COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON COMMUNICATIONS, TRANSPORT AND THE ARTS

Reference: Managing fatigue in transport

WEDNESDAY, 28 JUNE 2000

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON COMMUNICATIONS, TRANSPORT AND THE ARTS

Wednesday, 28 June 2000

Members: Mr Neville *(Chair)*, Mr Gibbons, Mr Hardgrave, Mr Hollis, Mr Jull, Mr Lindsay, Mr McArthur, Mr Mossfield, Mr Murphy and Mr St Clair

Members in attendance: Mr Gibbons, Mr Hollis, Mr Jull, Mr Lindsay, Mr Mossfield, Mr Murphy, Mr Neville and Mr St Clair

Terms of reference for the inquiry:

- Causes of, and contributing factors to, fatigue.
- Consequences of fatigue in air, sea, road and rail transport.
- Initiatives in transport addressing the causes and effects of fatigue.
- Ways to achieving greater responsibility by individuals, companies, and governments to reduce the problems related to fatigue in transport.

WITNESSES

Committee met at 9.38 a.m.

ELDER, Mr Robert, Executive Manager, Government, Industry and International Relations, Civil Aviation Safety Authority

TOLLER, Mr Mick, Director, Civil Aviation Safety Authority

YATES, Mr Richard, Assistant Director, Aviation Safety Standards, Civil Aviation Safety Authority

CHAIR—I welcome again Mick Toller from the Civil Aviation Safety Authority and his colleagues Richard Yates and Rob Elder. We have asked you to return because we understand that you have changed the emphasis on your control of fatigue. We are now in the preliminary writing phase of the report and we thought it would be a bit of an exercise in futility to put in a raft of evidence from the safety authority for Australian aviation that would be meaningless. We felt we would hold that aspect of the report for a week or two and ask if you could come back and brief us on your new approach, so that we can then take you into the report at this new level rather than the old one.

Would you like to make an opening statement, Mr Toller? You probably need to fill us in on that change of emphasis and then we will break into questions.

Mr Toller—Thank you, Chairman, and thank you for the opportunity. When I appeared before the committee last November, we were in a process of consultation with the industry on what we have described as operator formulated flight duty time limitations. This was based on a scheme that has been successful in the UK and Hong Kong, and I think it is worth saying that it is one of that few successful schemes in terms of formulating more modern flight and duty time limitations. Certainly the Europeans have struggled greatly with it and hit significant criticism from the pilots unions, and the Americans have also struggled with finding acceptable new rules.

Although I still believe philosophically that we were heading in the right direction in terms of, you may remember, talking about setting up boundaries, within which the operators would have to come to an agreement—which would then be approved by us—with their pilots on what were acceptable flight and duty time limitations. There was, as I think is not surprising, a fair degree of resistance from the industry to that approach. That is not necessarily a bad thing. If we had gone out with something that had been fully applauded by everybody, we would almost certainly have got it wrong. You will expect the perfect scheme not to make either the unions or the operators happy, because it has got to be taking a line between the commercial requirements of the operators and the industrial requirements of the pilots.

But, as we were developing through this and recognising certain resistance, we also began to look at what could probably be described as a world leader in an approach to this particular subject: putting a template on any system that would actually show whether it is going to produce fatigue or not. We are calling this project, which is under way at the moment, the fatigue risk management system. I have brought along today Richard Yates, who is my deputy director in charge of standards. At this stage I will hand over to him, because he is chairing the committee that is pushing forward on this fatigue risk management system and I think it is best

if he describes to you what it is trying to achieve, how it is trying to achieve it and where we think it might end up.

Mr Yates—The initiative to establish this fatigue risk management system and the group that is working upon it is really a joint one between the authority, Qantas, the scientific community and also the pilots association. I have been asked to chair the steering group which has overall responsibility for the project. Beneath that steering group we have a project group. For the committee's benefit I have brought copies of the terms of reference for the project group, which explain in detail what we are asking this group to undertake. I will just quickly go through that.

