps for a period there would be no expectation of volatility in revenue, so therefore the IRR should reflect that?

MS McGILL (ISA): No, the IRR will reflect the agreed risk-sharing arrangements.

DR MUNDY: But sorry, I'm talking about a circumstance where a revenue would be guaranteed, so there is no risk in the revenue other than a default on behalf of the Crown, presumably.

MR LINDEN (ISA): What you may find - I mean consistent with - I guess as we've expressed it the arrangements there would very much depend upon how governments wished to share the risks around individual projects.

DR MUNDY: So in principle there could be some - - -

MR LINDEN (ISA): Clearly there's instances where those risks are - - -

DR MUNDY: There could be an example - for example, government might guarantee a certain volume, so that it may have the characteristic of a take-or-pay contract rather than a total revenue guarantee?

MS MCGILL (ISA): Yes.

DR MUNDY: Okay. In which case the IRR doesn't become relevant.

MR LINDEN (ISA): It's not - I guess conceptually those arrangements would vary on a project-specific basis. You can see how through traditional procurement processes and deal structures, for instance, in availability payment model, how effectively they're saying the same arrangements exist. There's a capacity to structure the deal in such a way that they're - in respect to the - there might be a guaranteed component of equity consistent with an availability-type model, and where the remainder is at risk. They're all matters for negotiation.

MR LINDWALL: It's all about getting the incentives in the right place.

MR LINDEN (ISA): Yes.

MR HARRIS: The primary purposing model, which we haven't really dealt with at all because we've been investigating the detail of it, though, is effectively to say that equity should substantially be the initiator of the project rather than either a very detailed design and tender process from a government or a model delivered by a project integrator, from the finance sector, for instance. You're saying that principally because you're concerned that the current models both leave equity too exposed because they're driven by the short-term interests of the project integrator and/or the financiers and the contractor, and leaving equity exposed; and the fee structures which are potentially associated with short-term refinancing arrangements and things like that.

MR LINDEN (ISA): That's essentially it in a nutshell. It's about bringing to the table early in the process the long-term owner-operators of those assets who can price the risks over the long term, and properly aligning the incentives in a way, we'd argue, to deliver better outcomes than exist through the existing incentive structures and processes.

MR LINDWALL: One final question from me. Obviously there are unique risks to greenfields projects compared to brownfields projects. Are there any regulatory barriers which minimise the scope for diversifying those types of risks?

MR LINDEN (ISA): In respect to superannuation fund investment or?

MR LINDWALL: In greenfields investments, yes.

MR LINDEN (ISA): No, look, I wouldn't have thought so. I mean, there are instances at the moment - there have been instances where the funds have invested in

greenfields projects sometimes through - obviously the funds themselves invest - or don't actually; they invest through both equity and debt, so there's instances where funds have invested in respect to debt, there's instances through equity, and IFM Investors could perhaps expand upon their involvement in greenfields projects. They certainly have done it before. They haven't in relation to obviously some of their renewable energy assets and investments and offshore in terms of some of their global investments. But I wouldn't have thought necessarily that there's any regulatory impediments which pose a particular constraint.

MR LINDWALL: Yes, all right.

MR HARRIS: In its purest form, the inverted bid model pure, being if you actually followed literally the descriptor in the submission, it's almost an alliance partnership in its own way. Without trying to drag in too many different perceptions of whether alliance contracting is a good or a bad thing, the principle that an alliance contract is trying to approach is something where it's difficult to define the risks ultimately and therefore they need to be shared. Now, that may or may not be the case here with a particular infrastructure project such as this one but throughout it the model really is, pick an equity partner and partner with them the whole way through on a shared - almost a payment for managing the entire thing from concept to effectively its disappearance at the end of a 35-year ownership period.

It's pretty much like that in principle. I'm not trying to diminish its concept but I guess I'm trying to draw out whether I'm right that you're saying there's enough flexibility here in this model here in this model because it's a partnership rather than a set-and-forget, here's a set of contracts, and it's gone. Would I be right in that or am I being too - - -

MR LINDEN (ISA): No, I think that's probably an astute observation.

MR HARRIS: Probably. Without trying to tie you initially, I'm not going to write down that you - but I just want to be sure that as we approach the thing and we assess it we're assessing it properly. It offers a level of flexibility that isn't otherwise inherent in current models and, as I've said earlier, it's driven by two particular factors that have concerned you as equity investors from previous models. But it has the limitations that I think we're trying to address here with our questions. We're trying to find ways by which these might be solved, if indeed the benefit can be extracted from that, which is why we've asked the questions we're asking rather than describing the model so much.

I had one other thing which I've lost. I was searching for it. Yes, so if we agree an IRR and we're looking at a project return - therefore we're implying a particular debt level for the project, or at least that will be part of that original

initiator arrangement with a particular level of equity presumably - would you see that as being a range for debt and a range for equity or would you see it as being pretty much we'd want to determine at that point what equity held? In other words, is there flexing possible at the start or is it pretty much, "We're going to bid you a project IRR and we want equity to hold 20 per cent of the project." Would those be the two elements that you see as this process fixing at the start?

MR LINDEN (ISA): I think there would be capacity for there to be a range for each. Obviously there would be a view about the level of equity. We obviously expressed one of the issues with bidding a project IRR, and if there isn't a reasonably clear view around the equity and debt shares, there may be inappropriate incentives there too because of the level of debt. But I'm not sure necessarily that there would be a need to fix precisely up-front what the relevant components would be, but I think a range would be sufficiently flexible to deal with it as it went forward.

MR HARRIS: And that would help you in your subsequent negotiation, then, with financiers.

MR LINDEN (ISA): Correct.

MR HARRIS: Yes, okay. That was worth getting on the record too. Thank you. Do you have other questions?

MR LINDWALL: No.

MR HARRIS: Anything we missed that you want to try and get - - -

MS MCGILL (ISA): I was just going to add to the question of construction. One of the big advantages of this approach is that your construction companies aren't tied to a particular finance consortium so when you do do the construction tender you're tendering for the best of breed in the market place rather than being forced to take a particular construction company that goes with the particular investment bank.

MR HARRIS: Yes, I can see that would be the case. That's great. Thank you. All right, thanks very much for your time and for your multiple submissions around this process. They have been particularly useful and I think this idea has been elaborated in the public arena and that in itself is of great value, I think, for potential proponents, particularly with unsolicited bid propositions now being agreed by various governments. So thanks very much.

MR HARRIS: For the record, could you identify yourself, please.

MR ABIDI (IFMI): Azhar Abidi, IFM Investors, investment director.

MR HARRIS: Thanks very much for the time and attendance here today and also your submissions throughout this process which again have been exceptionally useful for us. Is there anything you wanted to outline at the outset before we jump into questions?

MR ABIDI (IFMI): I do, thank you, commissioner. So just to say a few words and to set the context for our submission - IFM Investors has made a submission to the commission's draft report and I would like to summarise the key points of that submission for this hearing. IFM Investors is one of Australia's largest investment managers and manages in excess of \$50 billion on behalf of institutional investors globally. IFM has extensive infrastructure investments in Australia and around the world and has a track record of 19 years of investing in infrastructure. IFM Investors is owned by and invests on behalf of 30 Australian industry super funds.

We, through our Australian and international unlisted funds, invest equity and debt globally in infrastructure such as airports, seaports, toll roads, telecom, electricity generation, transmission, distribution, gas distribution and social infrastructure. Our investments include assets of national significance such as capital city airports as well as PPPs such as Southern Cross Station in Melbourne, the new Royal Adelaide Hospital and the Victorian Comprehensive Cancer Centre.

We have experience in investing in both brownfield and greenfield assets through our investment in Pacific Hydro, a leading developer, owner and operator of renewable energy projects. We have invested in greenfield projects in Australia, Chile and Brazil. We also have invested in a greenfield project in the US, recently entering into an agreement to invest about \$US1.6 billion of equity in Freeport LNG's facility near Freeport, Texas. With this background as a long-term equity investor our submission responds to the commission's information request 6.3, which is the inverted bid model, seeking feedback on that alternative procurement for long-term equity.

Private capital is not homogeneous. There is private capital - and when I say capital I mean equity - provided by investment banks, developers and builders and there is private capital provided by pension funds and institutional fund managers. They are driven by very different incentives. Contractors make a profit on construction, investment banks make a profit from up-front advisory fees and underwriting fees, and equity investors on the other hand make their returns through project cash flows. So the premise of this model is very simple: to get the best

outcome for financing infrastructure the government needs to differentiate between private capital providers and find the right partner for the right project.

If the government wants the private sector to build a project that the government continues to own then it should partner with the contractor. But if the government wants the private sector to build, own and operate a project then it should partner with the long-term equity investor. The procurement process should be designed accordingly. So it is really horses for courses. We believe that a formal procurement process where the government appoints the long-term equity investor through a bidding process and then the equity investor puts out tenders for construction, operations and other services, levels the playing field for long-term investors. Introducing equity early shifts the focus of procurement from construction and getting the project built to long-term economic ownership.

The concept is not particularly new; it has been tested. We have referred to many precedents in Victoria and New South Wales that demonstrate that private sponsors and governments have worked in partnership together to deliver value-for-money projects. In the current environment long-term investors like IFM Investors do not typically participate in traditional PPP procurement for a number of reasons that we have mentioned. However, by trialling this procurement model we think governments can start to level the playing field for long-term investors and attract additional capital to finance their infrastructure needs. I will be happy to explore any of these issues in the Q and A. Thank you.

MR HARRIS: That's great, thank you very much. So you've heard most of our previous set of questions, I assume.

MR ABIDI (IFMI): I have.

MR HARRIS: I think they'll pretty much be exactly the same set of questions.

MR MUNDY: Yes, or similar. So we may as well start on liquidity, I guess.

MR ABIDI (IFMI): Yes.

MR HARRIS: Do you have a particular view on liquidity that you - IFM hasn't really submitted that much on - - -

MR ABIDI (IFMI): No, we don't have a view for this hearing and I'm not informed enough to speak about liquidity at this hearing.

MR HARRIS: Okay. So the inverted bid model, as you can tell from our questions we're really trying to work out where the flex points are that might attract a

government as a proponent of a project to take up the model and to cross-compare the existing models. So perhaps can I start with this fee issue because it has been quite a big matter of contention and IFM have certainly submitted on the subject. We have received some evidence of the size of fee leakage, how large it might be. It isn't what I would call in a form that's really that easy for us to call upon publicly. So do you have any estimate that you could either put on the record today of the size of fee leakage that occurs inside projects as they're currently tendered, or would you be able to provide us with some evidence on the record that we could use in our final report?

Because if we are to talk positively about an inverted bid model, those two primary areas - short-termism and fee leakage - these are the primary drivers, as I understand it, for the idea of bringing an equity partner in early. I guess our report would benefit a lot from being able to pick out some size of the problem, if you know what I mean. I have no doubt there's a problem. The only question is, is it a large enough problem to try and convince a government in a final report like ours that you should potentially address model change to deal with this.

MR ABIDI (IFMI): Sure. So on the fee issue, I guess the best place for you to refer to would be a public document like an information memorandum for a PPP that failed. So I would suggest you look at some of these IMs which are available in the public domain. The one example that comes to my mind is the BrisConnections IM which is available, and there is also sufficient information available in the public domain about the fee that was taken out of that consortium by the investment bank which is in the order of \$100 million or \$110 million. That's again reported by the newspapers, and in the IM there's a fee figure of, I think, \$89 million in advisory and underwriting fees. So that would be about \$200 million of fees and that is without me having the IM in front of me and actually telling you exactly what the other numbers are.

MR MUNDY: It's good to see you again, Azhar.

MR ABIDI (IFMI): Good to see you.

MR MUNDY: Some of these fees presumably are not avoidable. I mean, you're not suggesting that inverted model would lead to a zero transaction cost basis because presumably debt has to be financed, debt may still need underwriting.

MR ABIDI (IFMI): Absolutely.

MR MUNDY: So how much of that 100 million, or whatever the number is - you know, design contractors still have to be paid and all these things - how much of it is compressible? Or, if you, like, how much are - - -

MR ABIDI (IFMI): Warren, there will definitely be fees charged by advisers in a consortium even if it's led by equity, because even if equity is acting as a principal, equity will appoint an investment bank to arrange debt and put the consortium together. The investment bank will probably charge a success fee, the banks will charge an underwriting fee. The advisory fee will drop, however, because equity typically does not charge advisory fees. In Australia particularly, equity does not charge advisory fees because the way equity makes its money is through asset management. So the greater the size of their assets the greater their asset management fee. In open-ended funds I've never seen equity charging advisory fees.

So what you will see is that the advisory fees that the agents are charging on behalf of equity, because in the current model the agents or the parties that are acting on behalf of equity are not actually bringing their own equity. They are the investment banks and the contractors who are acting on behalf equity. So their incentive is to put the deal together, get it done and get out - and they will make money on getting out; whereas with equity, they have to live and breathe with the asset for the duration of the asset. If the asset goes down they go down with it because their fees come down all the time.

MR LINDWALL: So since there's still going to be significant debt - success fees and so on - why can't IFM package up to a consortium X amount of equity and Y amount of debt and provide debt directly from your superannuation funds and then package it up amongst your 30 members, say, so that they each have a bit of exposure to both the debt risk as well as an equity risk? I asked this earlier to, I think, CBUS and there's apparently nothing in the superannuation rules that prohibits both an equity and a debt position by the one superannuation fund into the one asset. So why not?

MR ABIDI (IFMI): I think it's more an internal conflict issue. If one party, whether it's IFM or whether it's Hastings or Colonial or whoever it is - if one party is providing both debt and equity to one asset you've got potentially conflicts there because if the debt is under pressure then the equity has to make - equity has different incentives than debt to keep the asset viable. How those incentives then drive governance within the firm is a matter for the firm to resolve. Many firms simply do not put debt and equity into the same transaction because of those reasons.

DR MUNDY: Presumably there'd be circumstances - for example, at acquisition - where for a short period of time there might be deeply subordinated debt provided by shareholders, but your expectation is that that would be worked out reasonably promptly?

MR ABIDI (IFMI): That's right. We would typically not provide debt and equity

at the same time.

MR LINDWALL: But you could do one or the other?

MR ABIDI (IFMI): We could. We certainly do one or the other.

MR HARRIS: I can recall Michael Hanna, I think, telling me previously around this that we wouldn't want to sit on both the debt supervision committee and the equity risk management committee because the one, in circumstances where the project is in difficulty, is attempting to pass the buck to the other.

DR MUNDY: Well, they ultimately have competing claims over the same cash.

MR HARRIS: Would that be roughly right?

MR ABIDI (IMFI): In my previous life. I have sat on an asset where the company - the investor had both debt and equity in the asset and there was some difficulty with the refinancing and it was not a pleasant experience.

MR HARRIS: Yes. Difficult to internalise, no matter what people say.

DR MUNDY: Or externalise.

MR HARRIS: Externalise. Yes, shove the responsibility away.

MR ABIDI (IMFI): Yes.

MR HARRIS: Pipeline. So pipeline of projects; not particularly a central aspect of your submissions but a great matter of interest to the inquiry. So this morning I did ask Cbus and maybe other submitters too - particularly I had a interest in asking Cbus, and I didn't get a chance to ask ISA but I'd like to ask you. The way we've run our draft report is to say that a pipeline of projects should emerge over time if governments are prepared up-front to analyse options that they may wish to consider, publish those along with - in other words, the concept and then the analysis that goes behind that, and allow that transparency to provide, effectively, the pipeline over time.

Now, the further advice to us has been, "Yes, but you're not doing much coordination of projects in that way," and I note that, although we will come to it if we need to. But my particular interest in asking you this question is if such a pipeline of visible options under consideration by a government was in place, would it not match the kind of concept that is behind an inverted bid in the sense that you don't want the project, whatever it is, fully detailed and comprehensively ready to go

to market with the requirement for exclusive finance and set contractor arrangements. The concept of a pipeline developing in the public eye is surely closer to the concept that supports an inverted bid than the kind which says, "We'll make an announcement at a big public conference and the tender documents will be issued in three months." Would that not be correct?

