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Official Committee Hansard

**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON COMMUNICATIONS,
TRANSPORT AND THE ARTS

Reference: Managing fatigue in transport

MONDAY, 2 AUGUST 1999

BRISBANE

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON COMMUNICATIONS, TRANSPORT AND THE
ARTS

Monday, 2 August 1999

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 Hardgrave, Mr Mossfield, 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.

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Committee met at 8.36 a.m.

CHAIR—In declaring open this hearing of the House of Representatives Standing Committee on Communications, Transport and the Arts in its inquiry into managing fatigue in transport, I welcome witnesses and those present in the gallery today for this, the second session of hearings. I emphasise that, in addressing the terms of reference, the committee has not prejudged the issues, nor is there any element of a witch-hunt in this. We have had a few inquiries that have disturbed us a little bit in that our inquiry may have some sort of hidden agenda. It has not. It is a perfectly open inquiry and we are not in the business of being in witch-hunts.

Members want to hear a full range of views and consider initiatives that are being or could be developed for the better management of fatigue in transport. Managing fatigue is a very important issue in the workplace and has ramifications for all of us. Under the terms of reference, the committee is asked to inquire into and report to the parliament on managing fatigue in transport by focusing on four areas: the 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; and ways to achieve greater responsibility by individuals, companies and governments to reduce the problems related to fatigue in transport. Queensland is recognised as one of the leaders in adopting important initiatives to address the management of fatigue, particularly in road and rail transport.

Witnesses in today's program include government and industry representatives from all transport sectors—air, road, rail and sea. For example, appearing today are people directly involved in working with maritime and air pilots and aircraft maintenance. In addition, we have a witness working to assist drivers to understand and manage fatigue. I would like to thank all of those who have generously given of their time to come here and assist the committee in its inquiry. It promises to be a very interesting and informative day.

[8.38 a.m.]

MULFORD, Mr Andrew John (Private capacity)

CHAIR—Mr Mulford, I welcome you. I understand that you are a licensed aircraft maintenance engineer and that you are not appearing for any organisation but in your private capacity.

Mr Mulford—That is correct.

CHAIR—Before proceeding, I have to advise you and all witnesses that the committee does not require you to take the oath, but the committee's hearings are legal proceedings of the parliament and warrant the same respect as proceedings of the House itself. As such, the giving of false or misleading evidence is a serious matter and is regarded as a contempt of the parliament. At the end of the hearing, if you use any proper names or quotations, you might defer to the Hansard reporters so that they can get the correct spellings, et cetera. Would you like to make a short opening statement before we go to questions?

Mr Mulford—Yes, Mr Chairman. I welcome the opportunity to make a brief opening comment to mention a recent development and a few key points. The timing of this inquiry coincides with proposed changes to airline line maintenance during which time the committee will be able to observe any effects of these changes, which have the potential to increase levels of fatigue in the industry least able to tolerate it. Up until two weeks ago, a quantum change to line maintenance work practice, including overnight servicing, was proposed without considering fatigue. At this juncture, a memo was received by all affected staff advising them of the issue of fatigue and duty of care and that after a program of education and changes was implemented, this issue would be better understood and jointly managed.

There are two important points I put to the committee to argue against the consideration of self-regulation for the management of fatigue and airline line maintenance. The first point is that the committee must always consider the compromised position of an airline manager when trying to reduce fatigue with one hand and increasing resource utilisation with the other. The second point is that, to my knowledge, the only readily available fatigue analysis is based solely on hours of work and does not factor in environmental, physical and mental demands. When an appropriate standard is set down, it should then be applied to the risk of the tasks being carried out and the time of day or night that they will be carried out for a complete and accurate fatigue synopsis.

Serious consideration must be given to the undeniable risks of carrying out major aircraft servicing between 2 a.m. and 6 a.m. given the overwhelming evidence of fatigue during these hours. Overnight aircraft servicing must be reviewed extensively as it is a concept that originated in a less competitive era and is vulnerable to business plans that are indifferent to the unique operating conditions of an airline. That is my opening comment.

CHAIR—That is your overview, but are you a supervising engineer, or are you hands on, or are you a bit of each?

Mr Mulford—I am hands on. As a licensed engineer, we—

CHAIR—What sort of aircraft do you do?

Mr Mulford—Regular public transport.

CHAIR—747s?

Mr Mulford—Not quite that large.

CHAIR—146s?

Mr Mulford—Certainly in between those two, yes.

CHAIR—You do not particularly want to identify—

Mr Mulford—Not particularly, no.

CHAIR—Right.

Mr Mulford—And I believe that it is across the board. This is an important issue to cover that whole class of aircraft.

CHAIR—So just lead us through it. Most aircraft terminating in Brisbane at night, or operating exclusively in Queensland, are serviced in Brisbane. Is that the idea?

Mr Mulford—I believe that Brisbane is the major centre.

CHAIR—The major centre.

Mr Mulford—Yes, although we, of course, have aircraft terminating in Cairns and Townsville, but there is no major aircraft overnight servicing there. It has a brief terminating check. Can I get back to your first question about my supervisory capacity? As a licensed engineer, we supervise, we certify, we rectify. We take care of all of those issues in various capacities in our daily work.

CHAIR—What time do you start work on an aircraft at night? The last aircraft are in at about 9 o'clock, aren't they?

Mr Mulford—No, aircraft are terminating anywhere between 7.30 p.m., 8 p.m. up until well after midnight. We have arrivals in from Wellington and the connection from an international flight from the Sydney international terminal that gets in after midnight sometimes. To clarify the point further, generally in Brisbane overnight there is one aircraft designated for a major service. It can arrive anywhere between 8.40 and 10.40 and, depending on the delays in Sydney, it can arrive a little bit later than that as well.