Essentially, we are asking this group to develop a system that will satisfy the requirements of ICAO, which are fairly high level and general, that it provides for safe operations and is also consistent with a broader duty of care and occupational health and safety considerations and obligations. We are also asking the group to examine any recommendations that come out of this committee's deliberations. What we are hoping to accomplish at the end is what we describe in here as an implementation ready, standard fatigue risk management system—for flight deck crew, at this stage. It should include algorithms that support automated roster planning, roster management and also compliance audit, because obviously we need to be comfortable that what an operator is doing is going to provide us with an acceptably safe outcome.

It will provide degrees of flexibility and optimisation that the operators can exercise. It will lead also to a consultative procedure between the management and the employees and a procedure for resolving any disputes that may arise between the two parties to that. As it says in item 4, we want a group to determine the limitations of such a system. The idea is to look into the feasibility of possibly extending, reducing or enhancing the system so that we can perhaps come up with systems that are applicable in other sectors.

In the first instance, as I have said, Qantas is directly involved in the work. But if the exercise proves to be successful—and I think personally that there are grounds for some optimism that it will—then it is not unreasonable to expect that its applicability may be broadened to embrace more of the industry than just that which is directly involved with it at this stage. There are tasks associated with the work which the group is going to be undertaking. They held one meeting about a month ago. The second meeting of the group is scheduled to take place in just over two weeks.

CHAIR—You often find—and we see more of this in the commuter airlines than you see on the trunk routes—that an aircraft pilot's hours for the day are about to be exceeded. You might have had a storm and have landed in Maroochydore north of Brisbane. Is it sufficiently flexible then for that pilot to take the plane on to Brisbane or is it going to have a certain rigidity about it? Is it too early to say what the emphasis is going to be on this? Is it going to be fairly rigid in its application or fairly flexible?

Mr Yates—The system you are talking about?

CHAIR—Not the system itself but how it is applied. You are still going to have these outer limits presumably or are you going to dispense with those completely?

Mr Yates—I think the outer limits will be embodied in the system.

CHAIR—I see what you mean.

Mr Yates—There always will need to be a possibility for flexibility inherent in what goes on because of the variable nature as you mentioned in your example for an unforseen circumstance to appear during the course of an operation. We would expect an operator to provide guidance to his staff to cover such an eventuality.

CHAIR—You have to get a formal exemption now if a pilot is going over his hours, don't you?

Mr Toller—There is flexibility built into the basic civil aviation order at this stage. We always recognise that what crews are rostered to do and what they end up doing vary. All rosters have to be within the basic limitations. We recognise the fact that on the day certain duty periods maybe extended. The general way of handling an additional length of duty is to increase, and in some cases quite significantly increase, the subsequent rest period. There is generally a knock-on effect in some shape or form so that, as the amount of duty increases, the amount of rest that is required after that duty generally increases as well. There will always be an outer boundary there somewhere. Regardless of the disruptions to the system, there will come a stage where you say, this far and no further.

CHAIR—What form of the compliance ought it take? Would you just be reviewing actual roster sheets or would you be looking at how creatively the organisation had set about implementing the culture of fatigue management? Sometimes a roster might be technically reflected but does not necessarily reflect—

Mr Toller—What needs to happen on the day.

CHAIR—That is right. We mentioned to you last time we spoke that, when we met with the LAMEs at Qantas—we met first with the management in the LAMEs and later with the LAMEs—one thing that came out quite innocently in the course of our discussions was that Drew Dawson had been engaged to set out a regime for fatigue management in the servicing of aircraft, yet he had been there only once. I am not suggesting that Qantas was window dressing, but what I am saying is that any audit needs to look not just at sheets. You could say, 'We consulted Drew Dawson and these are the sheets of our members for the three months following that,' and that may not necessarily reflect a culture of fatigue management. It might just say, 'We went through the motions and it's a bit better than we had before,' but it is not necessarily a real management of fatigue. I am interested in what form this compliance audit will take. What is your vision of that? I know you are still discussing it and calling for submissions, but what is your vision for it?