MR ABIDI (IFMI): I think a pipeline - what the pipeline does for equity and for investors is provide certainty of how much capital can be deployed over time. So if we are - let's talk specifically about the inverted bid model. PPPs, as you know, are highly leveraged, have very small amounts of equity, take a very long time to complete and in the current environment the bidding costs are very high. So for equity investors to say, "We're going to patch a deal for X but we're going to wait, sit it out, and we will still deploy equity for these assets even though the chance of success is unlikely and the deals are infrequent. "Why would they do that than go overseas and deploy the same amount of capital in less time with less - at a less, lower, cost?

So the concept of a pipeline is that if governments can say that there is a PPP pipeline of X number of deals over five years which will allow us - or we can calculate, allow us to deploy so much equity, that gives us then the ability to make up our minds whether we are going to put more resource into it. Even with an inverted bid model I think that's an essential requirement. I don't think we are suggesting that just by having an inverted bid model or just by turning the procurement upside down equity will come and - - -

MR HARRIS: No, and I don't think we're assuming that either. I'm really asking - - -

MR ABIDI (IFMI): Yes.

MR HARRIS: You're describing now a pipeline which says, "I can, for the next five years, plan with certainty that a certain amount of my capital, which I know I'll have available to me because of the mandated nature of superannuation, can be devoted to the purpose of these projects." That does assume that there's no political intervention in the five-year plan.

MR ABIDI (IFMI): That's right.

MR HARRIS: It does assume that some plans don't fall over; it does assume that there's a cooperation from the assets being privatised, if they're indeed part of this as well as just being - as being greenfields, cooperation, meaning the boards cooperating; the legislation is passed and things like that.

MR ABIDI (IFMI): Sure.

MR HARRIS: The pipeline that is notionally being called for, it seems to me, is hopeful, in those circumstances. It presumes we can eliminate those kinds of factors. I guess I'm trying to turn it round and say if all projects that are under consideration were transparently made available at the earliest possible point, isn't it possible for you to synthesise that? The way I saw the inverted bid matching that was - the proposition is, "We, equity, will come to you early and tell you that we'd be happy to take on this project," as long as you haven't locked it up into a form that says, "Well, we're going to have to follow the traditional procurement process," and therefore be subject to an integrator and, you know, the mechanisms that have now been constructed for PPPs.

MR ABIDI (IFMI): I understand. So if there is a pipeline that certainly gives equity the opportunity to come early to governments and offer unsolicited proposals.

MR HARRIS: That's right.

MR ABIDI (IFMI): I'm sure that will happen. But if you formalise the process where equity can actually make those proposals and bid for those returns - and I'm happy to talk more about some of the questions you asked earlier about how do we make sure that IRR doesn't change all the time. But if there's a formal process of actually bidding for those projects, then that gives us a very straight sort of formal - - -

MR HARRIS: Yes. I'm not trying to eliminate the idea that there might be a formal call for - under an inverted bid process. I'm just trying to really deal with the linkages between the moving parts of this whole infrastructure financing model. You've got a new proposition called inverted bids and I'm trying to see whether it fits with our mental model or whether it upsets our mental model, in which case maybe we'll need to change our model if we find your bid process very attractive.

MR ABIDI (IFMI): The certainty that a pipeline will provide investors in coming to governments and proposing unsolicited bids - that will certainly occur. But unsolicited bids, there is a lot of uncertainty about having unsolicited bids then taking forward to the next stage where they're actually negotiated and then put to market. So what we are suggesting is that take that uncertainty away by - first, the government needs to decide whether they want equity to own a project. If they decide - if equity is the right partner for building and owning a project, then this is effectively an early partnership or early contractor model. I mean just change the word "contractor" to "equity" and it's the same thing.

MR HARRIS: Yes, okay.

MR LINDWALL: Now, in terms of the IRR bidding, and we've mentioned the previous conversation about settling it in the conceptual stage.

MR ABIDI (IFMI): Yes.

MR LINDWALL: What do you think about the ability to renegotiate that as the tender process proceeds?

MR ABIDI (IFMI): So I guess from the government side the concern is that the first time the parties negotiate - and we've given some examples in our later submission of where this has actually happened in both Victoria and New South Wales with Transurban negotiating with governments on the Tullamarine-Calder interlink and the West - NorthConnex in New South Wales, and Interlink on the M5 West Widening. So in all these examples the parties got together, negotiated an IRR before the incumbent actually contracted with the construction party. Once that was done the IRR was finalised and that's when the project was actually executed, so there were two points.

The actual negotiation of the IRR was only completed when the government had actually benchmarked and got advice on this IRR does it make sense. Between that point and the final point the IRR might have moved because the incumbent obviously went to market to get a construction contract and arrange finance. But at the final point the government still has the right to cancel the project or walk away if the proposal does not meet value for money requirements. The risk, I suppose, from government's side is that between negotiation and final execution is there a risk of scope creep and cost blowouts and what we see from the examples in the market is that has actually not happened. In all these examples where the incumbent has actually negotiated an arrangement with the government it has been validated by the auditor-general in Victoria that have come out and said there is value for money in this arrangement.

DR MUNDY: Those two examples, the M5 widening and the Calder-Tulla, they are a little peculiar in the fact that no-one else can do them. No-one else can get access rights to the road and the road reserve and all of that sort of stuff. They have the other benefit, I guess, of volume risk being pretty easily known to the owners because it was just the congestion that was chocking up on the roads which they already knew all about it. So I can see why those are reasonably straightforward and it's just the question really of the building contract. But what about where there's more greenfield risk? To an extent Transurban knew what the traffic was going to be like because it was just moving more slowly along the road.

One of the challenges that we have thinking through some of these ideas about

the IRR is how do you avoid a situation developing where effectively what you are doing is guaranteeing equity returns. What we're trying to unbundle in some of this is where does the risk remain with equity that needs to be priced and put back on it rather than, "Is it some sort of take-or-pay arrangement? Is it a guarantee just on debt?" I mean, where is the risk sharing? Is it just around construction costs? If it's not and it's in revenue somehow, how does that happen?

MR ABIDI (IFMI): I think equity can take all the risk. There is no suggestion from our side that equity is averse just a greenfield risk and our experience of greenfields is that we have taken risk of construction, start-up, commissioning, performance and ramp up. We have done that in the past, so there is no suggestion that we can't do it. There is obviously a premium that investors require for that start-up period but that is part of the return requirement. Obviously there are different views in the submissions but from our perspective we are not suggesting that the government should guarantee a free return. That would be a free lunch and a guarantee effectively turns that into the cash rate. Why wouldn't we put money in the bank for the same amount?

MR LINDWALL: So your IRR - - -

MR ABIDI (IFMI): We actually want a high IRR and when we invest in greenfield projects we want a higher IRR to take up those risks. So the equity IRR, when we talk about equity IRR and we say, "This greenfield project we're negotiating with the government needs this IRR." We are not asking the government to guarantee IRR. What we are saying is that we will take the risk on that IRR. How that revenue payment that ISA mentioned before comes to us needs to be then worked out in terms of allocation. Now, if it's a road with ramp-up risk, maybe it's a shadow toll through the first period of ramp up so that we're not taking patronage risk but that turns into a tolled payment after two or three years.

If it's some other kind of a PPP, it's a take-or-pay, so it's an availability payment where if the facility is available, then equity gets 80 or 90 per cent of the revenue return and it takes probably 10 or 15 per cent on some variable component which can be patronage or some other.

MR LINDWALL: Thank you for clarifying that.

MR HARRIS: I think that is pretty important. We could go too far down the pathway of imaging that the IRR then becomes a fixed payment. I think it's important to know that there is actually a risk being transferred in order to justify the - - -

MR ABIDI (IFMI): In all the PPPs that we have there are fixed payments but

those fixed payments are only made if and only if a number of key performance requirements are met and if they are not met they are actually abated, those payments are taken away.

DR MUNDY: So the risk is really an operating risk rather than a demand based risk?

MR ABIDI (IFMI): It can be operating, it can be demand. It depends on the - - -

MR HARRIS: You're saying it too is negotiable around the structure of that project?

MR ABIDI (IFMI): Yes.

DR MUNDY: It depends on what it is. Hospitals might not be - demand might not be all that relevant.

MR ABIDI (IFMI): Correct.

MR HARRIS: All right. I see that now. Other things that we were looking for here.

MR LINDWALL: Only briefly, but that question I raised earlier about the fully funded bids that were sorted out (indistinct) that are ex ante and the UK model where it is split apart and the consortia can go ahead and bid for the project but the financing gets sorted out later. Is that something you would think is congruent with this proposal?

MR ABIDI (IFMI): Absolutely. So this is an equity sponsor - it doesn't need to be an equity investor like IFM, it is really someone who has got skin in the game, who have got hurt money or are there for a period of time and what we're suggesting is the government should have holding locks on parties so that they can't just walk away from a transaction once they have made their money, they need to stay in it for some time and actually see it through. So whatever that party is that brings real genuine equity to the table once they've negotiated an agreement in partnership with government an IRR, they should go to the banks and source debt and they will find a greater pool of banks there because they are not all tied up with different bidding groups.

DR MUNDY: You would see it's equity's job to sort out the debt.

MR ABIDI (IFMI): We always sort out the debt.

MR HARRIS: But my question earlier then about a range for debt or a fixed amount of debt, so right at the start when the IRR is noted, as presumably the decision-maker in the contest between which equity partner or as an unsolicited bid proposal and negotiation, it then turns out to be settled around an IRR number, would you want to fix at that point the level of interest that equity would hold in the project or would you not want to do that?

MR ABIDI (IFMI): I think it will be very difficult to fix and when we talk about IRR and the IRR is a cost of capital, so it is debt and equity.

MR HARRIS: But we're talking proportions. I want to know do you want to fix the proportions or are you happy to have them flexed? We're talking about a WACC effectively.

MR ABIDI (IFMI): Yes, we are talking about - - -

MR HARRIS: We are talking about an ROA which presumably then you would - and that gearing ratio might change over time.

MR ABIDI (IFMI): Yes. But while the gearing ratio changes over time the IRR at - - -

MR HARRIS: The point in time when you make the decision.

MR ABIDI (IFMI): - - - the point in time is still what it is. So it's at the point when the equity sponsor is negotiating with the government and has not actually tendered for construction and has not got final commitment letters from the banks it is very difficult for them to say, "This will be our cost of bank debt and this will be our leverage," because until obviously banks have gone to their credit committees and come back with the final letters, providing that commitment is not possible.

DR MUNDY: Governments are not going to want these things too highly geared, they are going to want a reasonable amount of skin in the game.

MR ABIDI (IFMI): That's right.

DR MUNDY: So if governments set a floor or a collar on debt that equity could work within, that wouldn't blow the model out of the water.

MR ABIDI (IFMI): If the government wants to put floors and collars on debt, then that's - - -

MR HARRIS: I was thinking of it as - - -

MR ABIDI (IFMI): I'm not sure why you would do it because if you limit debt you're actually increasing - - -

MR HARRIS: I was thinking of it from a different perspective. I was thinking of it like this: if we effectively settle the price that equity gets right at the start and we don't say that that is only 20 per cent of the project because equity always is more expensive than debt. We don't want to turn out to find, "Shock, horror," when we got down the track, "actually you meant 50 or 60 per cent of the project is equity and we're paying the price on that." You would have to set a number at the start, a conceptual range at least, would you not?

MR ABIDI (IFMI): That is the intention. When equity bids an equity IRR - say, a \$100 million project, 12 per cent IRR, that 12 per cent number actually gives you - - -

MR HARRIS: Gives you the outcome.

MR ABIDI (IFMI): In that number there is an allocation for debt, an allocation for equity. That 12 per cent is probably based on 30 per cent equity, 70 per cent debt and a cost of debt that's internalised within that IRR.

DR MUNDY: So the IRR that's being bid is not the IRR to equity, it's the IRR to the project.

MR ABIDI (IFMI): It's absolutely the IRR of the project. Equity investors have their own hurdles internally and their objective is to bid IRRs which exceed their hurdles. So if a project IRR does not meet their own hurdle they wouldn't bid. So they will always talk about project IRRs, they would not talk about their own equity IRRs.

MR LINDWALL: That leads me to one quick question, that when you go and try and arrange the debt for matching your equity allocation, why not issue long-term bonds perhaps with a guarantee upon them or something like that or would you consider doing that?

MR ABIDI (IFMI): It really depends on what's the best debt package for the transaction. If the bond market is a better option for financing, then equity will go to bond market. I mean, we have looked at projects where we have looked at both bank debt and bond debt and it depends on what we can achieve more quickly, what has got a lower cost of debt and which is more - - -

MR LINDWALL: But you would certainly not be focused on just getting a

short-duration, low cost debt and then having a refinancing risk manifested in a few years which would be hitting your equity anyway.

MR ABIDI (IFMI): We have to finance anyway. So up-front if we bidding on a greenfield asset or even a brownfield asset the terms of debt are usually quite short and they want to get out quickly.

MR LINDWALL: Yes, they do.

MR ABIDI (IFMI): Construction debt is usually refinance. So the refinancing risk would sit with equity.

DR MUNDY: As it does, yes.

MR ABIDI (IFMI): As it does. But our objective would be to stagger the refinancing of various tranches of debt so that we don't have to refinance the whole debt at the same time. Those sorts of things - I would suggest equity is best placed to do than some investment bank or some other sponsor acting on behalf of equity.

MR HARRIS: We are out of time. Once again thanks very much for IFM's presentation today and also for the effort you put into submitting to the inquiry and we may have further things to ask you about before we finish. Thanks for your time.

MR ABIDI (IFMI): Thank you very much.

MR HARRIS: I think we have the Electrical Trades Union of Victoria as next up. Could you identify yourself please for the record today.

MS KERSHAW (ETUV): I'm Ruth Kershaw presenting for the Electrical Trades Union. Ivan Balta, the lead organiser, is an apology.

MR HARRIS: That's fair enough. Ruth, we have your submission. Thank you very much for that. Do you want to make some opening remarks at all or do you want to just leap straight into questions?

MS KERSHAW (ETUV): No, I wouldn't mind making some opening remarks. One of the key concerns that the ETU has about the draft report is that there appears to be a conflict between the analysis and evidence contained in it and some of the recommendations and in particular we note that the findings in the reports are that labour productivity and construction has been positive, especially in recent years and that labour shares of income in construction has decreased in recent years and industrial disputation is its lowest level in history and notwithstanding that you proceed to recommend re-establishment of a more coercive ABBC, an extremely interventionist building code and an increase in penalties.

Now, notwithstanding the fact that the report cautions that there will be any productivity or cost savings, you continue to investigate these particular areas, even though it would appear to fall outside the terms of reference once you've established that there should be no expectation of achieving any particular costs savings or productivity gains through the interventions that you go on to recommend. We are particularly concerned that having not investigated or done any analysis on your recommendations in particular in relation to the building code that you've actually appeared to be making recommendations that even the man on the street could see will lead to increased impost to builders, increased taxpayer funded interventions, increased risks to builders and funders, restrictions on the market of providers for major projects and that we cannot understand how you can come to those recommendations without at least acknowledging the productivity and cost inhibitors of your recommendations and seeking to understand if this something that you will be doing in the next report. I have to say that is probably the substance of it.

Naturally we are also concerned with the failure to look - there is obviously a gulf in understanding in some of the analysis, in particular in relation to industrial disputation and the role of the ABCC. Just as a point of clarification for your next edit, you should understand that the increase in industrial disputation before the ABCC actually related to the fact that a number or a large majority of unions were seeking to get their agreements made before the Work Choices prohibitive content and that as a consequence that also reflects an increase in their labour share

following that. That's just a technical point.

We have concerns that notwithstanding - like I said, you've said that you don't anticipate there would be particular cost savings or productivity as an outcome, you are recommending, in particular the proposal to increase penalties to construction unions and workers. I mean, the ETU has taken this issue and the contravention contained in some of what was Work Choices and retained in Fair Work, particularly in relation to this: that it is fact a violation of human rights and international standards on people's freedom of association and freedom to strike. Now, I know there are limitations within that but we would seek the commission's consideration in at least acknowledging where your recommendations are impinging on international human rights.