CHAIR—What is the procedure then? Is it taken to a service hangar?

Mr Mulford—Not straightaway. Depending on what shift practices you adopt, it can have a brief check whilst on the tarmac—the cleaners can wipe the dirty areas down after it has had its day flying—and then we tow it over to the hangar. So it can take, on average, at least three-quarters of an hour to an hour to get to the hangar. So that leaves your starting time for the major overnight servicing anywhere up to 11 o'clock. That is quite frequent.

CHAIR—So then where is the problem if you do not start seeing this aircraft until that time? Where is the fatigue? Are people who have been on day shift doing this work?

Mr Mulford—No.

CHAIR—Is it the pressure of the work? Just describe it for us.

Mr Mulford—No, a combination of factors. By the time that you are starting work on the service, you have already seen through quite a few aircraft. You may have already done a terminating check on one of those aircraft that arrived before this major service has arrived. So you are looking at 11 o'clock. The normal body starts to wind down about then; you are feeling as though you would like to be at home and in your normal routine. Where the problem starts, it would have started for most people, I would say, at 1 o'clock, 2 o'clock in the morning. Some people call it hitting the wall; there are various terms for it. The services are increasing in their depth and in their diversity of tasks required.

The other night, a very extensive check came in—two nights in a row in fact—and manoeuvring the aircraft into the hangar in Brisbane took considerable time. That check may not have been started until 11.30 p.m. It was a very big check. The fatigue kicks in because of the physical nature of the tasks, the environment in which you have to work and the work that you have already been carrying out that day. At 3 or 4 in the morning you are standing out in the cold on concrete. All of the factors that I have mentioned in my submission contribute to this condition.

CHAIR—You mentioned in your submission that aircraft engineers are not covered by a limitation on their hours of duty. What did you mean by that?

Mr Mulford—As distinct from a pilot's working regime, there are no limitations on how many hours a week or per shift an engineer can work under the guidelines set down by CASA.

CHAIR—You mentioned the average number in your submission. Do most of the people in aircraft maintenance you know work under these 12-hour shift arrangements?

Mr Mulford—I believe in the major bases the 12-hour shift is widely adopted.

Mr St CLAIR—What time do you start your shift?

Mr Mulford—We start the morning shift at 6 a.m. and the evening shift at 6 p.m.

Mr St CLAIR—Does that cover the majority of aircraft maintenance schedules? You are saying that the last planes come in at 11.

Mr Mulford—They arrive anywhere between, say, 8.40 and 1.30 in the morning.

Mr St CLAIR—Is there any reason for your starting at 6 p.m.? For example, why wouldn't you go from 8 till 8 or something like that?

Mr Mulford—The 12-hour shift was taken on board a long time ago—1988. Those shift times have not changed. We feel that finishing the night shift at 6 a.m. perhaps is more appropriate than finishing at 8 a.m.. Perhaps that is the factor that is taken more into consideration.

Mr St CLAIR—In your opening statement you said that changes were announced in the past two weeks.

Mr Mulford—Yes. The point I was trying to make is that since the closing date of submissions we have been advised that fatigue will now be considered in changes that the industry, due to competitive pressures and so on, will most likely be experiencing.

Mr St CLAIR—I must have misheard you, because I thought you said there had been no reference to fatigue in the setting up of this—

Mr Mulford—That was correct. This happened two weeks ago.

Mr St CLAIR—So the new rules will have a reference to fatigue management?

Mr Mulford—Fatigue was not mentioned in the—

Mr St CLAIR—It is not a trick question. I just want to be clear in my mind as to whether the new rules that are coming out contain a reference to fatigue management.

Mr Mulford—They are not rules as such. We need to clarify that. These are changes that will be brought about in the industry. Prior to this inquiry, it seemed that those changes would not take fatigue into account. As this inquiry is now in place, I believe that they are now being considered. I believe my opening comment was to bring you up to recent developments since the submission closing date. That is a recent development since the submission closing date; that is, fatigue will now be considered.

Mr St CLAIR—Do you believe that it is as a result of the wide publicity of this inquiry that that has happened?

Mr Mulford—That would be one reason. The issue of fatigue is not new. Certainly, since the inquiry it seems to have more impetus.

Mr MOSSFIELD—At least on two occasions in your submission you made reference to the industrial climate. I am interpreting that as meaning that you feel that the industrial climate is not allowing you or your organisation sufficient opportunity to put your views relating to fatigue. You stated that in the present industrial climate it is also more and more difficult for the representative body to initiate work practices and address unsustainable work arrangements. Am I interpreting that correctly?

Mr Mulford—There is sufficient opportunity. We are certainly not prevented from any dealings in the commission or anything like that. That is not what I am trying to get across. There is sufficient opportunity, but the industrial climate is certainly very challenging.

CHAIR—Do not hold back. I get the feeling that you are a bit scared. Say it as you see it. We are here to listen to you.

Mr MOSSFIELD—We are representative of the whole parliament.

Mr Mulford—I am aware of that.

CHAIR—Say it as you feel it. Don't be frightened.

Mr MOSSFIELD—You might want to think about it.

Mr Mulford—It is not a hard question. The industrial climate is different from what it was 10 years ago in Australia. That is my first point. Secondly, I made another statement that the IRC cannot refuse any initiative by management. Therefore, often the representative side of relations is left to react. It is very hard for us to take the initiative. The company has the initiative in this industrial climate.