Mr Toller—I think we have to accept that audits lie on a number of different levels. Specifically, we talked about what we are developing on the pilot side. I think we would be looking to ensure that the actual system for producing the rosters takes into account all the regulations, so that all the checks and balances are there to ensure that a roster is not produced that is illegal. That is common practice today, and we are just making sure that that system remains functional. In general terms thereafter, audits are done by sampling actual times flown,

so you are actually looking back on what was achieved. Under the system in which I worked before, we were allowed to extend for up to one hour and the records would be kept internally with the airline. But once we went over an hour—which we were allowed to do—we had to inform the authorities.

I anticipate that any system pushing the boundaries would have a reporting mechanism back to the authority. To give you an example: if you see, let us say, a particular pattern, every time they either extend their duty period or reduce their rest period by a small amount because they were in late the night before, you would turn around and say to the company, 'This pattern does not work; change it.' Your information for that can come from reporting requirements back to the authority or sometimes, obviously, from the pilots association or a similar body which will turn around and say, 'We don't believe that this is acceptable.' In the extreme they might even turn around and say, 'We don't believe that this is safe.' So, I think that, on those two levels, you are looking at how the roster is produced. But you are looking also—and more specifically—at what the effects of the roster are in practice.

CHAIR—What is happening in that establishment.

Mr Toller—What is actually happening in the real world, yes.

Mr JULL—Does this relate to something I picked up in your introductory remarks about an automated rostering system? Is that the wording that you used—'an automated rostering system'—and if it is can you give us a run-down on what you mean by 'an automated rostering system'?

Mr Toller—I do not recall using those words, no.

Mr JULL—I might have misheard it, but I wrote it down here and I thought, 'Strike a light, what the devil is that?'

Mr Toller—I am trying to think what I did say.

Mr Elder—It was a reference to that new system where you can put something in and it prints out whether it is within the boundaries.

Mr Toller—There are computerised rostering systems that exist within airlines, and for the smaller carriers these are fairly simple systems. When you get to a major carrier like Qantas or Ansett then the complexity of all the different rules that apply to the pilots is enormous. I know that certainly a number of major airlines have tried to introduce a fully automatic rostering system which would just turn out roster lines for their pilots, generally with only moderate success. It can cover a basic roster, but there are always problems with it. It is an area that the airlines are looking at. I describe rostering as a bit of a black art actually. It is a bit like doing difficult cryptic crosswords. It is not as easy as just writing out some mathematical formula and out comes the answer at the end. Some people have prepared good rosters, but you need very talented people to get a balance. It is very easy to write one good roster, but if you are writing a roster for, say, 100 pilots on a fleet, to get 100 good rosters is very difficult; and if you do not, you are going to get people complaining.

Mr JULL—With your reference that the ramifications of this may be beyond what we are looking at, are you basically saying that if we get this right, we may have the capacity to sell this overseas?

Mr Toller—I do not think it is an issue of selling it. I think it is an issue of the fact that other major regulatory authorities—and Richard may be able to comment better on this—who have stumbled with this and have not tried this approach are very keen to see how we get on with this approach. I do not know if you had any contacts when you were in America recently, Richard?

Mr Yates—I recently attended the FAA-JAA annual harmonisation conference in Chicago. Part of the proceedings in one of the workshops was about where, effectively, the world is at with respect to trying to solve the flight duty time limitations problem. I explained to the people present what we are embarking upon here, or what we have just embarked upon, and it is certainly fair to say, as Mick says, that there is great interest in what the outcome may be. As has been said, and as I believe you are all very well aware, it is something that the whole globe has been trying to solve for many years. I personally have been involved in trying to solve this particular problem, amongst others, for 11 years now—that was with the JAA, prior to coming out to join CASA—and it is an extremely complex problem.

Mr GIBBONS—I have not made a study of the industry at all, but you might be able to tell me: when modern aircraft are designed these days, what sort of increase in the speed capability has been made in the last 10 or 20 years, for example? The old 727s had engines in the back. I have noticed that all modern aircraft have two engines under the wing. What I am getting at is: are the designers building extra speed and larger engines into aircraft, or is it the same, or is the speed being lessened for fuel efficiency and noise reduction? Obviously, that would have an impact on fatigue. If the aircraft can get from point A to point B faster then there is not such a fatigue problem.