We say this in particular in relation to your terms of references because as you will be aware, a number of the investors and funders of major projects, particularly internationally, are pension funds and we believe that you're in fact further limiting and putting at risk available capital through some of the conditions with higher penalties - the ABCC and the Building Code which will contravene the responsible investment, environmental, social and governance criteria that they are required to meet before they invest.

Similarly in that vein, concerns that the extent to which you think that there might be potential productivity increases as a result of this will, as the ETU members understand it, potentially come at the risk of continued increase in injuries. We have a real concern that you can look at the concept of labour productivity in construction without understanding limitation in that these are actual human beings and human lives and that there is already an exceedingly high level of fatalities within the sector and that - I mean, the ETU wants to understand when and how do they input on making sure that those factors are considered in your final recommendations. I think they are most of the meaty ones.

MR HARRIS: Can I just start out by way of response. I don't think we have tried in this report to suggest that we see significant scope for productivity enhancement by the sorts of issues that you have addressed, particularly increase in penalties and related changes potentially to the legal position. What we were dealing with there was cost impacts in particular locations and I think we were at pains in the report to describe this wasn't necessarily a national impact it was actually locational by nature and based around, in particular, the costs that are imposed by certain actions on certain businesses where the penalties seem to be out of whack with costs. So it was as simple as that. I think in fact we went to great pains to try and disaggregate and address some analyses that have been put to us around productivity improvements that were alleged to have occurred as a result of particular shifts in the legal position and I think we were reasonably clear that we couldn't find the evidence matched

what was put to us by way of evidence - different submitters had different views but we did come to that basic position.

MS KERSHAW (ETUV): Yes.

MR HARRIS: But the problem was one relating to the fact that the costs of certain activities were out of complete whack with the penalties that might persuade people from taking such action. That's what it came down to. So the terms of reference given to us are around funding and financing on the one hand and costs of infrastructure on the other hand. Under costs of infrastructure we were looking - - -

MS KERSHAW (ETUV): Yes, and productivity.

MR HARRIS: Yes, that's true, productivity being the overarching, if you like, rationale or raison d'etre for us even looking at anything particular issue but under the nature of the terms of reference the government asked us to look at funding and financing and asked us to look at costs, we disaggregated all of the cost elements in infrastructure, one of them was labour. In the labour area we looked at industrial relations and the consequences of certain actions and some areas - and they were locationally obvious - there was clearly an inadequacy in our view around the nature of penalties. That said, we're quite happy to take advice from people on whether that is accurate based around factual submission to us and/or whether there are better ways of dealing with the same the proposition. It is a draft report and that's what it's here for.

MS KERSHAW (ETUV): Thank you, and we appreciate that. I can't say that I have fully understood how that relates to the recommendations that you've made and perhaps if you could - - -

MR HARRIS: Costs.

MS KERSHAW (ETUV): - - - extrapolate that.

MR HARRIS: Just costs.

MS KERSHAW (ETUV): But increasing the cost and risk and risk of cost, how does that - I mean, I can understand if you're talking about a disincentive for certain things but if they have no impact on cost or productivity.

MR HARRIS: They do have impacts on costs. They have limited discernible on productivity, productivity being a much larger and aggregated - - -

MS KERSHAW (ETUV): So increasing the cost for companies to comply with

regulations that we have not identified as having a problem. How is that a fix?

MR HARRIS: No, we have identified a problem. A problem relates to cost not to productivity.

MS KERSHAW (ETUV): This is a real concern and perhaps you can seek further information in the future and it's unfortunate my colleague couldn't be here - as I say, some of the analysis is (indistinct) and you've taken three or four - or as you say, three strands or examples, but what's missing is that any analysis of the number of projects that have been completed under the current industrial relations system, which we still think is too interventionist, and the number of union projects that have come in on time and on budget compared to non-union projects, so it seems perhaps it's the lack of analysis of the actual cost and productivity evidence to support that recommending more expensive and more means of intervening in the sector is going to produce the outcome that the terms of reference is seeking.

MR HARRIS: I think we're trying to change the incentives for behaviours that have been identified as causing significant cost or suffering minimal penalty. In a simple way that's what we're trying to do.

MS KERSHAW (ETUV): I respect the Productivity Commission acknowledges the limitation in the availability of such evidence. We are concerned that you would still proceed to those recommendations without actually looking at the evidence which is outside the three examples that you've given is quite profound in the industry. Obviously part of the reason that we raise that is because the government is already discussing the building code and excluding builders who have non-confrontational relationships with their workforce and with the unions - - -

MR HARRIS: But we wouldn't be recommending - - -

MS KERSHAW (ETUV): - - - is impeding all of the builders and investors who are saying to us, "We don't want to enforce this. We don't believe it's better for our productivity. We are concerned about investing in future projects if they're going to proceed to this further quasi judicial intervention into what we're doing. But we can't say so publicly and we can't so or won't say to the Productivity Commission because that will put us at risk of taxpayer-funded projects." That's reality.

DR MUNDY: It puts us in a difficult position.

MS KERSHAW (ETUV): It does but it's a reality that we - - -

DR MUNDY: We can take information confidentially. We don't have to publish it. Our act provides for that and we were entitled to rely upon that if we think the

confidentiality claim is genuine. Nobody has come to us wishing to make such a claim - no-one.

MS KERSHAW (ETUV): Yes, for the reasons that I've just explained and I respect the fact that you have put in your submission that most stakeholders did not raise industrial relations as an issue of major cost pressures.

DR MUNDY: Yes.

MS KERSHAW (ETUV): If we can't talk about the political realities, then it is a huge omission and gulf that is potentially going to lead us down to a path of further exacerbating the concerns of - - -

DR MUNDY: We can only deal with the evidence as put to us and we can seek evidence elsewhere on the public record, we can ask people questions, we can go and visit them. But it's very difficult for us to deal with the circumstances that you describe and I have no doubt that there are people that are in the position that you describe. No doubt at all. But the fact remains that we must deal with the facts as we find them and what we have said is that we can't discern - and we're not saying the same thing as others in this regard. We are saying that we cannot discern in productivity trends any of the things which you've identified and that's exactly what we've said.

But what we can do and what we have evidence of are circumstances where individual actions have caused particular harm to individual businesses and that the harm, on any reasonable inspection, seems to be greater than the penalties that flow, you know, a \$1000 perhaps. That is what we're saying and what we're saying is that that probably doesn't seem right and it certainly obstructs the productivity at a micro-level on those sites. That is what we're saying.

MS KERSHAW (ETUV): Yes. It's a concern, like I stated, that you haven't given equal weight of analysis of the cost of the proposal to address that small identified issue.

MR HARRIS: So the code rather than the penalties. We started with penalties; we'll get onto the code in a second. But the particular thing I was trying to make clear in response to your opening statement was the reason we are concentrating on penalties, which wouldn't normally be a place the Productivity Commission would really spend a lot of time, but it's because the government asked us to deal with costs. In analysing costs we have found examples where significant costs have been imposed where there is minimal penalty in response; in which case we're saying penalties need to be reviewed. That would be a simple and logical thing to say in response to that.

Having dealt with that, we then go to the bigger question of the relationship between firms and unions, and then we have looked at this question of the code. We're very interested in knowing - and we believe there's no reason why anybody shouldn't give us good information on whether the code itself may impose higher costs. So while we have, in a draft report, recommended that the code be extended across Australia, if businesses can come to us and say, or unions can come to us and say, "Look, this is the kind of cost that is imposed upon us as a result of this code and we think it's out of all whack with the benefit we'll ever get," then we will take that evidence and we'll come to a different conclusion.

But what we're trying to say is we need somebody to go on the record somewhere to say that, otherwise we're left with a set of circumstances which say, "There have been examples of problems in this area and something should happen but no-one's prepared to tell us that the things that should happen are other than those things that have been put in front of us," or "We have a number of submissions asking for the code to be extended, including from the Victorian Government," as an example - - -

MS KERSHAW (ETUV): So you have no obligation as the Productivity Commission, and this is a genuine question, under a commissioned report to make any comment on the cost or productivity impact of your recommendation?

MR HARRIS: Yes, as I've said to you, this is primarily driven by cost. We've already examined productivity and at the aggregate level we find these things are not discernible in the productivity statistics. So we have abandoned anybody's claim that productivity is going to be altered on some kind of aggregate basis by this. Then we go to cost.

MS KERSHAW (ETUV): But the fact that you haven't even looked at the cost of what you're recommending doing - I mean, it is a bit mind-numbing that the Productivity Commission is dispensing with all its typical analysis about the costs of red tape and intervention, and in this case you're making these recommendations without any reference to them at all.

MR HARRIS: Well, what are the costs of the code?

MR MUNDY: What are the costs of the code? Tell us this then.

MR HARRIS: That's what we want. We want someone to tell us there are costs because right now, as far as we can see, the claim has been in your submission and in no other place that says, "You realise the costs that are going to be imposed on us for complying with this code."

MR MUNDY: So tell us where the rabbit burrow is and we'll send the ferrets out.

MR HARRIS: And we'll go. But we can't make it up ourselves either.

MS KERSHAW (ETUV): But you don't even know the contents of a code yourself. You're saying it should mimic some aspects of the Victorian code. I mean, yes, we have real concerns that it's - - -

MR HARRIS: Give me an example of the Victorian code and a cost it will impose upon someone - one that you think is unreasonable in the circumstances.

MS KERSHAW (ETUV): I've got a whole list of them somewhere. In particular, the cost that we believe, and we understand that organisations are concerned about, is the cost of requiring legalistic or legalese action; the cost of moving away from mediation; the cost of being able to resolve the issue there and then on the spot. The code recommends, or mandates, that any stoppage, even an OHS stoppage, needs to be reported to a government body in the middle of Treasury. They will send out inspectors. I mean, I don't know how you could not even consider the cost to the public as a result of having an AVCC, having a federal code, having a state code, having the number of inspectors that they're talking about now.

So anything that has to do with resolving disputes quickly and returning to productive relations in the workforce is going to be delayed. Any company has to increase its own compliance.

MR HARRIS: That's a good example. Can we stick with that one. So if the proposition that you'd like to put forward is the code should be varied so that there isn't any requirement to - I mean, reportage is one thing but reportage is not actually a very expensive cost, I would have thought, but sending out - - -

MS KERSHAW (ETUV): No, but this is the delay to the project.

MR HARRIS: Delay to resolving the dispute.

MS KERSHAW (ETUV): I understand you're not builders and you're not from the building sector but it is absolutely fundamental to the productivity of building your project, being able to - - -

MR LINDWALL: No companies have said to us that the code has caused any delays.

MS KERSHAW (ETUV): Yes, and I've prefaced that with anybody who wants to

receive taxpayer-funded projects is not going to make public statements about - - -

MR HARRIS: But you can.

MR LINDWALL: Yes, but they frequently make statements about government policies causing delays, and they're not afraid to make comments about any number of other things that might - - -

MS KERSHAW (ETUV): Do you have another example of how the government can - or where they have threatened not to provide government-funded projects on the basis of their relations with their workforce?

MR LINDWALL: Threatened - who has threatened not providing government-related work? I'm not sure I understand that.

MS KERSHAW (ETUV): Is it the terminology you don't understand or the concept?

MR LINDWALL: Are you saying that the government has threatened companies that if they complain to the Productivity Commission about the code they won't receive any business?

MS KERSHAW (ETUV): Yes.

MR LINDWALL: I haven't seen any evidence for that.

MR HARRIS: We'd certainly be interested in it.

MS KERSHAW (ETUV): This is getting a bit circular, isn't it. I mean, I know it's not your business - the amenability to corruption, or institutionalised corruption, as a consequence of having such a policy - but I would have thought it would have been within your ambit, particularly when you're talking about barriers to entry and impeding investors, that you would at least look at how excluding companies on the basis of how they conduct their workplace relations to achieve their own productivity outcomes is within the interest.

MR HARRIS: No, look, there's little doubt that if a company proceeded down a path that offended the code and was excluded from a tender, that there would be a cost imposed on competitiveness. Whether that cost translated actually into dollars or not is arguable; it depends on the nature of the tender. Clearly, if there are only ever two firms bidding for something and one of them has been excluded you've only got one firm. There's obviously going to be a cost imposed, right, but I'm trying to move from that - - -

MS KERSHAW (ETUV): Yes, from an economic perspective that should at least be recognised when you're making that sort of recommendation.

MR LINDWALL: But why add there to stop the collusion between a company and a workforce at the expense of the taxpayer itself?

MS KERSHAW (ETUV): Look, I understand that. But in either case when you go into discussion you're damned if you do, you're damned if you don't. So you're saying pattern agreements is bad, there's a level of, let's say, collusion in that; but on the other hand you pick out individual variations in agreements and say that they're inexplicable. They're only inexplicable because you haven't spoken to anyone about how they operate or about what's been traded off or what's been - - -

MR HARRIS: In our - - -

MS KERSHAW (ETUV): There's insufficient analysis at the firm level to justify some of those conclusions. Sorry.

MR HARRIS: No, sorry, I didn't want to interrupt you. I was going to address that "inexplicable". When we got to the point of looking at the EBAs and found what were very large differences - so there are plenty of differences but it's the size of the difference for exactly the same allowance. It's very, very large. So in some circumstances you would say that's probably to do with the amount of market leverage that somebody has in a particular case.

MS KERSHAW (ETUV): Only if you don't look at the product that's actually delivered. The absurdity of - I mean, if it was the cost of something else you wouldn't be looking at the quality of the product or how it has contributed to your return on investment; you just would not ignore that. But you have in this case. You haven't gone, "Okay. Well" - you've taken one indicator of higher hourly rates - I think it was at the desalination plant. Now, you cannot look at that and make comparisons without including the whole agreements and how that contributed to outcome.

So, for example, the company wanted four days on, four days off. They needed a large workforce. They wanted to be able to retain that large workforce, ramp them up and ramp them down again. I don't think the ETU thought - and have been advising from the beginning that that didn't appear to be the most productive way of doing it and eventually they changed their rostering. But you can't look at just the pay rate and not look at whether or not they're getting weather penalties, whether or not they're getting - you know, it's the - I'm getting a bit worked up. How do I say this? I'm a microeconomist. Unions engage me to assist them in the

productivity gains within bargaining. Now, you can't come to the sort of conclusions that you've come to unless you look at the agreements in its entirety and how it operates.

MR HARRIS: That's right. I would not disagree with that. We did actually look at the entirety of a set of EBAs and we compared the same stated allowance and found vast variations, within the context of the whole EBA.

MS KERSHAW (ETUV): But - - -

MR HARRIS: Within the context of the whole EBA.

MS KERSHAW (ETUV): - - - you cannot have done it. The exercise is not possible, and I know this myself, because unless you have, for example, an average weekly roster - I mean, you can't say, "Well, this is excessive." You don't know which allowances they're actually getting, you don't know what allowances they've previously traded off or what the workplace relations require them to pay. So they might be extremely generous LAFH allowances, but if nobody is living away from home it's irrelevant.

MR HARRIS: It may - - -

MS KERSHAW (ETUV): I'm just saying the practice in the industry is to look at the common average example of a individual or group of workers and how that cost is derived given the contributing productivity factors - like what else has been traded off, the amount of effort, etcetera.

MR HARRIS: We would look at this not across the common industry average but at a set of projects relating to infrastructure because we're the infrastructure inquiry. We would say, seeing these examples of much higher allowances for infrastructure projects versus what might be considered to be a non-infrastructure project, why would it be so different - and we have a good reason for coming to the conclusion this could be a very expensive and otherwise inexplicable allowance because we're concerned ultimately that the taxpayer must pay for that.

MS KERSHAW (ETUV): But can I ask the Productivity Commission before it publishes its findings that it seeks an explanation to what you're claiming is inexplicable?

MR HARRIS: Across 34 EBAs?

MS KERSHAW (ETUV): I apologise that my colleague - - -

MR HARRIS: We'd be happy to do it.

MS KERSHAW (ETUV): It is people's core business, and I apologise - as I say, my colleague isn't here.

MR HARRIS: We would be happy to do it.