Mr MOSSFIELD—Do you feel as though the eight-hour shift—day, afternoon and night—would be a better arrangement for overcoming fatigue problems, as distinct from the existing 12-hour shifts?

Mr Mulford—I am not putting forward any claims. I believe that there are many rosters that could be a better alternative—once tried, of course. I do not have any direct suggestions in that regard. The eight-hour shifts are what we used to work previously. Until 1988 we did work an eight-hour shift. I believe the experience in other countries was that the 12-hour shift was beneficial for increasing productivity and providing quality time off. It did provide those things initially, but I believe that the review of the fatigue issue may result in changes to the hours worked in one day.

CHAIR—I sense some reticence on your part. Let me say this to you: we are from all political parties. We are good mates and we work very hard together. We do not vote on things and you need not think that the members who are not of a union persuasion will act differently from the others. We all act as one. If as a result of your giving evidence today anything happens to you, this committee would see that as an infringement of its powers and a contempt of the parliament. Anyone who did that to you could expect us to come down on them like a tonne of bricks. I give you that assurance.

Mr Mulford—I take that under advisement. Thank you.

Mr HARDGRAVE—As someone, similar to my colleagues, who flies a fair bit, I thank you for coming forward and raising this issue today. For us, the human face of air travel tends to be the cabin crew. I don't believe that we have had a submission from its association. However, some cabin crew have said the same thing to me. They work a 12-hour shift one day, then a five-hour shift, then a 10-hour shift and then a six-hour shift. I

probably would have made a good shop steward were I on the other side of politics. I cannot understand how anybody can plan their life around that type of working environment. Is that your sort of working environment? What is your working week like?

Mr Mulford—It is long. Generally, no matter what age we are, if we have two solid days and two solid nights, it takes a few days to recover from that.

Mr HARDGRAVE—But you are not working five 12-hour shifts?

Mr Mulford—We are working at least four. We are blocked four 12-hour shifts.

Mr HARDGRAVE—And four night shifts one week and four day shifts the following week?

Mr Mulford—No, we work two days and two nights and we rotate forward one day per week. We have an eight-week working block. Throughout that eight-week block we rotate one day forward per week. We have a fairly stable roster system. We know which time of the day we are starting and which days of the week we are working day shift and night shift.

Mr HARDGRAVE—I think Mr St Clair has worked some very odd hours as well. Some 20 years ago, when I was a radio announcer playing rock-and-roll records between midnight and 5 a.m., starting at about 10.30 at night and finishing at about 5.30 in the morning, I remember that I could cope when I had four of those in a row. However, when I did a day shift and then a night shift it was very taxing. Do you agree with that?

Mr Mulford—It is a very taxing schedule. This should be fairly clear to people. We are carrying out very responsible tasks. Whenever I tell somebody what I do they say, 'That's a responsible job.' I think to myself, 'It is.' Commonsense would lead you to believe that the hours that you carry out these tasks and the maintenance of the body of the person carrying out these tasks should be paramount.

Mr HARDGRAVE—You have not put forward a proposal for what your working shift should be, but do you think it would make sense, based on your experience, to have a more consistent run of, say, three 12-hour shifts—36 hours, recognising that that is less than the normal 38-hour week? You could be given four days off, three days off or a bonus couple of days off. Then you could work a day shift and then have a break. Could it not be organised in that sort of way?

Mr Mulford—As I said to Mr Mossfield, there are many combinations of rosters. In all the research—I guess you may have gathered yourself that there is no perfect roster combination for any workplace.

CHAIR—I think the point that Mr Hardgrave was making—and I think the committee will want to know this, because we have had evidence on this in Adelaide and Melbourne—is that there is no evidence to say that 12-hour shifts in themselves are dangerous; it is the combination in which it is done: if it is a night shift with a succeeding day shift or vice versa. You say in your submission you do—

Mr Mulford—Two days, then two nights.

CHAIR—For example, if you did two night shifts, would you get a day off between that and when you did the—

Mr Mulford—We get four days off.

CHAIR—The point is: do you do those four straight or do you have a day off between the two night shifts and the two day shifts?

Mr Mulford—We do two day shifts followed by two night shifts, so we get four days off.

Mr HARDGRAVE—So you do two day shifts, have 36 hours off?

Mr Mulford—Two day shifts, 24 hours off. We finish the second day shift at 6 p.m., start the first night shift at 6 p.m. the following day and then do another one. As I said, it is the 12 hours off in between the night shifts which really does seem inadequate to rest and recuperate properly. Just to clarify, we do two day shifts, two night shifts, then we have four days off. So we are working a 48-hour block, even though we are under a 38-hour week agreement.

CHAIR—Have you ever suggested to management that it should be two day shifts, a day off, two night shifts and perhaps three days off, or do most of the guys prefer the four days straight?

Mr Mulford—That seems to be the case. I guess it is very hard—there are a lot of people involved. There are large numbers involved. It is very hard for an individual to go up to a company and say, ‘Look, this is what I think we should do’, and the company would say, ‘Okay, we’ll try it.’

CHAIR—If you and your colleagues are rostered so that you are doing 14 twelve-hour shifts, if it is work of that regularity, what is the difference between that and 21 eight-hour shifts, or again is there a money component in doing the 12-hour shift?

Mr Mulford—No, there is no extra—

CHAIR—There is no extra overtime? If you are doing 48-hour weeks there must be some sort of penalty that applies.

Mr Mulford—There is two hours overtime factored into it, but I believe that the company was prepared to cop that for the productivity gains. It has not been—

Mr HARDGRAVE—Is there any additional check of work performed in that 6 p.m. to 6 a.m. shift versus the 6 a.m. to 6 p.m. shift—additional checks in the night shift versus the checks in the day shift?