Mr Toller—It is difficult to generalise, but overall we are probably holding a constant speed, roughly. We are coming down slightly. The 747 is about the fastest aircraft around at the moment. The next generation is going a little slower. We are talking of a decimal of mach 1, which is the speed of sound. You are looking at about mach 0.85 or 0.86 on a 747 and down to about 0.83 on a 777 and 0.81 to 0.82 on the new big airbuses. As the wings become more sophisticated—my former boss used to describe the wing on the 747 as the 'Ming wing', as it was a very old design—then the actual cruise speed tends to reduce very slightly. But I do not think it has a major effect. You may be talking about 10 or 15 minutes flight time at the most on a nine-hour sector.

CHAIR—Again, I am not trying to anticipate what your group will do but do you envisage that CASA will use Drew Dawson and his charts more extensively?

Mr Yates—He is one of the members of the scientific community involved in the project group, together with Curt Graeber, so I would say very much so is the answer.

CHAIR—He will not be just there superficially? He will work right through the process?

Mr Yates—Very much so. He is involved intimately with the deliberations of the group, yes.

Mr Toller—The concept depends on the sort of research that people like Drew Dawson have been doing, because we are trying to put some sort of scientifically justifiable measurement on to something that up until now has been predominantly intuitive. That requires tapping in to his research.

CHAIR—Have you got Ansett or any regional airline involved in the project? I noticed that you mentioned Qantas.

Mr Yates—At this stage, no. There is great interest on behalf of Ansett and the Regional Airlines Association, but at this initial stage it is just Qantas. Subject to the outcome of the group's deliberations, it is likely, I believe, if it proves to be a positive outcome, that it will be expanded and be exposed to a wider audience, so to speak. Certainly, if it shows promise, which I am hopeful that it will, then we would involve a much wider segment of the community, obviously, in developing it further and bringing it into effect.

Mr Toller—I think it is probably fair to add that, in looking at Qantas, a significant domestic carrier as well as a worldwide international carrier, you are looking at the most complex of all possible models. It is much easier to stage something like this down from Qantas into the regional airlines and into the commuter airlines than it is to stage it up. We have got to check it at its most demanding first.

CHAIR—How long will this process take? I just want to get the feel for it.

Mr Yates—I would hope that we might start to get some sort of concrete feedback from the group within about six months, but how long it will take to get something that will actually stand up, I think will be a considerably longer period of time than that.

CHAIR—Pending the completion of the project, has CASA got any ideas to address the CAO 48 as an interim measure?

Mr Toller—One of the biggest problems I have got with CAO 48 is obviously the fact that it lives on exemptions. It is a very basic and fairly dated framework that lives on exemptions. The task that I am currently undertaking is centralising control of that exemption process up until the change of the structure within CASA. That was done regionally and it tended to be done fairly inconsistently. What I am trying now to do is to review all the exemptions that have been made and to try and put some consistency into them. I think if we do that then I will feel reasonably comfortable that CAO 48, as it has evolved over the years, can keep us going with the safety margins that we believe we need while we are developing the new system.

CHAIR—Does this flow over into aircraft maintenance personnel as well?

Mr Toller—I was just going to say it might be worth while bringing you up to date on where we stand with aircraft maintenance personnel and with air traffic personnel.

CHAIR—You might like to make a comment too on that near miss at Brisbane and the other two near misses—are you allowed to talk about that at this stage?

Mr Toller—I do not think I have got enough knowledge at this stage to be able to make a comment.

CHAIR—We are interested from a general point of view and it is possibly relevant to that last question.

Mr Toller—I think I will leave it. I really do not think I know enough to comment at this stage.

CHAIR—What about this idea that it will spill into aircraft maintenance?

Mr Yates—Yes, it certainly is intended that it will be included or covered by the regulations that cover maintenance activity. The current intention is that civil aviation safety regulation part 43, which is entitled 'Maintainers' responsibilities', at this stage will include provisions applicable to the management of fatigue by maintenance personnel. There will be provisions applicable to the individuals. In other words, they have a responsibility personally for ensuring that they are making the best use of the rest periods that they are allocated.