MS KERSHAW (ETUV): You could have the specific debate about the difference between the four days on, four days off in a remote location and what you attribute as being excessive.

MR HARRIS: The desal project does attract a lot of eyes, but we were wider than that in the conclusions we had about inexplicable differences within EBAs. My recollection, subject to someone else contradicting me, is I think there were 34 EBAs examined. So we're really basically trying to say why would these big differentials occur in infrastructure projects where it doesn't seem to be a case - you're right, we could ask you, and we're happy to have a discussion with the ETU around those that are relevant to the ETU.

MS KERSHAW (ETUV): I mean, there are teams of people that are involved in agreement making. The other concern is, if that's your position you'd taken an equal position about your concern about pattern agreements - and this is notwithstanding the fact that it hasn't proven to be any particular problem in cost or productivity in major projects. If we go back to your point that, yes, there have been problems in government-tendered major infrastructure projects - - -

MR HARRIS: In particular locations.

MS KERSHAW (ETUV): Yes, but the materiality of the minutiae that you're talking about in hourly pay rates in EBAs has nothing to do with the - - -

MR HARRIS: No, but that was - we're mixing two things here, remember. So we've moved from penalties for inappropriate behaviour to the code and the impact and then we've moved on to EBAs, okay. So each of the three things are quite different. The penalties are in relation to particular examples of behaviour where, as I said, we find large costs in certain behaviours and minimal penalties. So that's one particular scenario.

MS KERSHAW (ETUV): Yes, and my request to you was just simply in relation to the other is where you claim that differentials are inexplicable that you actually seek an explanation before you reach that conclusion. That's all I'm requesting.

MR MUNDY: Is the ETU in a position where it is a party to these EBAs? The

ETU doesn't have a huge coverage in the area that we're interested in - I mean, minimal interest in roads and laying rail track and things like that; perhaps signalling is a different story - but to the extent that the ETU either nationally or within Victoria - and I absolutely accept what you say about, "You don't know what's being bargained or what the counterfactual was." Now, the public records don't contain the counterfactual and the context of the nature of the industrial bargaining frame or its circumstances, it only contains the outcome. If the ETU is in a position to put to us from its experience either in Victoria or nationally - and not all of them, but a few of them - that would be profoundly helpful to us.

MS KERSHAW (ETUV): Yes. I appreciate that you've said that they can give you information confidentially, and I will go back to the ETU and ask what specific examples we can give you. I mean, I was surprised that you didn't then yourself even look at the Cordells and go, "Well, what are the major projects? How did the agreements relate to systemic outcomes of the major projects?" or anything like that. But certainly I appreciate your offer and I'll go back to the ETU and see what we can - - -

MR MUNDY: As you'd understand, it is very difficult to understand the context of industrial bargaining outcomes from the outcome, simply from the outcome itself, but that's all that's publicly available.

MS KERSHAW (ETUV): Yes.

MR MUNDY: In our defence, we've had a very limited of time to do something that is incredibly broad ranging and I have, I think, fairly - some people would perhaps say too fairly - dealt with some of the evidence that has been put to us.

MS KERSHAW (ETUV): Look, yes, some of the analysis is really good. It's just how you then come to the conclusions and your recommendations.

MR MUNDY: The point is this is a draft report and we have dealt with the information as best we have it in the time frame that we have. Now, if there is an opportunity to gather more information, even if we have to deal with it confidentially - and I do appreciate what you're saying about people's reluctance to reveal their dealings with unions and with governments. Whether they should have that reluctance or not is a different question, but they have and I accept that's real. So the extent that we can gather more information and look at that, we're more than happy to.

MS KERSHAW (ETUV): Yes, I'd appreciate that because I think there's a lot in the report that's misunderstood in terms of how the union operates and how union consultation actually advances productivity - and a lot of it is in the point that I'm

making, is that it reduces disputation and the length of those things. Another example - and this was a concern with the code, so for when you say its potential applicability to the NBN - well, again I'd be surprised if you weren't aware of a major contributing factor to the cost of the NBN being shonky contractors and exposure of them and the public to asbestos. We'd say these are the types of issues where you do have union consultation - - -

MR HARRIS: But you wouldn't breach the code if you had a genuine OH and S issue, the Victorian code or the federal - because there was a federal code even in operation at that time.

MS KERSHAW (ETUV): Yes. But again, it depends on the measure of it; it's not always cut and dried in the way it's dealt with. Again, I don't know how much experience you've had with WorkCover or WorkSafe or the WorkSafe inspectors.

MR HARRIS: I've been sued multiple times in other jobs so - by WorkCover.

MS KERSHAW (ETUV): It is largely procedural, so to be able to say we were in the process of putting up those guards or in the process of installing lights or in the - so there is a grey area there and I think a lot of builders and unions would prefer to err on the side of resolving it themselves than reaching that position.

MR HARRIS: But to be very clear then, if there are areas of the Victorian code that you would like to tell us you believe create very significant costs for no gain or limited gain - very interested in knowing that. In terms of the broader question of cost-related issues in the infrastructure area we put our draft recommendations out because they are a public document now. If we don't put something in a draft recommendation you won't see it because the final isn't published until the government publishes it, generally with its response.

So it is worth noting that the Productivity Commission tends to try and put things in draft reports even if it isn't complete in its consideration - and you've made some comments in relation to that - because we only have two choices: put it out in the public arena or don't, because the final doesn't go out in the public arena until, roughly speaking, the government has finished with it. So you will see things written in our reports where we chance our arm. In relation to, as I said, penalties and codes, in both cases we think what we have is what we have, some evidence, but we're more than happy to take alternative views. They've just got to be based around more than assertion or hope or wish because we have to balance them against other information that will be coming to us as well.

We are saying to everybody, for example - because in this area in particular being on the record is quite hard for just about everybody so we have said to people,

multiple people, tell us off the record if you must. We'll try and rely on that. A lot of it will depend on the credibility of the information. So we're still open to receiving information on this and particularly, as I mentioned, in relation to the code if you think there are areas, then we'd like to see some further advice on that, and on EBAs to the extent that the EBAs involve the ETU we'd be quite happy to talk to you about them.

MS KERSHAW (ETUV): All right, thank you, and I appreciate that.

MR LINDWALL: Could I ask a question before you go though. The federal safety commissioner, how effective do you find that regime from the perspective of the ETU and does it provide benefits in terms of safety, since you just mentioned fatalities earlier, above the AS4801 requirements which are generally applied outside of the construction industry?

MS KERSHAW (ETUV): I can't answer that but I will take it on notice and get back to you.

MR LINDWALL: Okay.

MR HARRIS: Yes, we are interested in the federal safety commissioner and whether he's adding value or not.

MS KERSHAW (ETUV): Yes, on that note - and again, if you do get the opportunity to do some of the analysis you may be aware that the rate of increase of, say, WorkCover premiums, but more particularly harmful in the industry is the rate of increase in the premiums for disability and income protection insurance. I mean, it is really out of control. Thank you.

MR HARRIS: Okay, thank you very much.

MR HARRIS: Can you identify yourself please, for the recording.

MS KUIPER (BTIC): My name is Ilsa Kuiper of BTI Consulting. I'm an independent procurement consultant.

MR HARRIS: Do you have opening remarks you would like to make?

MS KUIPER (BTIC): Yes. I'd like to thank the commission for inviting me to come and appear today. But I'd also like to thank industry members who have helped me along the journey of understanding what building information modelling is and to all those people who have shared their experiences primarily my interest in them has been in respect of contracts and in looking at that endeavour have come to the conclusion that it's a bit bigger than just contracts. It has potentially a more fuller effect, depending on how people approach it. But it might represent an opportunity to improve the way the construction industry in particular and maybe more broadly in relation to the built environment industry how they approach built environment information and whether this is to encompass life cycle type of applications, achieve the idea of interruptibility which I understand has been the subject of some government policy, particularly in relation to other areas. It's about determining what people might need for their particular purposes.

BIM is, in every sense of the word, an emerging issue for the built environment industry. Critically I believe it's one size will not fit all and that it requires a process of inquiry and embrace the commission's objective about finding out what this represents, particularly in terms of cost savings but really for governments it might be an area that is focused on through the various departments, particularly as government's role as an owner where they might see value. Whilst that needs to be assessed as part of the procurement process, it starts to encompass those ideas of life cycle applications of getting a product at the end of the day that gives you information, not necessarily about the actual asset but starts to feed into the procurement process, whether it be in terms of dimensions, information about equipment and whether it goes a step further and drawing on some examples overseas, whether the federal government has a particular role by other means by using energy performance or the use of technology as another means to push productivity just more generally in the built environment industry.

Another challenge I suppose again is going to be derived from looking at built environment information is whether and how the community can use this information for other applications, whether it be education based or whether it be for safety or an emergency management, the list goes on. But they're just some preliminary comments.

MR HARRIS: In terms of BIM which came up in multiple submissions to us and therefore is a very popular concept in the industry, why is it the number of people nevertheless who obviously knew enough about it to put it in a submission seemed to think that it was something where we could perhaps promote its wider availability by - they weren't clear but our assumption was including it in preferred practices or something like that in government contracting. Is it really a translatable model in that form? Is BIM a thing or is BIM a concept? Because my impression from the descriptors given to us is it's much more of a concept.

MS KUIPER (BTIC): I think it goes to both. If you talk about BIM the technology and Dominik Holzer, the next speaker, might be able to talk more about the specifics of the technology. It is a forum, as I understand, that enables the creation of a three-dimensional model but also has data that sits behind that and whether that is attached in terms of costs or time you might get other aspects. So, for example, you might get a door, you not only get the dimensions but you might get who installed it, when it was installed, what's the fire rating. So it starts to open up this idea of - again, the concept of BIM, this idea of this forum that allows you to access this information, where there are challenges over in international jurisdictions, particularly in the US and the UK and Europe, you see, I suppose, the fringes of technology, so that idea of trying to achieve interoperability using the information that might come from, say, a BIM-authoring tool and capturing that in a way that can be used for other applications or linked to other applications.

There have been examples from America, let's say the Department of Defence Military Health Service, where they are reshuffling their entire sets of databases, not necessarily confined to the built environment, but how they operate the asset and integrated 120 databases of information is a five-year program and BIM is just one element of that. I think they have embraced it more in a digital data context and that's where you see some of the specifications but also some of the standards that are emerging, particularly in the UK and over in America, this idea that we appear to not have embraced the idea of finding those opportunities that can enable that translation, particularly between phases and even within, say, construction project phases. A study by one of the American science and technology agencies identified there are some significant costs associated with delivering projects with a piece of paper and then rekeying that information for a facilities management/asset management type of applications

Whilst that might be of assistance in terms of government departments or who actually own and manage their assets and even for super and fund providers there might be some opportunities for consideration. At a federal level I suspect that the need or the requirement for that information might be slightly different. I'm not going to propose that I know what it requires in terms of its endeavours in that kind of context but seeing some of the drives and commentary coming from the UK about

how instrumental the government has been in the UK where they've mandated BIM for its government construction projects by 2016 and the flow-on effect that's occurred has been observed as being critical to the uptake of BIM but also to enhance the development of understanding what they don't know and what they do know.

MR HARRIS: This is the thing that has intrigued us, if it is such an attractive tool, why is government involved in having to mandate its take up?

MS KUIPER (BTIC): The mandates in the UK and, say, for example, in Singapore where they have mandated, as far as I understand - based on government structures are centralised. So they have direct interests - - -

MR HARRIS: Of their participants in managing the databases, are they? They actually extract the information rather than - so this is not just an efficiency tool within an infrastructure project, it's actually, "We want to share in this information for our next project and our one after that."

MS KUIPER (BTIC): Possibly.

MR HARRIS: So rather than bidders for projects holding onto this information, both for their subcontractors, but also for their next bid, this is about the government holding onto this information as well and being able to create benchmarks, if nothing else.

MS KUIPER (BTIC): Exactly, but information that might feed into the next procurement process. It might get away from the scenarios where I understand in industry stations have had to be redrawn because the data has been lost or it's unreliable and you get scenarios of where industry models in 3D, not BIM but in 3D but 2D documents are asked for. Are we missing out on the opportunity of having that structured information? Personally I don't know. As I say, this has been an interest and I suppose I do have a technology background. I'm a qualified engineer but I'm also a qualified lawyer and so I see the mash. I don't propose to know all the answers but I think the endeavours that have been done to date by industry, so agencies like buildingSMART and the national BIM initiative report, are a good starting ground in terms of developing a strategy, getting a group or an organisation to start punching out what needs to be addressed in this regard. Even if it means demonstrating further proof, it's about utilising our information that we have.

DR MUNDY: Just by way of background, so you might understand where I'm coming from, in my former life I was an airport planning director and on more than one occasion have I pored over handwritten drawings of the old Commonwealth Department of Works for something that's at the end of the freeway, so I'm quite interested in this area. I think you're right, I think it has - it seems to me what you're

talking about is really the next stage in an evolution from which, in the first instance, people started in contractual terms looking for CAD diagrams and for footprints of areas, particularly if buildings were commonly shared - I mean, land footprints. But also for compliance issues.

MS KUIPER (BTIC): Yes.

DR MUNDY: The challenge I find in this whole discussion is that this information will only be as good as whatever is put behind.

MS KUIPER (BTIC): Exactly, yes.

DR MUNDY: Certainly I had an experience once where but for a bloke who used to draw handwritten diagrams for the Department of Public Works we would have put a taxi way in the wrong place on the basis of highly creditable consultants using bad data. That ended up us having to go and survey the whole of Melbourne Airport. So I am very sympathetic but I guess I and still - I think Peter. I can see the methodology, I can see why it's attractive for legal reasons, I have seen very interesting over time 3D visualisations of airport terminals that look at how passenger flow work and all that sort of stuff. There was a part of me that said, "This is nothing new. I have seen this stuff 15 years ago."

MS KUIPER (BTIC): Yes.

DR MUNDY: I guess the thing I'm still grappling with - okay, I get the concept of building information systems and I get the concept of - I used to have plans about every square foot of concrete and when it was built. We had all that stuff, we knew - - -

MS KUIPER (BTIC): Yes.

DR MUNDY: - - - but from a policy perspective - certainly government can influence - it's the old (indistinct) government being a lead consumer argument, I guess.

MS KUIPER (BTIC): Yes.

DR MUNDY: I can see why it makes savings for governments but I'm still really trying to grapple with - of course you would do this anyway because people have been doing it for a long time and where the standardisation - and I see attraction from being able to pass documents to regulators and all that sort of stuff. But I'm still grappling with what can we do other than say, "Well, it's good idea," but if it wasn't a good idea people would be doing it. What's the policy impetus that we can give?

MS KUIPER (BTIC): I think it is that idea that recommending the fact that work has been done to date, a lot of work has been done to date. Now, whether that is translatable into a mandate, as I say, I'm not sure. It might be the uptake for consideration. You're right, it already is being done. There has been an interdepartmental group that has been looking at this, APCC, ACIF are trying to get a framework or strategy together in respect of that. The other forum, like you alluded to, is the idea of the federal agencies and whether there is some idea of support for agencies like the Department of Defence who were looking this quite significantly and whether they would be the forum or the testing ground, pilot projects whatever, to see and demonstrate to the government if it needs that justification to go down that particular path. In terms of just blinding saying, "Yes, you've got to do it," I don't want to go there.

MR HARRIS: I guess one of my problems is I'm still not sure what "it" is. I think you have elaborated, it's the concept really.

MS KUIPER (BTIC): Yes.

MR HARRIS: This is the concept of using a particular formulation, technology advancement to record for multiple parties to continuously access how you designed and then implemented a particular project which is replicable in the future. It may also be the source of plans and other things. But this is really about the variations that you could apply to this thing in the future.

MR LINDWALL: I take it that it's a four-dimensional thing effectively, that you've got something over time as well as the traditional three dimensions.