Mr Mulford—The checks during the day are pre-flight checks. Does that answer your question?

Mr HARDGRAVE—I think most would agree that, as you have described, at 4 a.m. it is cold out there at Eagle Farm and regardless of the time of year, bodies are tending to want to switch off between 3 a.m. and 4.

Mr Mulford—They have switched off.

Mr HARDGRAVE—Between 3 and 4 a.m. is the time when most people die. If you look at biorhythms, that is when people are at their most lethargic. Are there additional checks built into the system recognising that fatigue could have been a greater factor in the night shift than during the day shift?

Mr Mulford—Is there a check and balance?

Mr HARDGRAVE—Are there additional checks?

Mr Mulford—No.

Mr HARDGRAVE—In other words, it is regarded by the system that the work quality—this is no reflection on you or your colleagues—could never be any different during the night from what it would be during the day; it is just simply hours worked?

Mr Mulford—That would seem to be the case.

Mr GIBBONS—Can you just explain to me what the maintenance crew would do—obviously there would be specialist engine maintenance crew people and there would be airframe maintenance, or are you all multiskilled?

Mr Mulford—We are multiskilled. You may have gathered from my submission that manpower numbers—I speak for Brisbane alone; it may be different in Sydney or Melbourne—on each shift have stayed the same. We do not have big crews running around. Often on my shift up until recently it just happened to work that there was one engine fellow. He would be doing a service on both those engines and there would be three or four airframe fellows. Airframe seems to be an endless story. There is no end to it. You just throw a bucket of men at that and one bloke at the engines because that is all you can spare.

CHAIR—What do the airframe fellows do?

Mr Mulford—Lubrication, inspection, filter changes, servicing.

Mr GIBBONS—I know it sounds like oversimplifying, but if you had the magic wand, what would you recommend precisely to fix the problem of fatigue in your industry if you were given the power to do it?

Mr Mulford—I would simply question the soundness of allowing people to be working on aircraft—major regular transport aircraft—in Australia between the hours of 2 and 6 p.m. Some people might say, ‘It is only 3 to 6 p.m.’, or whatever, but certainly—

CHAIR—Just repeat those hours again.

Mr Mulford—Between 2 and 6 a.m.

CHAIR—Between 2 p.m. and 6 a.m.?

Mr Mulford—2 p.m. and 6 a.m., sorry.

Mr HARDGRAVE—2 a.m.

Mr Mulford—2 a.m. and 6 a.m. I am trying to avoid being completely specific, because there is so much evidence to back up any combination of hours in the morning hours.

CHAIR—The practicality is that aircraft in Australia have to be serviced overnight, and there is also the price of aircraft. The point is: how do we manage the stresses on the people who are doing the work? I do not think you can say you have to close down every workshop between 2 a.m. and 6 a.m.

Mr Mulford—No, that is not what I am saying, either. I will give you this insight into the way we would think. If we have a windscreen change, that is an all night job. There are many jobs that just arrive at 10 o'clock and they are an all night job. Okay, you just have to do it. A windscreen change or main engine control component—that sort of thing—is going to take you all night. There is no getting out of it and it is the exception rather than the rule.

The way that I would like the committee to see things progressing is that the companies, due to competitive pressures, are going to fill the hours of overnight servicing with the maximum amount of manpower and productivity as they can. I believe that that should be regulated quite seriously because they are dangerous hours to be carrying out this very responsible job.

Mr St CLAIR—Why are they dangerous hours?

Mr Mulford—I believe that there is overwhelming evidence—and from my own experience I do not feel as I should. I do not feel awake, astute, alert to be carrying out the tasks with a completely appropriate conscience and sensory ability. I, as many other people would experience, feel tired. There is no doubt about it. You feel asleep, even though you are awake. All these things contribute to a condition that makes it very difficult for you to be as aware as you should be and as focused as you should be. As I said, from overwhelming medical evidence and from personal experience, the human body goes through these changes at these hours in the morning.

Mr St CLAIR—Do you do anything to prepare yourself for those night shifts?

Mr Mulford—Always.

Mr St CLAIR—What do you do?

Mr Mulford—I sleep for a few hours before I go in for my first night. In between the nights I do nothing, I plan nothing. I go home, I go straight to sleep because I feel like doing nothing else, let me tell you.

Mr St CLAIR—Do you sleep for a good period?

Mr Mulford—The human body generally likes to have its own rhythm somewhere in that time in the morning and that can be disruptive of your sleep. Generally all you can do is try to plan your day around sleeping and be able to go back to sleep if you feel tired.

Mr St CLAIR—Dietary?

Mr Mulford—I do not drink coffee on night shift. I drink green tea. Coffee affects me and it would affect my sleep during the day. Dietary—it is very hard to drink alcohol every day if you wanted to drink alcohol.

Mr St CLAIR—I was just wondering whether you look at your diet and shift your diet if you know that you are going to be working all night.

Mr Mulford—There has been very little education—I guess this is one of the things that we feel—in our industry for this type of personal management, dietary management.

CHAIR—Any fatigue management?

Mr Mulford—In place? No.

CHAIR—None whatsoever?

Mr Mulford—No, and I am happy to say that.

CHAIR—A couple of hours a week on fatigue management?

Mr Mulford—Nothing. I have been doing 24-hour shifts since 1985.

Mr HARDGRAVE—Pilots have a requirement of X hours between bottle and throttle. Are there similar requirements for people maintaining aircraft?

Mr Mulford—Not legally, but I believe that there is a recommendation only.