There will also be provisions applicable to the supervisors of those staff, and thereby the organisations that employ them, to ensure that their work rosters, schedules, are such that ample provision is made for adequate rest. We have very much a first cut of the proposed draft regulations, which we are going to be working on further over the coming months, together with the human factors people and the industry representatives as well, to come up with a proposal which will ultimately be going out for consultation in the normal way.

Mr ST CLAIR—Just talking about LAMEs for the moment, we have taken evidence and listened to people talk about what appears to be a critical shortage growing, not only nationally but internationally as well. I have also been listening to some people who are now starting to look at courses to start up again, as I am sure you people would be aware. Where do you see that going? Do you see apprentices coming back? It seems that Qantas got rid of all their apprentices and just employed qualified tradesmen. That is fine if you have got people coming through, but is there a change happening at the moment as far as apprenticeships are concerned for the maintenance engineering side?

Mr Toller—This is one of the significant problems that the industry is facing, and I think the industry is starting to realise it. It is an industry issue rather than a regulatory issue, obviously. I think we worked out the other day that the average age of a LAME in Australia is about 52 or 53, and that tells us we have got a problem. The problem for the industry is that it is no longer an attractive profession. People prefer to go and play with sporty motorcars and things like that rather than play with aeroplanes. Something has got to be done. Work has to be done on the amount that they are paid. Part of it might be to do with just promoting the industry and promoting the profession. I think that the industry has been fairly remiss in that.

Of course, we have got the additional problem that when you get out of the large airline market it is a very tight industry. There is not a lot of money around and businesses are very tight. They have not actually got the ability to spend money on training people and things like this. I think that is a real problem that the industry as a whole has got to face, and has got to face pretty soon.

CHAIR—I raised that with you at the last meeting.

Mr Toller—You did, and I certainly do not hesitate to make the point publicly.

CHAIR—We have written to both ministers about that from the committee because we are concerned too.

Mr HOLLIS—It was put to us quite recently that the apprentice matter is a responsibility of the major airlines as a commitment to the industry. It is a statement about their belief in the industry to have those training facilities.

Mr Toller—It is interesting that if you look worldwide at the moment there is probably more focus on a pilot shortage than there is on an engineer shortage. I think Australia is backwards at the moment. We have still got, at the moment, plenty of young people who are prepared to spend $40,000 or $50,0000 of borrowed money, generally, to scramble their way through the bottom of the industry because flying aeroplanes is still something that appeals to people, and maintaining aeroplanes not so much. It is almost as though there has got to be an industry body that starts promoting aircraft maintenance as a good, worthwhile career.

CHAIR—There are two things, aren't there? It is not only a matter of having people there for the future, but if you are going to have a distinctive Australian culture of safety, you have got to nurture it. You cannot just buy that in.

Mr Toller—There is immense training required. To become a LAME is a very lengthy, very complex process. There is a lot of on-the-job training, there are a lot of exams to be done, there is a lot of competency based training. It is a major step. But even to become an unlicensed aircraft engineer still requires a significant amount of training. They are complex beasts. I think you said you walked around the Qantas hangar. When you see one of these things in pieces, you realise the skills of the people who are required to ensure that they are put back together in the right way.

Mr MURPHY—In today's *Sydney Morning Herald* there is another article which inculcates in the minds of people fears about safety, getting on aircraft, et cetera. Do you think the media are being fair at the moment or are they just sensationalising it?