MS KUIPER (BTIC): So there is - again Dominik might elaborate - software that enables you to link the program and the costing. So even that idea of a change of scope comes up, let's quickly get it in. There is, at least from industry perspectives, recognised cost savings, so instead of taking the QS guys three weeks to nut out a new sum, it gets done in an after. Again, I think it's still very much an emerging issue. It's very much challenging practices about how projects are being delivered and, as I say, my interest is on the legal side of things and that's a whole other kettle of fish because it does go to that point of standards and that's where you see some evolution happening over in the UK that doesn't always just focus on design and construction, it's looking at life cycle.

But you get big projects like the cross-rail tunnel in the UK being delivered with BIM and with a real focus on asset management and whether that information is and can be used for government purposes I haven't investigated the detail.

MR HARRIS: But the value if it's a concept rather than a thing is it is within scope for us. I think it's potentially outside scope if it is, "Here is a proprietary technology which you should buy tomorrow."

MS KUIPER (BTIC): No, I can't do that.

MR HARRIS: That has been a very useful clarification because you have it on the record and where as if it's a concept there appears to be significant value and we can list values that might come from having this as a commonly adopted concept for how you proceed through a design into implementation phase. That's within scope for us because that's part of our cost side looking at infrastructure.

DR MUNDY: Presumably particularly valuable in those sorts of infrastructure projects which you are not going to build all at once so you retain information about the previous bits - I mean, one of the big problems in my experience in doing airport terminal redevelopments is that every time you do one you've got to go back and work out what's there and if you haven't been scratching around in the roof cavity for 30 years you often find surprises which you'd rather not have. You can see other applications, it's certainly a way of passing information to users.

MR HARRIS: Yes, that's right. You are also saying it's a sharing mechanism.

MS KUIPER (BTIC): It is.

MR HARRIS: It should be done as that. It should be done as a commons rather than - - -

MS KUIPER (BTIC): Yes, and whether you get from some American - and Dominik can talk more about this particular detail - where there will be an architectural model and a structural model and an MEP model and that idea that you can integrate them to work out the clash, detection of services or where things are going and there are issues that need to be ironed out in terms of those processes. But what is saved on sight is all done in the design.

MR LINDWALL: I take it it integrates project management as well.

MS KUIPER (BTIC): Again, I think that's an emerging kind of idea or concept.

MR LINDWALL: That is one thing you can imagine, the same as sequencing of how the workforce comes aboard and all sorts of things like that.

MS KUIPER (BTIC): The fact that the amassing of that information can be done very comprehensively. Again, I don't know enough about what's happening out in

industry to the extent that that is happening. I know that they will have certain applications and where you see some examples - and again, whether it happens locally, but at least in international jurisdictions where they do have those 5D and 4D kind of requirements. Again, whether that's something the owners, principals are starting to switch into, I'm not sure. Just from some research I have undertaken, the idea of even writing in contractual requirements is, from this very limited research, very few and far between and they do come in ranges of, "Give me a BIM model," to the more developed examples.

MR LINDWALL: It's one thing to mandate it but on the other side, are there any barriers to the adoption of BIM, do you think?

MS KUIPER (BTIC): There is a lot of commentary on the idea that the legal issues are barriers and issues of insurance. That idea that maybe it's because it hasn't gone through a legal kind of context and there is no regulation around it or there is no case law or anything like that I wonder if it's just about challenging the legal profession to say, "Look, this is this issue, let's deal with it."

MR HARRIS: But there is a lot in current - or certainly in PPP structures for having common suites of documentation now. There has been a lot of work gone in over the last three or four years into that.

MS KUIPER (BTIC): Yes.

MR HARRIS: Primarily common suites of documentation have been about using costs for bidders in their preliminary development work. Now, there would be scope, I'm sure, for BIM concepts to be included in the common suite of documents without actually mandating, "You must provide the BIM model in three forms to us by tomorrow afternoon," sort of thing. In other words, the specificity of it is probably less important than the adoption, generally speaking, of the concept of transferability of information in this form.

MS KUIPER (BTIC): Indeed, I think that has been replicated with the Royal Adelaide project, as far as I understand.

MR HARRIS: The hospital.

MS KUIPER (BTIC): So BIM hasn't been mandated for that project but it was definitely used for it, for the delivery of it. From what I read, I understand that there was a requirement on the contractor to ensure that the information could be integrated as part of their asset management or their systems, ITC systems, but nothing about BIM.

MR HARRIS: Okay. A lot of things, a lot of things.

MR LINDWALL: I think we've got more to talk about BIM in the next two. We can talk more about the technology, I think, in the next, yes.

MR HARRIS: Thank you very much, Isla, for your presentation today and for your information and for your helpful elaboration on the concept. That's very good.

MR HARRIS: Dominik, can you identify yourself for the record.

MR HOLZER (AECC): Good afternoon. My name is Dominik Holzer, owner of AEC Connect. I'm an industry advocate for BIM and a researcher and educator at the University of Melbourne. I would like to thank the commission for having me this afternoon and obviously following up from a lot that we just heard from Isla and hopefully also being able to expand on some particular areas in relation to the submission that I've made.

MR HARRIS: That will be good. Why don't you go for that.

MR HOLZER (AECC): I will very quickly bring up three points that are close to my heart, and one obviously is the opportunity for BIM to address an innovation gap that we see in Australia. If we look at the construction sector it is probably the least innovative out of all sectors in Australia when it comes to service process and management innovation. Personally, I see a huge opportunity for BIM to address that and even address it in the context of public infrastructure.

The second point would be getting an understanding of information management. A lot is said about building information modelling - this is what BIM actually stands for, building information modelling. As I'm kind of quite experienced in that field, over the last few years it has really shifted far more into information management; it has gone beyond just the building. So we should probably at some point consider the information management side far more and understand the whole-of-life concept of BIM. In that context consider parametric procurement and parametric tendering and complete new ways of collaboration as we already experience it successfully on a number of projects in Australia.

Last but not least, point 3 is an increase in productivity related to knowledge transfer. A lot of good points were already made in the draft report, I believe, but I think that there is a bit more that we can add to that and maybe even look at the broader picture. One of the key things that I see, or concepts, if you want, that I see coming out of the current industry uptake of building information modelling or building information management is the fact that subcontractors warm up to it in large numbers, and particularly mechanical subcontractors - steel, but also in the civil area.

What happens there is that we see an increase in prefabrication and off-site assemblies, with a large aspect of manufacturing actually coming into the construction sector. I personally perceive quite an opportunity for us to have knowledge transfer from the automotive sector that we see that is in decline and be able to apply some of that manufacturing knowledge actually in the construction

sector with the use of BIM connected to product life cycle management and the like. So these three points would be kind of my opening statement but I'm more than happy and curious about some questions and further comments from the commission.

MR MUNDY: The focus of our inquiry is public infrastructure and I guess in terms of dollar spend that's dominated by things like roads and bridges. So could you just give us a bit of a sense around where BIM is specifically applicable to things like that rather than office buildings or factories or hospitals or whatever - so flat things.

MR HOLZER (AECC): BIM has gone through quite a development, as I alluded to before. It was mainly used for building information modelling up-front, but throughout its development what we've seen is it has really broadened. It has broadened not only in terms of its uptake by specific stakeholders - and of course predominantly consultant architects and engineers up-front - but it has seen a broadening of uptake predominantly through the contractors. We see more and more interest now by clients.

It has also broadened its scope in terms of the scale of objects that you refer to, and we see the value actually now of BIM not necessarily about, as I said before, the modelling part where you put building components together, but we understand the value of structured information and how it is being integrated across the supply chain and how BIM from, as I say, a modelling process starts to actually affect the entire procurement, planning, construction, delivery and operation of built assets in the built environment.

There have been some reports and some studies, at this point predominantly from software resellers - so I don't want to refer them too strongly about BIM and infrastructure, but there's a lot of similarities, if you want, in terms of the benefits of this sort of approach, this structured approach, that we can see on a building living, as we can perceive it also on an infrastructure scale. So there's nothing that keeps us from applying those concepts of well-articulated component based sort of integration and assemblies virtually to test out if certain infrastructure, for instance, would work, how it would function; run analysis based on these sort of virtual models that would be pre-produced and to then take that further through the construction cycle and operational aspects.

So that I don't believe that there is a major hindering factor to consider the concept of building information modelling to the wider area of infrastructure information management.

MR LINDWALL: So effectively BIM can be used to optimise materials for an engineering structure in such a way that there is the most efficient way of doing it. Now, if you look back at Renaissance Baroque buildings and so on they were very

heavy buildings because they had trial and error - they fell down - but nowadays, I take it, with the BIM you can actually reduce materials use for a given structure.

MR HOLZER (AECC): I think it would be wrong to consider BIM as a silver bullet that solves all your problems. I think what BIM does do is it ties into a number of already existing computational design techniques and methodologies, and what you just referred to is something that engineers would have done for a number of years but it was never that well - it would always have the segregated process, if you want, between analysis and documentation and delivery. Now you're able to tie that all together. So it's not necessarily that BIM is all that new. The development of BIM goes back 30, 35 years actually. It's just now we seem to have reached a particular point in time where, through confessional means, information technology and so forth, we are actually able from a technology perspective to bring that all together.

What is lacking though at times is then the policy that goes with it. It's an understand of processes that need to change, and one thing that hasn't been mentioned so far, much, I think, is the process change that we see. Technology is the enabler, if you want, but then the effects of that being that you see a complete, rejig, if you want, on the way that project teams engage and how they share information. This is the unique opportunity that I think is great. It is interesting.

There is a lot of bottom-up sort of development that happens there, but I truly believe, and that was one of the reasons I've put in my submission, that if there were some government incentives - and I will not talk about mandates or standards at this point, I think it probably might not be the right to use here, but if there were some sort of preferred practice, some incentives, I think it would encourage a more uniform uptake. At the moment we deal with an industry and construction and infrastructure that is quite segregated, the processes are still quite segregated.

Currently under traditional ways of delivery, when it comes to the technical part at least, we are not really delivering in a very smart way, we're not delivering in a very integrated way. We have the opportunity now to do that, but what is at times still missing is the bigger picture and that's where I believe government has an opportunity to step in. What I believe is missing is education that cuts across different professional (indistinct) because they're still predominantly there. I think there's an opportunity to look at contracts, as Isla already mentioned.

I think we also should not forget that those who are currently really benefiting from BIM are either early adopters or larger organisations with a lot of muscle, very often in central locations, larger cities. There is a whole array of organisations who might be interested but who are falling behind because they are in the country or rural areas where they don't necessarily have the access to the funds or the

opportunities to learn about this technique and technology. We also have in larger cities tier 3 contractors and consultants who are not keeping up with what the big guys are doing, and the big guys are not necessarily always helpful with that. Industry bodies are trying, but I think what is needed is a slightly more overarching strategy of how education across various sectors can happen and how even the smaller guys could be educated.

In the UK we see rural BIM hubs emerging that help more local participants, and that was all facilitated through the BIM taskforce in the UK. So there was a clear motivation, if you want, or mission from a government/industry initiative, a combined initiative, to consider these issues and address those issues. I'm saying all this in response to a question you asked earlier about what could the role be of government in that. There will certainly be a few other points. One thing we didn't mention at all yet is BIM object libraries. Now, this is where things get really interesting.

A lot of the quality that you are trying to assure in the process of integrating information from various stakeholders relies on high-quality virtual representations of the actual built object to the level of detail that is required for any specific task. Now, I don't want to get too technical - stop me if I do. We are struggling at the moment in Australia because every large organisation seems to have to rely on their own in-house capabilities of developing BIM objects even though they might be quite standard in the way they represent building products. But a large organisation's contractors, consultants, engineers, architects, they are reinventing the wheel by having their own in-house people who spend hundreds and thousands of hours developing the same BIM objects, and there seems to be very little sort of commonality between, let's say, common approaches, if you want.

There are organisations like buildingSMART who are very actively propagating the idea of object libraries that are being kind of organised with some support. I don't know, maybe buildingSMART representatives should talk about that at some point. But the way these libraries are being set up and being disseminated to the industry follow more a kind of - they provide them for free, ideally, and they provide them at a quality where people would not have to do that work all by themselves.

MR LINDWALL: The use of prefabrication, I think you mentioned, the increased use of prefabrication, should lead to significant efficiency gains in itself, I would have thought.

MR HOLZER (AECC): Currently there is a number of examples, predominantly with the mechanical subcontractors. It started in the US but we now see it on a number of projects also in Australia, the Royal Adelaide Hospital being one of the

key projects there that I could refer to, but also there would be Triple C here and these are both PPPs, if I'm not mistaken, where larger subcontractors have decided that in terms of cost efficiencies it would benefit them to investigate how they could pre-engineer a lot of the components and pre-assemble them, looking at obviously transport sizes and so forth, but really pre-assemble them on a factory floor and then being able to pretty much install at the - - -

MR LINDWALL: Improve quality control and so forth.

MR HOLZER (AECC): Improve quality and so forth, safety for the workers actually. I was told that you pay the workforce on that off-site factory floor about half of what you have to pay somebody on site. So it is obviously a huge cost issue that's also related to that. So you have the quality assurance, you speed up the process, you de-risk the process - and a lot of what I just mentioned before is also about de-risking the process; and thereby you are able to contribute quite substantially, I think, to have more transparency in your costs, have more transparency that ultimately relates back to the tender and procurement process.

MR LINDWALL: Is there a Beta and VHS problem here then, which was a comment earlier in the day?

MR HOLZER (AECC): That question came up maybe seven, eight years ago and I think the industry has now gone beyond that. Also through the help of organisations such as buildingSMART there are common formats that cut across different software and so there is accepted industry - we don't call them standards necessarily, it's called the Industry Foundation Class. So it is an exchange format that allows you to go from any BIM tool to another. It's not perfect by any means, but it's getting better and it's starting to become more and more accepted, predominantly in sharing information between subcontractors and consultants.

MR LINDWALL: So you just have to use a particular format, you're not stuck with the particular technology then, clearly, because the software - - -

MR HOLZER (AECC): No, not necessarily. The argument is also - I think we have gone beyond the argument because we see a whole range of, let's say, the tool ecology that is being applied throughout the construction sector to first of all go into preliminary studies, mass modelling, the actual design process, then the construction process and then tools that assist in going from BIM models, like the information models, to facility management and asset software.

There's a whole range of technology that's there and the software that's there. That is now accepted by the industry, that we deal with that pretty broad tool infrastructure and there's not one single entity or part within that supply chain that

would argue we need one tool to solve it all. So VHS versus Beta is about one recorder, but we talk about a whole suite of tools anyway. So it does make a lot of sense to rather look at the smooth transition, if you want, from one to the other.

MR LINDWALL: Okay.

MR HOLZER (AECC): But again, it comes back to the fact that it is more about the concept than the thing. The bigger problem is the communication between the various stakeholders, and trying to set benchmarks about what is it actually that is required. How would a consultant know what the owner-operator facility manager actually requires at the end of the day? Where does the contractor and where do the subcontractors sit in the middle of that? Sometimes I would argue that it's good to work your way back from the end-user requirements.

This is where you start to analyse what are the key benchmarks that the owner-operator has, and that would relate very much to some of the comments that were made in the draft report about benchmarking and being better informed how procurement decisions support environment because it offers that clarity, it offers that transparency, and this is where I believe if we work our way back, in a way, from the needs of the supply chain and inform the various players more what's happening - and this is what we see happening at the moment - then mutual opportunities are there.

MR LINDWALL: Exciting technology.

MR HARRIS: Do we have more questions for Dominik?

MR LINDWALL: No, I don't.

MR HARRIS: Did we miss anything that you wanted to put across to us?

MR HOLZER (AECC): The last comment I would make is that one should not underestimate the value of BIM on existing projects. So we talked a lot about what happens if you procure new projects, but there is now certainly a lot of movement - I wouldn't say a lot, but we start to see some key projects - I'm involved in one of them, which is the Shrine of Remembrance; Sydney Opera House being another interesting one where the owner-operators very actively search for solutions that allow them to maintain or run their asset based on the fact that it is, of course, already built, it's already there. So people start to investigate, and those responsible on the (indistinct) side and asset management side are very keen to get their projects post-BIMified, if you want to call it that way.

MR HARRIS: How do they do that?