Mr HARDGRAVE—So there is no check made of those checking aircraft as far as their pre-work standing is concerned?

Mr Mulford—Not to my knowledge, but I believe that they may be interested in introducing drug and alcohol testing. I am not sure.

CHAIR—When you get to work, is there a supervising engineer who is responsible to make sure all the checks are done?

Mr Mulford—Yes, there is a foreman on shift.

CHAIR—Let us say it is one of these shifts when you get the windscreen in. Do people get taken off other duties or do you just try to cram those in?

Mr Mulford—Generally, yes, they would be taken off—the manpower for the arrivals on the tarmac would be reduced.

CHAIR—Are casuals brought in to assist?

Mr Mulford—No. If you really have a bad night, the foreman will start ringing around to try to get overtime people in. The 12-hour shift makes it very hard for people to come in and do overtime, particularly after the shift they have just worked. There are no duty hour limitations to limit the overtime people work after a 12-hour shift.

CHAIR—What do you think of the fact that the Australian Licensed Aircraft Maintenance Engineers Association might commission the Adelaide Centre for Sleep Research? Is that your understanding? Are you aware of that?

Mr Mulford—Yes, I am aware of it.

CHAIR—What is your view on that?

Mr Mulford—That they are commissioning? I do not know that they are, but I believe that they should.

CHAIR—Have you suggested this to them?

Mr Mulford—Yes.

CHAIR—What is their attitude?

Mr Mulford—I believe they are currently looking at this.

CHAIR—I am not asking you to speak on their behalf; I am just asking you to say whether you feel they should do it or not.

Mr Mulford—I believe so. That is why I mentioned it in my submission.

CHAIR—That is where I am picking it up from.

Mr MOSSFIELD—People tell me you came into the industry at a fairly early age?

Mr Mulford—Not necessarily young at all. There are fellows I work alongside who are only 40 and they have 25 years up with the company.

Mr MOSSFIELD—Is there a set retirement age?

Mr Mulford—It depends on your age and other superannuation factors, I believe.

Mr MOSSFIELD—Are you aware of any particular stress or fatigue related illnesses that LAMEs experience at all?

Mr Mulford—Ulcers.

Mr MOSSFIELD—Is that documented?

Mr Mulford—And other shift workers.

Mr MOSSFIELD—Shift workers generally?

Mr Mulford—Yes. Stomach cancer and all sorts of things, even though they have good diets and so on.

Mr MOSSFIELD—Do you feel that the age of a person would have any beneficial effects relating to handling the 12-hour shifts and the fatigue? Is it easier for a younger person to handle it than an older person? Is there any relationship there with age?

Mr Mulford—From personal experience—this might sound unusual—I found it more difficult when I was younger. There were occasions when I fell asleep up on a work stand sort of thing when I was just resting for five minutes and found myself asleep. That was when I was younger. I seem to be able to handle it a bit better now, but I believe that from 40 to 45 onwards the body really starts to do it pretty tough with shift work. That is only from what I am reading.

CHAIR—Although research shows that some guys at that age quite often handle the shifts better than younger guys.

Mr Mulford—As I have said to you, I actually did find it more difficult when I was younger. That is only from personal experience and I am not going to speak for everybody on their behalf. It really does affect people very differently.

CHAIR—Have you approached the association to make a submission?

Mr Mulford—They made a submission. The president of the association made a submission—Mr Ian Lang.

Mr HARDGRAVE—Based on your experience, do you believe that it is possible for an aircraft to have been maintained purely on a night shift, or are there program maintenance requirements that actually ensure that it is maintained day and night?

Mr Mulford—I am glad you picked this up. I made mention in my submission that it seems to be a changing philosophy to decrease the amount of servicing that is done at a major lay-up to decrease the amount of time that aircraft is out of service. That is an

initiative the company is taking on board. Unfortunately, the consequence of that is that the night shift is then picking up the tasks that have been off-loaded from that major lay-up. That major lay-up is carried out during day and afternoon shifts once every few years. In between that major lay-up every few years, it is serviced continually overnight.

Mr HARDGRAVE—Given that safety is the first priority of aircraft movements in this country, you are really going to the heart of that first priority, are you not?

Mr Mulford—Absolutely. I was not involved with the particular aircraft, but there has been a discovery that one particular aircraft was starting to be maintained at night-time. I cannot comment on the quality or on whether they had any servicing or reliability problems or whatever, but they found that the aircraft was far better serviced over a weekend, during a day shift.

CHAIR—I am sorry; we have to conclude there. I am disturbed by your evidence, to be quite honest. We have a submission from your association which I will now go back to and read again. I thank you very much for attending this morning. It took some courage and I trust that you can feel comfortable in what you have done. I repeat: if you find any difficulties as a result of giving this evidence today, we want to know about it.

Mr Mulford—I have not been intimidated by the committee at all. That is not my concern. I hope you understand what I am saying. Thank you.

CHAIR—Thank you for coming. You will receive a draft of the *Hansard* transcript and a copy of the report when it is finished. If you need to refer to your evidence, it will also be available on the parliament's Internet site.

Mr Mulford—Thank you, Mr Chairman. I offer an opportunity for any last questions. Please, if something is not clear, I would like while I am here to—

CHAIR—If we find that there is something we want to come back to, we will communicate with you in writing. We trust that you will respond in writing. Thank you very much.

[9.18 a.m.]