Mr Toller—How long have we got? Everything I say will be taken down in writing and held against me by the *Sydney Morning Herald*! There is in Australia an almost unique focus on aviation. That is not necessarily a bad thing, but I think it is part of our cultural heritage and it goes back to Kingsford Smith and Hinkler and the fact that a lot of the development of the bush was done by people with aircraft. So the aircraft is much more a part of what we all are here than it tends to be in other countries. As such, it has always been something that the press have liked to focus on. It is always an interesting story. In terms of the focus that they put on certain safety stories, I guess, from a press point of view, they are good stories. From the public's point of view, I think it is important that a balance is maintained. It is very easy to beat up a story and make it look as if there is a major issue when there is not, because we are in a very technical profession in aviation and we are in a very safety minded profession in aviation. Therefore, even the slightest weakness looks like a good story. The strength of the industry overall far outweighs in the long-term the sort of short-term comments that we get from the press.

Mr MURPHY—I have always understood that you are safer in the air than you are on the road.

Mr Toller—Statistically it is the safest way to travel; there is no question about that.

Mr MURPHY—Yet most of us get in a car in one form or another. I wish that your message could get out and that the media could be more honest in its reporting and not put fear into people. Everyone, I presume, at some stage, gets a bit nervous about flying. Certainly, as a passenger, when you are 40,000 feet in the air and you are strapped in, there is not much you can do about it. People want to feel comfortable and relaxed. I must say I love the thrill of flying. I would fly every day, if I could; I just love it. I do not feel uncomfortable at all in an aircraft. In fact, I feel very confident. There must be thousands of flights every week all over Australia and nothing goes wrong, yet every day I pick up a newspaper and read about terrible car accidents, truck accidents and rail accidents. I hope the press listen to this segment of evidence and try to make a headline out of it. Instead of saying that you had better be careful the next time you get on a Qantas jet, in fact we are safer in the skies than we are on the roads.

Mr JULL—Mr Toller, you are being very diplomatic. The reality is that, when a cracked windscreen makes front-page news—shock, horror, scoop, Qantas has another safety scare—it has gone over the top a bit, hasn't it?

CHAIR—We are starting to demonise it, aren't we?

Mr JULL—And if these wankers in the press want to be independent they have also got to exercise a bit of responsibility.

Mr GIBBONS—There was a story in one of the Melbourne Sunday papers about a hydraulic component that operates the rudder on a 737 or 747 or something. Apparently it alleged that, when the pilot applies a bit of right rudder, this component can cause the aircraft to invert and crash. That was almost a full page. That was about 12 months ago. I have not heard of any incidents where that has happened.

Mr Toller—That was based on two accidents in the United States that they could never explain. I did see the figure recently about how many millions of hours 737s have flown over the years. They are the absolute workhorses. More 737s have been made than any other aeroplane.

Mr GIBBONS—Except the DC3.

Mr Toller—A lot more 737s have been built now. I think it is well over 2,000. I cannot remember how many DC3s there were. That is an interesting one—I will look that up. Going back to your point, Mr Murphy, the number of people that get killed in boating accidents—

Mr MURPHY—That is another one.

Mr Toller—is horrendous, but we do not see it with that. I guess to a certain extent it is because boating is largely deregulated. AMSA looks after the very big stuff but, other than that,

the controls are a lot less. Because we have got so much control on aviation, there is more focus on that.

Mr ST CLAIR—You have mentioned AMSA. Are you the only safety authority that operates within the transport field—road, rail, air and sea? Is AMSA the maritime safety body?

Mr Toller—AMSA is maritime and federal, but it only looks after large ships.

Mr ST CLAIR—Have you any comment to make on whether the heavy vehicle industry that operates hundreds of thousands of heavy vehicles on our roads should have a safety authority?

Mr Toller—I am probably getting slightly outside my terms of reference here.

Mr ST CLAIR—You are a controller in a commercial field, and people who are out there carrying heavy goods in heavy vehicles are also in a commercial field.

Mr Toller—The reason I say I am a bit outside my terms of reference is that I am not clear on just how much state authority, as opposed to federal, there is over heavy road transport. The point about aviation is that all control is federal, whereas in other forms of transport—rail and road—you are getting into state authorities as well.

CHAIR—We made the suggestion in our report *Tracking Australia*, which is being discussed in the other chamber today, that we should have a parallel construction in the rail industry, that there be a safety authority separate from the regulator and that the Commonwealth and the states both subscribe to that. Stuart's question is not a bad one. Even if the states do have the necessary power themselves, why wouldn't they partly surrender that to an all-embracing structure? If you get a traffic fine now in New South Wales and lose points, it counts in all the other states. That has not diminished the role of the states in controlling safety on their roads. All it has done is put a layer of interstate cooperation between them.