MR HOLZER (AECC): There's technology now, it's called 3D laser scanning - which an opportunity to do that. We've just recently - a thing in The Age - last week or so from CSIRO we had somebody come down and for two hours in one afternoon went down with an instrument which was a 3D laser scanner - and within two hours was able to capture the entire geometry of the Shrine of Remembrance inside and outside. We are now combining that information with information that we commissioned an engineering company to do that are looking at all the services within the building and, based on 2D documents, actually recreating the 3D service structure.

MR HARRIS: The two are mergeable?

MR HOLZER (AECC): Then we are merging as we federate those two models to provide a more comprehensive information environment to the owner-operator, in this case Major Projects Victoria and the Shrine of Remembrance - a huge opportunity there not just for - - -

MR LINDWALL: Then you use a 3D printer to copy the Shrine of Remembrance somewhere else?

MR HOLZER (AECC): I don't know why people are laughing. But of course you would do that. There is now large-scale 3D printers that print whole houses so, yes, we are going in that direction.

MR LINDWALL: It's very exciting, yes.

MR MUNDY: I thought CAD was a good idea.

MR HARRIS: We did the whole of the rail network but we didn't do 3D. You couldn't do 3D. So anyway, that's really interesting. That's pretty impressive. Thank you very much, Dominik.

MR HOLZER (AECC): Thank you.

MR HARRIS: We appreciate it.

MR HARRIS: We're probably now running ahead of time, he says optimistically. Do we have Professionals Australia? Do we have anybody else who is due to present today?

MR HOLMAN: We were 5.15 or 5.10.

MR HARRIS: Jump in now. This is what we call genuine productivity savings for everybody. Could you please state your name for the purpose of the recording.

MR HOLMAN: My name is Geoff Holman. I'm a private citizen but with a longstanding interest in infrastructure and experience in engineering.

MR HARRIS: Feel free to make some opening comments.

MR HOLMAN: This second submission of mine relates mainly to your draft report but there is very little of it that is actually directed at points in your report, more, in my view, what appeared to me to be omissions and additional things you might like to do or consider. The first one I have mentioned there in recommendation 1 is I would like to see - and I think it would very useful - in your report and the submissions - your final report and possibly the draft report, if that's going to be useful - preserved or archived in such a way there is public access to them and I also think they could be distributed to schools and universities to increase interest in the subject matter which is very much overlooked, I think, and underestimated and ignored actually. You might have been doing that anyway.

MR LINDWALL: Everything is available in perpetuity as far as I know.

MR HARRIS: Everything of ours is available, however, the system is difficult to search.

MR HOLMAN: It is, that's the point.

MR HARRIS: I'm now going to spend some money upgrading it.

MR HOLMAN: It's not just your system, it's all system. I go, I look and I think, "Well, that's an interesting subject," I go to the Internet which everyone goes to now and I think, "Well, I'll find it on there," and it's impossible to find what you want because it's gone.

MR HARRIS: Unless you know specifically what you want - - -

MR HOLMAN: It's probably somewhere in the system. If I was to ring up I would

probably get a link or something to it but that's tomorrow and I actually want it now.

MR HARRIS: Moreover the submissions, I think, are electronically archived as well but they're even harder to relocate.

MR HOLMAN: What's that, the omissions?

MR HARRIS: Submissions.

MR HOLMAN: Submissions, yes. I think they should all be available and I think it needs a very good index, that's one comment I might have about the way it's presented at the moment. I think you've been snowed under perhaps with the number of submissions.

MR HARRIS: It's a largish number.

MR HOLMAN: It would have been nice to have had an index of some sort so that you knew what you were looking for.

MR LINDWALL: An index of submissions?

MR HOLMAN: Perhaps three or four key words. I mean, you have basically an index there but it needs some descriptor of the individuals submissions. There is one there, I think it was about number 1 or 2, which dealt with cost benefit. That would have been quite to easy to put, "Deals with cost benefit," or something underneath that.

MR LINDWALL: They need tags, in other words?

MR HOLMAN: Yes, that's it, just key words and that sort of thing.

MR HARRIS: That's very useful one.

MR HOLMAN: That's comment 1 or recommendation 1 and I put down there some areas that I think it would be useful in, particularly schools and universities because it might encourage students to take it up as a career, either engineering or one of the other disciplines that are involved. The second one is the second stage of your inquiry. As I have listened to things hear today - I mean, a couple of things already have cropped up which made me think that these are the sort of things that need further exploration. One is the BIM and the other one was the Vic Code of Practice, I think it was, for building. I saw both of those as I read your report and I did wonder about them both. The Vic code, I thought it seems odd that you're putting it in and you're recommending it. I think you actually said it's going to

become the national standard. I thought, "That's a bit bold."

MR HARRIS: Potentially. But we put it up, as I was explaining - - -

MR HOLMAN: I don't know anything about the Vic code, so it's not that I know anything about it. But I thought, "Well, that is odd that you're recommending it almost as a national standard," because that's without input from, say, Queensland or New South Wales who have got a lot to say about it.

DR MUNDY: They are in the process of implementing codes that are very similar.

MR HOLMAN: Similar, yes.

DR MUNDY: To the extent that they're relevant to the general legal structure of those jurisdictions. Functionally they will do very much the same thing.

MR HARRIS: Nevertheless, we understand your point, but it is a draft report and our view is, therefore, as I was explaining to the ETU, "Tell us where you think there's an error then."

MR HOLMAN: Yes.

MR HARRIS: Because if we don't do it now in the draft report, we won't know.

MR HOLMAN: I'm not necessarily saying they're errors but I mean - and as far as the BIM is concerned, that takes me back about 20 or so years now when I was actually trying to sell occupational health and safety software and document register software to various construction companies and the difference I thought between here and the UK - because for some work it was UK software where it was a big seller - was that in the UK they had mandated for - well, they had their occupational health and safety code and they'd mandated the code and I think that made reference, for example, to machinery registers. So in the UK the machinery register software package was a very big seller whereas here no-one was interested, they had their own systems which they developed - some were but I mean most were - which they developed in Excel and that sort of thing.

That was an aside really but I thought it was worth mentioning as it had been raised but they're the sort of things that I thought could be handled or looked at further - this is what I'm really suggesting, a two-year ongoing - I think the subject needs it. I think your report was a little bit top heavy on the finance side which is probably the intention and light on the engineering and construction side which is why I think - I can think of lots of areas - I have listed a few in here but that is not meant to be an exhaustive list, but it's top-of-the-head ideas that I thought would be

useful to explore further because you have done a good job on the report, I'm not trying to take that away from you, but you're spread very thinly over a big area and you have said that yourselves.

I think engineering standards and perhaps this BIM software, that's another sort of thing that could do with further study by independent people to think about what are the implications of it and how would it be introduced, should it be legislation or what sort of legislation might help and is it worth doing, all those sort of things. That's really a relatively small area. I do cover that in there which again is sort of in keeping with item 6 of the terms of reference but it is something that you don't think you have - well, you haven't addressed it as far I know in the report so far.

MR HARRIS: No.

MR HOLMAN: This afternoon has confirmed my thinking on that. I think it would be worthwhile considering. The third recommendation was general risk assessment. You've cut a lot of what I'll call project risk assessment and finance risk assessment but there are still these very big issues out there and issues generally. People might say, "What's sovereign risk got to do with?" but that impinges on finance and all those sort of things but I think the big issue is, of course, the climate change issue and whether it's real or not. If it is real - well, even if it's not - it needs work, it needs some sort of further examination to see what its impact, if it is real, would have on roads and then you can weigh up the risks. Well, it could almost make everything else irrelevant in time because it could consume just about all the funds you've got available in terms of repair or maintenance or new works basically and that was one of the risks.

The other one I mentioned in there was this - I'll call it the asset register. You do mention it under Infrastructure Australia and I have put that down there. You say they conduct audits and prepare priority lists for roadworks. They must have a register of some sort for that but I don't think there is anything available publicly and personally I'd like to see it extended so that we do know the extend of the infrastructure that's actually out there. If you know that then people can make better decisions about what we should be spending our money on.

MR HARRIS: There are a number of submissions that have suggested something not dissimilar to that and roads is where most of that occurs. The implication of most of it is that when you have a complete asset register then you will do a condition analysis and as a result of the condition analysis you will fix everything once it falls below a certain condition standard. I guess when those sorts of submissions were put to us - that's certainly one pathway of doing it, the problem is people will then debate what the appropriate standard is.

MR HOLMAN: That is very difficult to do anyway. Even if you've got the road in front of you it's often very hard to judge that just by looking at it.

MR HARRIS: Then there is the assumption that you would have the funds to be able to do that which does bring you back finance.

MR HOLMAN: Yes, but the point is if you've got that then you can say, "Well, let's take a section of the road system" - I'm hoping that - it does need a good classification but let's say you had a classification which was, say, "Roads under five metres wide," or something, "Sealed roads under five metres wide," or something of that nature, then you could say, "Well, these roads need to be upgraded to six metres wide or 10 metres wide," whatever is necessary, whatever you think is an appropriate standard, or they need side drains or something of that nature and then you can then come up with a cost and compare that to the cost of something else you're thinking of doing, some other new infrastructure elsewhere. I'm not just thinking of roads though, I am thinking in terms of all the other infrastructure.

MR HARRIS: It's a good example. You have to pick an example to be able to talk specifically about it.

MR HOLMAN: Asphalt roads, for example. If you know all the roads that have got an asphalt surface on them, you can - it may not be federal government, I don't know which tier of government it would be who would be doing that maintenance work but you can work out an annual cost for those roads to be resurfaced, all of them and then you can look at the effect of cost increases or other factors on that and it something that would need doing in any case but at least you can then budget for it and know that this will be a chunk of expenditure that you have to meet over the next five or 10 years, whatever the cycle is for them.

MR HARRIS: That's right. The contra-argument would be, "No, you only spend money on the roads regardless of the condition they're in that have sufficient traffic to justify that."

MR HOLMAN: That's something else. I'm not trying to - - -

MR HARRIS: No, I think we're agreeing the standard that - - -

MR HOLMAN: These are the sort of things that could go in there. Traffic levels are an important function of it and hopefully they would lie in the system somewhere so that they could be - - -

MR HARRIS: My point is really one about where we have had it put to us there are those who would go down what I might call the engineering quality path and

there are those who might go down the path which says economic priorities are the ones that actually matter. Unless standards type of process absorbs both of them, then the one is almost certainly in conflict with the other. But once you get to the last half a billion dollars or whatever it is that you've got available to you, you start adding conflicts.

MR HOLMAN: Yes.

MR LINDWALL: How far have you got level with the database that you are proposing? To what level of detail would the database that you're proposing cover?

MR HOLMAN: I don't want to get into the process of me proposing something. I think this is sort of area that deserves further work and perhaps, as I have suggested earlier - I mean, not in this particular section but maybe it could be a research project by a university, that sort of thing, so that they can look at this, see what is available and see how it's done elsewhere and look at what's available. I mean, where is all the data? It's all there somewhere but it's probably in 20 or 30 different places. It probably wouldn't be too hard to bring it all together, it's fairly standard.

MR HARRIS: About 540, if that's the number of councils there are in the country.

MR LINDWALL: We're not sure it's all there either. In fact we're pretty confident it's not all there.

MR HARRIS: Having dealt with local governments I'm certain they don't even - - -

MR HOLMAN: But they all have to report to the Grants Commission, don't they, and the state government?

MR HARRIS: No, they don't. They've got lots of legacy assets which some of them don't even know that they've got.

MR HOLMAN: Yes, well, that's probably true as well. There you are, that's another area, isn't it?

MR HARRIS: You're suggesting Infrastructure Australia in your submission, if I quickly read it through here.

MR HOLMAN: I did suggest them as project managers. I'm thinking of a committee like yours to act as a steering committee for this ongoing process but you would need one and possibly more project managers to actually manage individual components of it. It depends how big it gets but, I mean, I'm not envisaging something to replace Infrastructure Australia but it would be valuable and if it is

ongoing, if even elements can be made ongoing, then you will have an informed research core, if you like, who can provide you with information as it's needed. Because it's a changing world in more ways than one and I think that would be useful to have.

MR LINDWALL: That would help with the input of new technologies - - -

MR HOLMAN: Yes. For example, as we were talking about earlier, the BIM process.

MR LINDWALL: Yes.

MR HOLMAN: As I said, it's a system rather like quality assurance was. I know how difficult it was for people to accept quality assurance and probably still is. I don't know that - probably the same with BIM and as the speaker said, everyone seems to have their own way of doing it. They all have their Excel programs that they developed over 30 years or so and they are familiar with it, they don't want to lose that and change to doing it another way or a better way. Of course, one thing that wasn't mentioned is they don't have the support for the software. I mean, they are probably doing it on Excel anyway and there is probably one of the engineers doing it and not a software specialist. Those sort of issues come into that particular topic as well.

As I say, that is the sort of thing that may be could be looked at further over the next couple of years. I even think that you could have a five-year reporting cycle on just sort of thing and aim to have a five-year reporting cycle - not necessarily with the full team engaged for that five years but so that you can review the situation in five years' time and decide whether you need to do something else or what has changed in the intervening five years. That is the situation. There is a worry that your report will get done and that will be it. It will be used, I have no doubt about it, or referred to but - - -

MR HARRIS: But there will be no-one going - - -

MR HOLMAN: There's no follow up. There's no - you know, unless you request it, unless it's accepted, there won't be a follow-up in five years' time, and any continuing work. I actually think that it would be a huge benefit in all sorts of ways. I mean I can see, you know, if export is the name of the game at the moment, well, it could be a winner. I mean you've got a body then of expertise out of the game with science behind them. We've got something to sell, something that is useful to the rest of the world who are going to be facing the same of sort problems as we're facing. So it's just a further thought on it, really, but I didn't put in the five-year cycle in here but I have thought about it afterwards. I think that's probably the

way - something like that may be an alternative. I mean depends what the government's prepared to spend on it.

MR HARRIS: Exactly.

MR HOLMAN: But it's pretty small beer, really, when you think of the - - -

MR HARRIS: Scope of the amount we're going to spend otherwise.

MR HOLMAN: - - - what's involved in infrastructure.

MR HARRIS: That's right.

MR HOLMAN: I mean not just the legacy infrastructure but the new infrastructure, we're talking about billions of dollars. I think it's worth spending more on it than we are currently, really. We'll get the money back.

MR HARRIS: Look, that's been pretty good. So thanks for that. I think the idea of some ongoing involvement from an institution to take some responsibility for thingos like this is probably worth - certainly worth serious consideration.

MR HOLMAN: Okay, well, that's good.

MR HARRIS: So I appreciate your submission and time today.

DR MUNDY: Thanks very much.

MR HOLMAN: Okay, excellent.

MR HARRIS: All right. So we're approximately - - -

MR LINDWALL: On time.

MR HARRIS: - - - on time still.

MR HOLMAN: Thanks very much. I hope so.

MR HARRIS: Thanks, Geoff. Professionals Australia. Could you identify yourselves for the record?

MR LOCKE (PA): Eric Locke, director of marketing, Professionals Australia.

MR PAYNE (PA): And I'm Bede Payne, director - or national campaign director in public infrastructure.

MR HARRIS: Fine. Would either of you like to make any opening remarks before we lob in to questions?

MR PAYNE (PA): Yeah, I would, if that's okay.

MR HARRIS: Sure.

MR PAYNE (PA): We'll make it brief. I know you've probably had a very long day. Currently there is an estimated infrastructure backlog of around \$700 billion. Ensuring that we spend this money efficiently, diligently, surely needs to be one of the critical tasks of this commission. Conservative estimates indicate that we are wasting tens of billions of dollars worth of this money. Even if you consider that \$700 billion is a bit of a stretch, even if we consider just the \$20 billion worth of major projects currently being funded by the federal government, we're still looking at wasting, conservatively, one to two billion dollars worth of that current investment.

So the wastage just on current major projects could pay for almost two years of the entire country's road maintenance budget. So the scale of the wastage is fairly staggering, and we see billions of dollars worth of waste in major projects, and we see, or our members see, every day wastage in the thousands and thousands of smaller projects that they manage. So we're talking about from expressways in Adelaide where four-lane expressways go into two-lane local roads all the way down to where pontoons in tidal rivers in Queensland get washed away and \$200,000 just goes like that. We don't even see those pontoons in papers. They don't even make the cut.