MAHON, Mr Gary Leonard, Director, Road Use Management and Safety, Queensland Transport

CHAIR—I welcome the representative of Queensland Transport. I must caution you that, although your evidence is not given under oath, these are legal proceedings of the parliament and warrant the same respect that attends the House itself. Any false or misleading evidence may be taken as a contempt of parliament. Also, if you use any quotations or proper names, I trust you will defer to the Hansard reporters before you leave so that they can get those accurately. Would you like to commence with a short opening statement?

Mr Mahon—As the committee is aware, we have put a fairly substantial submission before you to consider.

CHAIR—It is an excellent submission.

Mr Mahon—Thank you. I commend my staff for the contribution they made to the preparation of this submission. Fatigue in transportation has been one of the higher profile issues in Queensland considerations for about the last five years. We reviewed our whole position in relation to what was then called driving hours in transport approximately six years ago and made the first substantial change to the regulations in March 1994. The government of the day showed, we believe, some considerable leadership in supporting us in that approach. That was where we did a number of things.

We completely repealed all our previous legislation and introduced a completely new set of regulations. We moved away from the terminology of driving hour limits to the concept of fatigue management, which we believed was more the issue. One of our concerns was that the focus was just simply on demonstrating that you could meet a number of hours, rather than actually on managing fatigue, which was the real issue.

We introduced the quite groundbreaking concept, we felt, of the fatigue management program, which allowed a person or a company to step outside the regulations and actually manage to a performance outcome rather than a process outcome. Over the last few years we have developed that concept of the fatigue management program, as it is now known, to such an extent that it has gained both national and international recognition. We have had our hurdles along the way in terms of bringing national opinion with us, to allow these operators to be able to operate across the nation, because it was not really a concept that would have been given sufficient consideration if it was only based on a state application rather than national application.

The NRTC then introduced the national regulations last year. They bring a fairly good level of consistency to the operation of road transport in particular. It did not particularly change the standards that were in operation across the states to any great extent. It did introduce the notion of TFMS, or the transitional fatigue management system, which we believe is a step forward because it starts to point companies and/or drivers in the right direction. It is still well short of the sorts of performance outcomes we would be looking for, but at least it is heading them generally in the right direction.

In summary, it has been about five or six years of work. We believe that some quarters of the industry have changed their attitude quite significantly. In other quarters there is still quite a bit of work to do to get them to accept that there is a real need for a cultural change in the road transport industry.

The other key component is all of the others in the chain of responsibility. I talk of freight forwarders, major customers and others who believe that they can completely disregard the fatigue issues in the transport industry in terms of meeting their particular needs. One of the concepts in the FMP is to allow us to include those people, because there is no better way than to focus people's minds on sharing the risk. If you can move them from a situation where they believe they do not share the risks to one where they believe they share the risk, you have a good opportunity to focus their minds on acting more responsibly and taking other factors into consideration in terms of product delivery and other services that come from road transport.

CHAIR—You have been at the cutting edge of developing the fatigue management program?

Mr Mahon—Yes, I have.

CHAIR—You personally?

Mr Mahon—Yes, I have.

CHAIR—What is the anecdotal evidence of the impact of the program and the improvements? What are some of the things it has achieved thus far?

Mr Mahon—Another of the witnesses today represents one of the organisations that was first in what we call phase 1 of the FMP. As for anecdotal evidence, I could give you instances of truck drivers saying to me, 'I have been driving in the industry for 30 years and for the first time in my life I am actually telling the truth about what I do. It makes me feel good.' We have evidence coming forward from drivers about feeling much more able to actually manage their lives rather than being dictated to. We have operations managers and others being a lot more concerned about where drivers are and what they are doing, because they now understand that it is a part of their responsibilities and their fatigue problem does not drive out the door with the truck.

In terms of some of the more objective evidence, at last count I think phase 1 operators had in excess of some 18 million kilometres. We have had only one fatigue-related incident, and it was an incident rather than an accident. There is a much higher level of awareness on the part of those operators and drivers about what their fatigue issues are and how to manage them. Our survey work tells us that we have been able to significantly dispel a lot of myths about managing fatigue.

Overall, much better informed drivers and operators are out there in these vehicles as a part of phase 1. One of our operators in phase 1 lost a couple of major contracts because the other parties in the chain were not prepared to do what they believed was voluntarily share the risk. They share it anyway; they just do not understand that they do. That particular

individual has subsequently picked up even better contracts. The contracts were substantially engaged on the basis that that operator actually mitigates the risk for the contractor. The advantage is that the transport operator is actually mitigating the risk rather than taking the attitude, 'It is not my problem; it is your problem.' To us, it is a signal that, slowly but surely, there is an attitude change starting to come. That is one of, 'Let's face up to our responsibilities and manage this issue rather than put our heads in the sand and just think that it will go away.'

Mr HARDGRAVE—Trucks are still breaking the law, are they not? They are still speeding. They are tearing through my own electorate along Kessels Road to Upper Mount Gravatt and along McCullough Street at Sunnybank and they are rat-running through suburban streets, all to get around at different times of the day and night. It all seems that is because there is some sort of deadline pressure on them.

Mr Mahon—Partly it is because of industry practice. Similarly, when ships arrive at the dock people want them unloaded immediately. There are just-in-time sorts of imperatives these days for a lot of manufacturing. I am not suggesting that we are anywhere near curing the issue that we have. We are trying to manage a cultural change to get people to own this particular problem.

In support of the industry, I suppose, you must look at the crash statistics. In Queensland over the last five years heavy vehicle crashes have reduced by about 40 per cent. That is one indicator, but there is still a lot of work to do. The industry associations generally try fairly hard but, unfortunately, the membership of the industry associations is fairly low. One of the biggest challenges for us has been how to get inside the minds of a very fragmented industry.