Mr Toller—The department would probably be in a better position to answer that question than me. We have also, of course, gone into the ATSB being a multimodal safety bureau. That is looking at one part of what you are saying, in terms of analysis of accidents and incidents and learning lessons from them, then we have a multimodal safety bureau.

Mr JULL—I am not quite sure just how much this is within the terms of reference either. The present controversy on the installation of the early warning systems on RPTs and charter aircraft in Western Australia and, indeed, in Queensland and the requirement to have that introduced by 2001: is that getting anywhere?

Mr Toller—We spoke with the people who are leading the push from WA on that one yesterday. The system we are talking about is known as a ground proximity warning system. It has been required since 1975 in the United States for aircraft with more than nine seats. It has been required internationally by ICAO since 1 January 1999. Australia deferred introduction until October 1999. We said that everybody must have this ground proximity warning system by October 1999. As we were approaching the October 1999 date, we had an approach from the Regional Airlines Association saying, 'A new system is coming out in the states called the enhanced GPWS or terrain awareness warning system, TAWS. It may be cheaper to fit or it may

be about the same price, but it is much better. Is there any chance that, instead of having to fit the antiquated equipment, we could fit the new equipment?' So we made a policy decision back in mid-1999 which said 'Fit or commit—you either fit the old-fashioned GPWS by October 1999 or we will give you until 31 December 2000 to fit the enhanced GPWS.'

What we are now seeing is that some of those who said they would take the easy way out and commit rather than fit are finding they cannot commit—the equipment does not actually exist for their types of aircraft. We are certainly looking at two types of aircraft that were brought by the people in WA. They are actually nine-seat aircraft which would be operating to different rules and would not require the GPWS, but they have put an extra two seats in because they need 11 seats for the mining contract. We are talking about aeroplanes that I would describe as light GA aeroplanes that are being used, perhaps inappropriately, in a different part of the market and have therefore come into the regulatory regime which requires more sophisticated equipment which is not available for those aeroplanes. So it is a bit of a conundrum. We have said to these people that, although they had committed to fit EGPWS, we will accept them fitting GPWS, the old-fashioned system which is available for those aircraft, by the end of this year. If they do not fit either, then they are on the ground.

There was also some leeway in terms of the final dates in view of the fact there are always practical implementation problems, like somebody cannot get their aeroplane into a hangar with all the pieces until the middle of January 2001. We have always allowed slight leeway in certain individual cases to cover that. We did that recently with the introduction of the TCAS, the collision avoidance system. There is flexibility on that, but they were trying to persuade us not to have them fit anything, and I said no. Controlled flight into terrain is recognised worldwide as the major cause of accidents. People have full control of their aeroplane when they hit something—it may be a mountain, but it may be the sea, as well. That happens too. This ground proximity warning system is a major advance, and has been over the years, in preventing that sort of accident.

CHAIR—You will be involved with Virgin and Impulse. They are de facto majors now, aren't they?

Mr Toller—Yes, absolutely.

CHAIR—It is proposed that the document titled, 'Terms of reference, Qantas fatigue, risk management project group' be received as evidence. There being no objection, it is so ordered. Thank you for coming. You are always welcome here. We have strayed outside our terms of reference on a few questions because there is a genuine interest in the committee in staying abreast of all major aviation safety issues.

Mr Toller—We are happy to brief you at any time and have general chats, too, because it is valuable for everybody.

Mr Yates—I would like to make a brief correction to something I said earlier. The date of the first meeting of this project group was at the beginning of May, so it is a bit more than a month ago, which is when I thought it was.

CHAIR—Thank you.

Resolved (on motion by **Mr Murphy**):

That this committee authorises publication, including publication on the parliamentary database, of the proof transcript of the evidence given before it at public hearing this day.

Committee adjourned at 10.24 a.m.