So waste has become the normal situation. Why? Our submission essentially says that that is because government is an uninformed - our submission, because government is an uninformed purchaser. They are uninformed because they no longer employ the infrastructure experts that are required to properly scope, design, deliver and maintain our assets. As the commission release its draft report we see at least two state governments cutting back on their engineering capacity or planning on cutting back in their engineering capacity, particularly in strategic planning areas. We rely more than ever on accountants to run our major projects. We rely on accountants to structure our asset owners and the engineer has been stripped of much responsibility.

The primary profession, obviously, that we're talking about that's being stripped back is engineering, of course. We're here today when our members have pretty little interest in announcing that the current arrangement leaves them incapable of doing their job adequately. So even though that it's somewhat embarrassing, hundreds of our members have written to us after your call for further information and given us hundreds of examples of - some of which are included here of blow-outs, of bungles and of botch-ups.

We believe that our initial submission stands alone. Our submission and our arguments that we make in here are widely accepted in the sector. It's accepted by asset owners, it's accepted by a range of government inquiries, it's accepted by our alliance partners who are in both private industry, in education and in the public sector, and in the private sector both in the engineering consultancy areas and also in construction. So we believe that through a range of fairly low-cost or effectively no-cost actions there could be huge productivity efficiencies gained. There's billions of dollars' worth of dividends achievable from this minor investment and we think the practical implications of that could be highly positive.

Our position is pretty simple: one, government's an uninformed purchaser of infrastructure, and government knows it's uninformed. It's uninformed because it doesn't employ the right people and it lets the wrong people manage infrastructure projects. Very critically, the whole sector agrees. I think that's important. We know that it's billions of dollars on the table and while we sit here and talk about funding there's billions of dollars worth of infrastructure not being built because we're pouring it down the drain.

Very sadly, we also know that waste is so common that it's considered normal and it's been built into project costs. We know that engineering is the key to eradicating the waste. We know that there's no magic solution in terms of delivery model and we need to work within the delivery models to make sure we're rebuilding our capacity, and that capacity is the key to getting rid of the waste.

MR LOCKE (PA): Rather than go off on a tangent here, if we could come back to a matter of engineering registration later on, which you requested further information?

MR HARRIS: Yes. So do you want to talk about engineering registration straight off?

MR LOCKE (PA): I'm in your hands.

MR HARRIS: Yes. Let's enter it straight off because it's - I think we've got a number of submissions that have actually picked up on a level of concern saying we are - there's a fair number of submissions supporting the idea that we should do more mandating of engineering registration.

MR LOCKE (PA): Okay.

MR HARRIS: If you could do me a little bit on that and then we might ask you some questions as to - well, relay our concerns in the draft and see how we can proceed from there.

MR LOCKE (PA): Sure. We support the registration of engineers. We're surprised that you would see it as an obstacle to the practice of labour, given there are a number of schemes in operation in Australia that do not marry with each other. We have a mandatory scheme in Queensland, we have an emerging scheme in the ACT, we have potentially an emerging scheme in Western Australia. These will emerge without any reference to each other, meaning that the jigsaw of engineering registration around Australia is going to become more complex, not less complex, becoming a mobility of labour issue down the line. More importantly, you raise in your draft report that employers could be an adequate referee of what is competence in engineering. Employers generally become referees post the fact. Now, the consequence of engineering catastrophe can be terrible. Throughout Australia's recent history there are examples of engineering disasters which are disasters which have been caused because of engineering competence failure: Thredbo, the West Gate et cetera et cetera.

So two issues: a cost-benefit analysis was done for this for Engineers Australia which found the benefits far outweighed the costs of establishing a national registration scheme. In our view it is best to get ahead of the game rather than try to retrofit a scheme on a myriad of - hodgepodge of schemes, and with this caveat: that a registration scheme for engineers has to be cost-effective. It cannot be levied at a punitive rate for employers.

MR HARRIS: Sorry, cost-effective for the engineer or for the employers?

MR LOCKE (PA): For the engineering or their employers, recognising that employers often pay for these costs. That's all we've got to say on registration.

MR HARRIS: Okay. So I guess the intriguing thing for me in this is it is obviously one of the few professional areas where, in a sense, there is no impediment to interstate transfer of capability. So mostly when we're dealing with professions we're dealing with, as you say, regionally or state-based structures which, amongst other things, tend to impede people working in one jurisdiction automatically. In the case of engineers, we're not. We've got the reverse implied problem, that is, no professional oversight body and therefore no standards. So what you've got is a lot of mobility, which is plus, but you've got potentially standard setting and control issues because there's nobody looking at the quality of the engineering.

MR LOCKE (PA): There's potential for engineering fail to occur as a result, with resulting economic impacts.

MR HARRIS: So the crucial question is those trade-offs - now, I presume in a cost-benefit analysis that would have been roughly - it wouldn't have been the sole factor that they would have looked at, but they would have looked at that trade-off. When we see jurisdictions, therefore, developing their own structure, the history of what's happened - and the professions would say, you know, it's damned difficult once states decide to regulate something to get a national standard in place.

MR LOCKE (PA): National occupational licensing scheme, yes.

MR HARRIS: Yes, it is damned difficult.

DR MUNDY: Commission has to be national occupational licensing which isn't shared with COAG or shared by COAG.

MR HARRIS: Yes, apparently COAG - - -

MR LOCKE (PA): COAG currently, yes.

DR MUNDY: COAG doesn't like the look of it.

MR LOCKE (PA): Not any more, no.

MR HARRIS: So you will see in our draft report some disappointment about that because, you know - anyway. So that's the conundrum we were tussling with. Would we mandate something if what it actually said was, "Have a set of standards

but the consequent result of it would be a set of state-based standards," but there is no national entity to take on responsibility for this, and potentially encourage Queensland and ACT and maybe Western Australia to adopt a national set of standards.

DR MUNDY: But the difficulty the commission's had for a long - I mean architects are probably - you know, you can say, well, if you're - you know, your licence is transferable but your professional maintenance, qualification maintenance, and your profession development requirements are very different. I mean I guess the other thing is that it would be - other than in those areas where the Commonwealth has peculiar sole jurisdiction, such as, for example, the licensing of maintenance engineers for aircraft or pilots, the Commonwealth - - -

MR LOCKE (PA): Speaking with another hat on.

DR MUNDY: Not any more. So the Commonwealth has relatively few powers in this regard, and has little history in it. I guess - I mean I - - -

MR LOCKE (PA): Limited history of success as well.

DR MUNDY: Indeed. I mean I made the observation just because a pilot is licensed doesn't mean there won't be an air crash, so that there's - I accept there's risk minimisation here, but certainly - I mean as someone who's been involved in the procurement of a lot of infrastructure, particularly more recently in the private sector, we've knocked back apparently qualified engineers because we didn't like the look of them. So I think there's a challenge here as what are you seeking to achieve by this? Is this a minimum standard which presumably would be degree qualification, appropriate on the job - so it's effectively some notion of an internship, you know what I mean? Certainly the engineers that I've worked with have said to me - and both in the public and private sector - you probably can't let an engineer out alone unsupervised until they're in the 30s, so they're probably out of university for - - -

MR LOCKE (PA): Five years.

DR MUNDY: Five to eight, depends on what they're doing as well.

MR HARRIS: But the difficulty - if I could, just before you answer Warren's question - is still, I think, primarily mine: if we mandate a standard it's going to be a state-based one. Where there are state-based ones, state differences apply. Mobility of labour is reduced.

The worry, therefore, in responding to the original - I think Engineers Australia put forward a proposition in their original submissions - perhaps more people did,

but I particularly - we did pay quite a lot of attention to that one and we did consider it, because we see the standard as being a desirable thing in its own right. The difficulty is how would it be actually implemented. Unfortunately in our federal jurisdiction it's more likely to be around state by state, which does say if we mandate it we end up with the same barriers to entry we've got in professional markets in just about every other profession.

MR LOCKE (PA): Your draft report read like you were going - read, essentially, as if you did not think registration was, in essence, a good thing.

MR HARRIS: Well, that was a - it wasn't an intention behind it. It was primarily - - -

MR LOCKE (PA): We are comforted by that then, I would say. Look, I would say - I would make this point for you though: international qualifications for engineers are assessed as they come into Australia. In between states they are not assessed. So, you know, there have been incidents of engineers in recent history practising who are not engineers. There needs to be some community satisfaction around this. You are dealing with people who design bridges. You mentioned - I'll mention two other professions which are more regulated: architects, as you say. Commissioner, they can design ugly buildings. That's the worst thing an architect can do. A medical practitioner can kill one person at a time. An engineer can kill thousands. So this is the reason why we support it. This is why our members support it. We surveyed our membership. They support it holus-bolus because they believe it's in the public interest and they have a great sort of - our members, by and large, have a great sense of public duty, which is why they respond to a survey like this about their own profession.

MR HARRIS: Is there any possibility of a national body establishing - whilst it would be voluntarily, a nevertheless deeply desirable register of qualifications so that people - - -

MR LOCKE (PA): Self-regulation.

MR HARRIS: Well, a form of that. Because of my - I'm hypothesising here but because of the primary concern that I see that if we mandate engineering qualifications as a formal work requirement we'll get Balkanising of the profession.

MR LOCKE (PA): I mean you will - eventually this will happen because every state will have some kind of system. We have certifiers in New South Wales, we have a mandatory system in Queensland, we have a system emerging in the ACT and we have system emerging in Western Australia. So regardless of what we might think about an ideal outcome, what we're going to end up with is an absolute jigsaw,

a myriad of schemes around Australia. Northern Territory also sees engineering registration as desirable. So you're going to have the resource states all with schemes in five years, all that will look different and all that affect the mobility of engineers. Now, there's a very good reason for those schemes, for public safety reasons.

MR HARRIS: But come back to my point then. How do you create something which avoids that? That's what I'm asking you as well. So I agree with you.

MR LOCKE (PA): Yes.

MR HARRIS: It's likely to happen. But if the Productivity Commission writes down, "There should be engineering standards nationally, we have no national entity to do this, we'll only get a state-based one," we'll be effectively supporting the creation of what you described.

DR MUNDY: Should the recommendation read, "State" - well, the Commonwealth can take the Territory jurisdiction but should the recommendation read, "The states should transfer powers for the regulation of engineers to the Commonwealth"? Then we can solve the problem. In your discussions with - and you obviously had these discussions with state governments.

MR LOCKE (PA): And federal government.

DR MUNDY: Are the states - what's the states' view on ceding jurisdiction to the Commonwealth on these matters, given that they haven't - the Western Australia government has an interest, a profound interest - - -

MR HARRIS: Geographic liability.

MR LOCKE (PA): Yes.

DR MUNDY: - - - in being able to access engineers registered in New South Wales and Victoria.

MR LOCKE (PA): Yes.

DR MUNDY: So what - I mean I think it is wrong to assume - what we're worried about is, from a very lengthy experience of the type - - -

MR LOCKE (PA): Yes.

DR MUNDY: Peter and I have done a little bit of Commonwealth-state relations and what we're worried about is we don't - we're worried about this Balkanisation,

we're worried about jurisdictions playing games, frankly.

MR LOCKE (PA): Registration of engineers in Queensland is conducted in quite a different way to the trades were licensed. So there are assessment entities called up under the Queensland scheme, which means there's competition between the Queensland scheme. It also means that - it's a co-regulatory system, which of all regulatory systems I understand the commission would be most comfortable with. Co-regulatory systems such as that could be recognised by the Commonwealth without actually taking control of them, which would be a perfectly sensible way to mandate a scheme without mandating it.

MR HARRIS: But it wouldn't stop New South Wales creating a rubbish scheme?

MR LOCKE (PA): No, it wouldn't. It wouldn't. But I don't think you're ever going to be able to get around that. I'm not going to be drawn on your exact question. I'll say that I think logically there would be resistance from states. I would say that internationally a number of countries protect the use of the word "engineer" and that may be something that the Commonwealth wants to look at because I think that's a real thing. I think that's a real issue worthy of consideration, should people be able to call themselves an engineer when they're not? Should people be able to call themselves a doctor when they're not? Logically, not. As I said earlier, the term "engineer" is as worthy of protection as the term "doctor".

MR LINDWALL: Yes, I've heard chefs being called (indistinct)

DR MUNDY: And there are these medical practitioners that all themselves doctors as well.

MR LINDWALL: Could I ask about a specialisation in the engineering profession. It's become increasingly specialised over the years.

MR LOCKE (PA): Yes.

MR LINDWALL: How does that affect the registration or are you just registering the base level of being an engineer, not this particular speciality of - - -

MR LOCKE (PA): Generally what happens - I will take the Queensland scheme, if that's okay. Assessment entities are approved to conduct assessments in certain disciplines, so Engineers Australia does a myriad of them. AusIMM does a few of them as they relate to their membership coverage. Then there is - - -

MR PAYNE (PA): IPWEA.

MR LOCKE (PA): They've applied, I'm not sure if they're - - -

MR PAYNE (PA): They've got it.

MR LOCKE (PA): And Naval Architects and a few others. So, no, they apply for specific areas so you have to have people who can competently perform the assessments.

MR LINDWALL: You wouldn't want the persons who has never done any work on a bridge to suddenly - - -

MR LOCKE (PA): No, exactly. The key thing with these schemes - and Commissioner Harris, if I might just say, the thing that draws the parallel with these schemes is that they relate essentially to things that fall on people. We made a submission to a review of the Queensland scheme that said that we think it's a fairly difficult argument to make that software engineers should have to be registered. If we were faced with a choice between mandatory registration or not and software engineers being (indistinct)*5.02.21 we're still on the side of mandatory registration. But the public good has to be the fundamental thing for us and for that reason we think that as it relates - as our president would say (indistinct) there needs to be a scheme.

DR MUNDY: I would probably want software engineers working on air traffic management systems to be registered.

MR LOCKE (PA): You get the general point.

DR MUNDY: I do. I guess my concern is - and harking back onto the registration of medical professions and particularly specialities and particularly surgeons, for example, which have been a long concern and I guess it comes to what is the nature of this certification of individuals in the first instance and how can we be assured that instances in the past where what you might call guild-like behaviour has emerged whereby the registration and certification of individuals has de facto become a device for effectively creating rent within the industry by restricting labour supply.

MR LOCKE (PA): This is why we support it at a low cost. It is why the Queensland scheme mandates that you cannot require membership of an organisation in order for assessments to be undertaken, so I know to that extent it is - - -

DR MUNDY: So if I'm a civil engineer and I come along and let's say I've got a halfway decent degree from some university in the United Kingdom (indistinct) jurisdiction, all that sort of thing, what's the - is it enough for me to present my qualifications and my work history or do I have to go for an interview or what is - - -

MR LOCKE (PA): You are engineer with qualifications under the Washington Accord then which is the universal governance of the transfer of labour. You would be pretty much subject to the same assessment as an Australian engineer, provide referees to confirm your experience and then you would be - it is not an onerous process, five years' experience referees.

DR MUNDY: So we would have to establish a set of facts essentially.

MR LOCKE (PA): Yes. But that's all that it is, is making sure you were confident practice.

DR MUNDY: But you will understand that in the past there have been other unprofessional (indistinct) particularly in the medical profession.

MR LOCKE (PA): Yes, I know, guild-like behaviour amongst perhaps specialists. Yes, I understand your point.

MR HARRIS: So if we were to go down the path of saying that should such a registration arrangement be under consideration in any jurisdiction that it should be national in nature, nationally consistent such that no labour market barriers - where would your organisation stand on that?

MR LOCKE (PA): Well, I ideally it should. Our fallback would be that if it isn't there should be state based scouts.

DR MUNDY: If I'm a Victorian engineer, should I immediately be able to practice in Western Australia?

MR LOCKE (PA): You should be subject to assessment. If they are operating a registration scheme, then you should be subject to the registration scheme.

DR MUNDY: Why not a mutual recognition?

MR LOCKE (PA): There can be a mutual recognition scheme but who's conducting the assessment here to give you access on a mutual recognition?