Mr HARDGRAVE—So whose minds are you trying to get inside of most of all? Is it the operators, the truck drivers, the owners of the companies or the consigners of the goods?

Mr Mahon—In the first instance our target has been the owners. There are a number of ways you can get to them but, in my view, the real challenge is actually getting inside the heads of the owners. One of the problems we have is that most owners have come up through the ranks, so you get this attitude of, 'When I was a boy we used to do this and that leg in such and such a time. If you can't do it you are a bit of a wuss', or, 'I will find someone who will.' These types of attitudes typically flow through: 'If you are not man enough to do the job, I will find someone who can. Why would you need to sleep? I never had to.' You find that, particularly at the first line supervisor level, the foreman in the yard or the foreman on the dock typically is a driver with many years' experience who has come off the road, and that person measures the new drivers coming through by his or her standards.

Mr HARDGRAVE—If that is the case, who would be the greatest at fault on the roads these days as far as those not getting involved in this fatigue management program, not adhering to the basic laws about speed and hours driven and so forth? Are they the privateers or the big transport operators? Is it someone who has the pressure of double a normal mortgage riding behind them?

Mr Mahon—The first thing to remember is that about 80 per cent of the industry is operated by organisations of five employees or fewer, so it is a bit difficult to point the finger in one direction or another when you have such a high proportion of the industry being undertaken by one particular group. At the end of the day, the driver behind the wheel should be the master of his or her own destiny. We only partially take on board this view by drivers of, ‘If I don’t do it, the boss will do this or that to me.’ If they had the collective will to act more consistently with community expectations, they may well influence owners as well.

I could give you anecdotal stories of owners who have taken proper and appropriate steps for drivers to be able to manage a trip and then the driver has gone and done something else. On the flip side of that, I can also show owners who make inappropriate operating conditions for the driver that are unsustainable.

Mr HARDGRAVE—There are plenty of carrots out there now. This is a good program. What about the sticks? It seems to me that, if you are driving a vehicle that is 10 times the weight of a car and you are doing the wrong thing—that is, you are fatigued, you are speeding, you are driving in a reckless way—you should get 10 times the fine of a driver of a normal passenger car. Are drivers getting fined? Are companies getting fined? Are consignors getting fined? It is not going up the line, is it? There is really no stick being applied to the people who are putting pressures on drivers.

Mr Mahon—The problem with fines is that level of affordability. There is plenty of anecdotal evidence. It is very difficult to substantiate, because there are not too many people who are prepared to hold their hand on a Bible in a court about it, but they will give you all the stories on it where organisations simply factor those costs into the cost of doing business. So there is a level of affordability that you reach which, if you go beyond, they will basically just put their hands up in resignation and will hand themselves up to do community service orders or whatever the case may be to serve those warrants out.

The approach that we have taken is a bit convoluted. It goes like this: there is substantial angst in the industry about the regulations as they currently are, because it dictates to them how they will conduct their business. We believe those regimes should be made tighter, but then allow those who are prepared to meet their responsibilities to step outside them. I do not want wish to be cavalier when I say this, but it is a bit like the 16- or 17-year-old who is suddenly given an opportunity to stay out later on a Saturday night. Their parents say, ‘If you can be shown to be trusted, you can be allowed to continue that; if you are not, there will be very tight controls put on you.’

This is the same approach in that you allow them the opportunity to step outside the regime and demonstrate real responsibility with the very real punishment of being put back into the much tighter, regulated regime where we will dictate to them the way they run their company and not reconsider them for an FMP-type program for some significant amount of time.

Mr HARDGRAVE—What are you doing to recidivist companies, companies that literally go through driver after driver, who might lose a licence because of something that

they have been pulled up for on the road? Those companies will find a new driver and go through that driver. Do they draw attention to themselves in the system?

Mr Mahon—They do. At the moment we do not have a huge number of people in the FMP, because we have found that many people speculate about what it is, but once they come in and find what all the accountabilities actually are and the fact that they will have to change—there is not an organisation that has come to us that has not found that they will have to substantially change their practices to meet the outcomes of the FMP. A huge proportion walk away because they are not yet ready to make that decision. Those who have, I am sure, would freely admit to you that they have had to significantly reassess the manner and way they conduct their business.

Mr HARDGRAVE—What about within the Queensland government? Perhaps you would be embarrassed by this, but somewhere in the Queensland Transport system someone is in charge of Queensland Rail Express. When I wrote to Transport Minister Bredhauer 12 months ago and said to him that I was nearly run over at midnight at McCullough Street, Sunnybank by one of his trucks doing 100 kilometres an hour, I got back a Pontius Pilate letter. What practices are in place within the Queensland government?

Mr Mahon—To the best of my knowledge, Q-Link would be operating under the regulated hours regime. They are certainly not in the FMP.

Mr HARDGRAVE—Rather than go into too many specifics, I simply make the point that the concept is right, but the execution—because of companies, because of governments' own departments' reluctance to follow it through, because there is no enforcement through regulations—means that perhaps the system does not work in practice.

Mr Mahon—I think one of the things you have to bear in mind is that the logbook regime is an honour system. If you expect to regulate it via command and control practices, you will have to significantly increase the amount of funding you are going to put into the uniform resources that are out on the road. That is the problem: do you put a system in place where you really get inside the minds of operators to own the problem, or do you try to regulate them into submission? My experience is that regulating them into submission does not work.

Mr HARDGRAVE—Chairman, I should say that it may not have been Transport Minister Bredhauer; it may have been Transport Minister Johnson in the previous coalition government. Either way, the story is still the same.