DR MUNDY: You would have had to have been assessed in the first instance.

MR LOCKE (PA): Then there has to be a scheme here for mutual recognition.

MR HARRIS: This is the problem that applies in half of the areas under national occupation licensing problems, so that real estate agents in Victoria can't practise in

South Australia because they haven't done the exam in South Australia. They have actually passed the qualification - - -

MR LOCKE (PA): I worked on (indistinct) for the plumbers, you don't need to - - -

MR HARRIS: You see our problem is just that and I think if we were - we have a deep reluctance to mandate something where we think it could be misused.

MR LOCKE (PA): The important thing to remember here is the employers want this, Consult Australia want this, the employees association wants this, the Professional Association wants this and every other stakeholder involved in engineering wants this.

MR LINDWALL: They want the government to do something rather than - you've just mentioned everyone that's in the transaction, there is no reason that they can't do all of this themselves without the government involved.

MR HARRIS: Which would be my national self-regulatory scheme.

MR LOCKE (PA): Who polices it?

DR MUNDY: Or alternatively, "Here is a scheme, it's aligned, it doesn't create barriers to interjurisdictional labour mobility, here Commonwealth, here are all the states lined up to make sure that this thing - now, please stamp it." The states can do this themselves with the Commonwealth.

MR LOCKE (PA): The states can do it, yes. By the way, this is a minor part of what I - - -

MR HARRIS: There are quite a few submissions on it, so you're just lucky then.

MR LOCKE (PA): I had a reasonably encyclopaedic knowledge of the area. But for my sins, who would have thought?

MR HARRIS: Necessity makes strange bedfellows.

MR LOCKE (PA): That's right. But I would say that the body of the evidence is that is necessarily a good thing for the profession and for the industry. I would be loathe to - the phrase went up in our organisation (indistinct) so - - -

MR HARRIS: We will review obviously the nature of what's in the draft report on this in the light of what you've had to say but it would be good, if we were to

consider anything further on this, to get some kind of conceptual support from the organisations advocating for this that they're advocating for something where the history is between chequered and poor, that history of creating registration scheme on a state-by-state basis has been to impede labour flows.

MR LOCKE (PA): Protect the term "engineer" nationally and the rest will take care of itself.

MR HARRIS: The difficulty is the Commonwealth will struggle to have any power to do that. The only words that the Commonwealth tends to protect are words in its own jurisdiction like "bank".

MR LOCKE (PA): "Soldier."

MR HARRIS: Anyway, if it was a minor point, then we should go on to some of the major points then. So examples of massive cost overrun that you've supplied, I think we'll be able to draw upon some of those further for the final report. In terms of our actual recommendations though - - -

DR MUNDY: Can I just ask a quick question. If there are particular examples here that we might want to explore a little bit further, would it be possible for our staff to come back and say, "Could you tell us a bit more about the fourth one on page 5?"

MR LOCKE (PA): Sure, and we can possibly put you in touch with the member where that's appropriate.

DR MUNDY: That's fine.

MR HARRIS: In terms of our overall structure of the report, we too are concerned about poor design, poor concept, poor project selection, poor development work all leading to substantial waste of money that would otherwise be quite widely used for the purpose of supporting better investment infrastructure in the future. So do you find the structure of change that we're proposing by what I might call intense use of transparency mechanism my jurisdictions? It would, inter alia, seem to me require a greater commitment capability on behalf of governments, particularly state governments, to be able to meet the transparency requirements of analysis that we're proposing to create this implied pipeline of projects; that is, that the states and the Commonwealth, to the extent it's involved in this, publish continuously from concept through analysis through re-analysis and redesign, the series of infrastructure projects that they're essentially planning and enable assessment of that by individuals including, obviously from our financing aspect here, potential private sector investors. So did you find that worthwhile or do you have comments on that?

MR PAYNE (PA): We think that the fact that our project pipelines are very lumpy currently, also the project pipelines are not adhered to - often they're chopped and changed on is a problem - and transparency in those things would be no doubt a good thing. However, in terms of what, Commissioner Harris, you just said there in terms of analysis and re-analysis of projects and designs the question becomes who then does that work and what is the accountability, where is the accountability of that work held? But what we're seeking practically on the ground is - and there's a range of different delivery models and our members engage all of them, but the core skills of the analysis of a scope or analysis of design - we're talking about the fundamental skills to undertake this work are missing and going into retirement and not being replaced.

So, in short, yes, what you're saying is a good idea but only if it is married with a situation where the core skills exist and the responsibility of those core skills inside the asset owner is to the public. When you start moving away from that truth then we fall back onto the situation that we have now.

MR LINDWALL: I go to the point that I don't believe governments deliberately go out of their way to waste money, so why has this happened? I mean, there's a denudation of skills over time obviously, is your testimony, and others have said similar things. Do the governments not realise the waste is occurring, or why are they allowing this happen over such a long time?

MR PAYNE (PA): That's a very good question, and I think the question needs to start with how political this work is. So if we start from that premise, that the work and the delivery of the infrastructure is political, then it's not necessarily going to be the logic here is the same as the logic there. That leads to funding ebbs and flows, boom and bust, both in core infrastructure and also in maintenance, and when we have the bust and boom funding linked to bust and boom infrastructure announcements you have expansion and contraction of the workforce in your asset owner; the natural flow of the workforce is in and out. Then that's linked with a desire to find efficiencies by using outsourced private industry labour, which is not necessarily a bad thing - in fact, inherently it is a good thing - but the asset owner has gone all the way over to using the private sector to do a range of work, including work which should be fundamentally theirs.

So there's a range of asset owners who have design and delivery components of their business. Those areas are minimally staffed with engineers. Their major job is to contract out design work for either construct only or design and construct or alliance delivery methods. Their major thing is to contract out the design work or the scoping to a consultant, then it comes back in and then it's reviewed on the outside as well. So the point where both the core designer, the reviewer of the design and the deliverer all sit outside of the accountability of the asset owner - - -

MR LOCKE (PA): The client has become a contractor in other words. How this has happened is we're subject to electoral cycles. So in a four-year cycle priorities as to infrastructure might change, etcetera. This started in the 90s when governments tried to derive greater value from their taxpayer dollar. Over time the cycle has become shorter, you're more reliant on people being outsourced. You don't rely on your capacity at a government level, you don't replenish it, because that's an overhead. There's no overheads in outsourcing to the private sector except for we don't know what we're buying any more. That's how it's happened, I think.

MR PAYNE (PA): I think Victoria is the perfect example of this situation where both capital expense on infrastructure and maintenance expenses just ebbed and flowed, and it's not particularly coloured red or blue, but it has ebbed and flowed through different government cycles over the last - - -

MR LINDWALL: You've got five-year terms here in Victoria - - -

MR LOCKE (PA): Four-year terms.

MR PAYNE (PA): It's most sharp when you talk about maintenance, because maintenance is the ugly cousin of infrastructure, but it's also very evident in the infrastructure agendas of different incoming and outgoing governments.

MR LOCKE (PA): We were attracted to your idea of having a central agency that overarches procurement and infrastructure and we think that's a salutary lesson from a number of sort of governments around the Commonwealth. Western Australia a few years ago started the Western Australian Centre for Innovation and Excellence in Infrastructure Delivery, which is a catchy name, and of course Victoria, Queensland, they all have models that are worth examining. I think worth looking at for the commission is the fact that in the delivery of the Building the Education Revolution a number of states delivered pretty much much poorer results.

Now, Queensland delivered quite well - and despite whatever criticisms there may be of the previous government, one of the reasons they were able to do it well is because they maintained some public sector capacity in Queensland. They are the last jurisdiction - they may be now, I'm not sure - with effectively a small public, standing public works department. That is to oversight contracting. I'm not saying let's return to the old days of having a public works department. But to oversight effective delivery of public infrastructure there is a role for government. Anybody who thinks there isn't is wrong.

The other thing to bear in mind with Queensland is their preferred model for delivery was alliancing. Why is alliancing good? Because it allows for a transfer of

skills between the private and public sector and because it allows the private and public sector to own the goals of a project together.

MR PAYNE (PA): Roads in Queensland is a small part of their department and they're called RoadTek which essentially bids for the work against the private enterprise. Now, they don't do much work because the purpose of RoadTek is not to get the bulk of the work done, it is to maintain the skills primarily of the project managers of the engineers and keep currency. So there's examples in Queensland - I mean, there's examples in other - Western Australia has actually done in the south-west region just done similar things where their engineers actively manage the private sector as a way of building capacity amongst their engineering workforce.

So there are examples of where it has worked, where capacity building is active in the departments, but scarily often those areas are known as kind of outliers in - RoadTek not being one of those examples, but south west in Western Australia considered an outlier in the overall structure of the department in that, "That's not how we do it overall even though fundamentally we are achieving better results by doing it in this area." So obviously there's some questions to ask when one area is delivering things cheaper with a certain model and building engineers that they're exporting to the rest of the area, and other areas spending more money doing less and are considered the mainstream.

MR LINDWALL: Is Australia unique in this sense? I mean, electoral cycles are found in other countries. Is there something about Australian governance that it's more likely to cut these skills out of the business?

MR LOCKE (PA): No, I think this has been a global problem and you've seen it in the UK. They've had infrastructure blow-outs of large amounts. I think what is unique in Australia is a couple of things. We produce a third of our engineering needs domestically and we have been reliant on the importation of engineering labour since the Snowy Hydro. So we are much more cycled to fluctuations in demands in this area of expertise. We have not focused on building a profession for Australia. So we're more subject to outsourcing simply because we don't have the domestic kind of capability. The answer to that is not to continue doing what we've been doing poorly is to actually focus on building a domestic capacity we would argue and I think most of our partners in engineering would. So I think that is the reason why it's a little worse here.

MR HARRIS: In our roundtable process before we started this inquiry we did discuss the capacity otherwise not directly pertinent what you might call public infrastructure, we nevertheless incorporated it mentally into our discussions of hospitals and so that is a continuous project that has applied in Victoria for a long time. There is a hospital team capability and it's not solely engineering, it's

obviously a whole bunch of people related to the skills necessary to assess propositions for rebuilding hospitals. In that discussion we were asking why the team now hospitals are perhaps getting to the end of their renewal phase in Victoria why that team isn't made available to other jurisdictions because South Australia is running a big outsource to hospital project at the moment. No-one knew the answer to that.

But in terms of this retention of capability and preservation of it in the public accept, when you accept that there is going to be cyclical in the building of hospitals in any particular jurisdiction eventually you're going to come to the end of the period when you can rebuild enough hospitals, you'd want to retain the capability and yet it doesn't seem to be shared between jurisdictions. Now, we all know implicitly why that's the case, you know, "Not made here," kind of concerns but it does seem to be the sort of area where if you were going to concentrate on trying to retain capability you try and retain the team capability that was capable of dealing with something which is as large as that and therefore essential to have it. As I understand the general view of the Victorian team engaged in building hospitals from the parties that were contracting they had all the capabilities, they were exceptionally good.

MR LOCKE (PA): They're very innovative. They've just finished a project at Bendigo Hospital. They're using modular construction for the accommodation which means the hospital can be moved once demand changes. Your point is valid and I think that if there were such specialist streams that could sit under the subcommittees of COAG or - - -

MR HARRIS: That's the sort of thing, somebody should identify the existence of a capability. There probably as equal - I'm just using Victoria because I roughly know it - but I'm sure there is probably some capability in Queensland or Western Australia.

MR LOCKE (PA): Western Australia has great capacity in the delivery of rail in recent years.

MR HARRIS: That's a very good example then because there are jurisdictions who haven't got much - - -

MR LOCKE (PA): Who haven't got a great history.

MR HARRIS: Didn't want to name anyone. Shouldn't name anyone adversely.

MR PAYNE (PA): I think that what you're saying both right but also there is an underlining part of it as well. The core skills in doing something like tunnelling, you

know, creating underground rail stations or major projects, multi, multi-billion dollar projects, I think there does need to be some thought given to mobility of those specialists and maintaining that specialist skill. Also, when your talking about multibillion dollar projects you are also are buying in skill internationally as well as in Australia. But there needs to be a standing capacity as well because we're not just talking about the expressway in Adelaide or the underpass in Brisbane or the East-West tunnel, we're talking about roundabouts and pontoons and safety rails and a huge amount of our infrastructure spend goes into those category 1 and 2 projects, not the majors.

So the building of a standing capacity to deal with the bulk of the projects that might not form the bulk of the finance but the bulk of the projects needs to be addressed as well which is our view about utilising the delivery models to ensure that there's secondments and there's learnings and there a cadetship program coming in and the RoadTek's of the world are doing on-the-ground training. The building of that capacity is just as important.

MR LOCKE (PA): It has to be at every tier, as Bede says, and I think you start at local government where there's a \$7 billion backlog in New South Wales of infrastructure. Who's going to build that? the engineering capacity of local government in New South Wales is suboptimal. Then you go into state government where it's slightly better but it's still not up to scratch. Then you go into federal government who has vacated the field and procurement and delivery. We go to defence where it's absolutely inadequate and you have all this evidence before you, I'm sure, about it being inadequate in defence. So how about we start with senior leadership positions in the engineering at all of these levels and work down because one of the key reasons that we're not retaining engineers in the public service is competition on wages and career paths.

MR LINDWALL: The skill shortage has been identified. It's going to take a long time to rectify it if it is as significant as you've been saying and yet we have a lot of people going to university, more than ever in history. How do you make it more attractive to do engineering and suck like skills or practically how do you go about it?

MR LOCKE (PA): We have to start valuing technical professions. Australia has become lazy in a public policy sense. We are content to rip stuff out of the ground and export it overseas without adding any value. We have to start valuing scientific and technical endeavour in this country a little more than we have in the past as a start. The last time we were doing that was in the 90s when we saw a boom in productivity, the uptake of elaborately transferred manufactures at an all time people and that was the result of an industry plan and a focused government on productivity. Now, we have to go back to that. I'm relieved that the government is focusing on

this now. But we have to actually work to celebrate the achievements of our scientists and our technicians, not our miners. So that would be the start, I'd say.

We spend a lot of time and money in Australia celebrating the achievements of some professions and lifted attraction into them. Teaching and nursing are pre-eminent amongst them. Why don't we just have a go at engineering and science for a while and see how that ends up. That would be our argument.

MR HARRIS: Okay. Commissioner Mundy has to leave. We have a few minutes left. Are there things that we have missed asking you about? We did divert you for quite a way onto engineering registration.

MR LOCKE (PA): I think we've broadly covered it off.

MR PAYNE (PA): I think so. I am always intrigued when we focused - obviously there needs to be a focus on how you bring private capital into delivering major projects. But I'm always surprised that when we do waste so much money and there is acknowledgment that we waste so much money that there hasn't been more proactive approaches designed to stop such huge black holes of taxpayers cash. So what we're talking about in capacity building should form the preamble of the funding debate because we're not talking about 1 per cent productivity dividends, we're talking about a quarter of all billion dollar projects go over by \$200 million. That's not chump change.

MR HARRIS: That's fine. Thanks for your submissions again on this matter. As we've said, we may come back to you on some specific examples if you can help us elaborate on a few of them but we recognise the circumstances of the way you've conducted the survey, so you may or not be able to but nevertheless - - -

MR LOCKE (PA): There will be people who are more than happy to assist you in your inquiries and we stand ready to provide - we are some of the pre-eminent authors in this space so we're happy to assist however you like.

MR HARRIS: Okay. I appreciate your time and effort.

MR PAYNE (PA): Thank you.

MR LOCKE (PA): Thank you.

MR HARRIS: Now, for everybody else who's present we do offer the opportunity for anyone who has stayed and persisted right through to the bitter end and who is interested in making a statement and hasn't had a chance to make one today. So if there is anybody who would like to come up to the microphone and has anything

specific to say, this is your opportunity. If not, I guess I get to thank everybody for their attendance today and to adjourn the nature of this set of inquiries and we will resume in Brisbane on Friday, 11 April. Thank you.

AT 5.29 PM THE INQUIRY WAS ADJOURNED UNTIL
FRIDAY, 11 APRIL 2014