What about the comparison of hours travelled and fatigue factors? From your experience, is there greater fatigue for people on the road working overnight rather than during the day?

Mr Mahon—The research tells us that working in the hours of darkness is not preferable to working in the hours of daylight. Considering the transport task, it is not really feasible to say that you cannot drive at night. What we have found through the FMP process is that we have the opportunity to incorporate what we have learned from research into best practice approaches for managing the issue. Regulated regimes do not do that. In fact, the regulated regime, I would argue, has not substantially changed from when the concept was first

introduced back in the late thirties. The numbers might have changed a little, but the basic approach is still the same.

With an FMP, you take into account medical screening, health and awareness, training people to understand what the fatigue issues are, diet and so forth, and how to actually incorporate things like strategic napping. One of the cultural issues we have in Australia is if you go off and have a nap for an hour, you are weak. We have to change that culture. There is a very good example in the American military. They have now significantly shifted the attitude of senior generals during war readiness situations to go off into a room and have a nap. That is a concept that was inconceivable 10 years ago.

In terms of getting up to an FMP standard, what the companies have to do is risk assess all the operations they conduct right from the preparedness for duty, what people do in their off-duty hours and what organisations can do to encourage people. I was interested in the previous witness' testimony when he was talking about what he tries to do to prepare himself for the next shift. You need that incorporated into a systemic process and not just rely on individuals being smart enough to think about those sorts of things.

You can train and educate people about what the issues are and include the spouses so they understand more about it. In the transport scenario, for instance, drivers could be away for seven days. When they get home, their spouses want them to mow the lawn, paint the house and do all those different things. We are not marriage counsellors, but if you include the spouses and they understand more about what the issues are, they are more likely to respond in a way that is positive in terms of that particular driver managing their fatigue issue—whether it is the type of diet on the road or whatever.

Hours of darkness is a good example. Evidence will tell us that you should have at least four hours of sleep in the hours of darkness on any day. That is one of the imperatives that is included in the principles for FMP operators to account for in the way they put shifts and rosters together.

Mr MOSSFELD—Would there be different regulations for different road transport vehicles such as freight as distinct from passenger vehicles as distinct from taxis as distinct from other forms?

Mr Mahon—To take those in order, there are some small differences between freight and passenger vehicles, but not to any great significance. Taxis are not regulated at all. The problem with the regulated regime essentially is that it takes no account of the human factors. It is simply compiling a set of numbers where you are saying, 'That is the lowest common denominator. All of you, regardless of your capacity or incapacity, can drive up to 12 hours a day or 14 hours or whatever the case may be.' It is silent on all of those other factors that impact on your fatigue. The hours you are behind the wheel is only one of the contributing factors to your fatigue. It is a false assumption to think that you are managing fatigue by simply counting hours.

Mr MOSSFELD—In New South Wales the general public is advised to have a rest after two hours' driving. Does your organisation support that principle?

Mr Mahon—That is one of the principles that we encourage in the fatigue awareness training. The regulations actually say that you can drive up to five hours before you take a half hour break; but we encourage people to drive two hours and then take a short break. Some road transport industries actually do that as a matter of course. One example is livestock. In terms of animal welfare practices, they are a particular commodity group that typically always pulls up every two hours. They will walk around the vehicle and make sure the cattle are up and other checks that they might make. Then they are back into the vehicle and away.

It is a bit more difficult to encourage that sort of practice on someone who, for instance, is doing a straight, say, Sydney-Melbourne run or Sydney-Brisbane with time-sensitive freight. They consider every 15 minutes to be more important for the freight than for themselves. It is a large-scale task to influence people to think a little differently.

CHAIR—On that point that Mr Mossfield raised on taxis, you said that there are no regulations for taxis. Have you done any work with them?

Mr Mahon—We have done some work with them. A study was conducted in Sydney about three or four years ago. It gave us a fair bit of material to work with. We certainly provide all of our awareness-type information bulletins and encourage management of fatigue, but not in any formal structural sense.

CHAIR—Is the accident profile of taxi drivers any better or worse than for other drivers?

Mr Mahon—On the face of it, it does not look like it. I think the more troubling factor in fatigue is that people always think about sleepiness and/or falling asleep. We consider that a much greater issue is levels of alertness. The contributions of levels of alertness to taxi accidents has yet to be established.

CHAIR—Are you planning to do that?

Mr Mahon—We have not got any forward plans for the taxi industry at the moment.

CHAIR—Do you know whether any of your colleagues whom you are working with on your program have started on it?

Mr Mahon—Not that I am aware of. The only study that I am aware of is the one conducted in Sydney about three or four years ago.

CHAIR—Could we have a copy of that?

Mr Mahon—Yes, we could source that. A paper was given at the second international fatigue conference in Perth.

CHAIR—If you would see Mr Cunningham from our secretariat when you finish, we would like a copy of that taxi report. If you could get it for us, we would be most grateful.

Mr St CLAIR—I have a question about vehicle design, vehicle technology and engine technology. What role do you see this playing now in fatigue management? I am talking about long distance driving.

Mr Mahon—I think vehicle technology is an excellent tool to assist owners to manage the issue. I am very cautious about the approach that vehicle technology should be some other way of regulating people into submission. Vehicle technology, smart card and a whole range of other initiatives will be excellent tools for owners to manage the problem, rather than having some arrangement where you are sticking a reader in a vehicle at the side of the road and trying to prosecute people because they drove five hours and five minutes.

Mr St CLAIR—I certainly was not looking at that. But certainly the question of managing the engines, et cetera—we took some evidence from some rail people who were suggesting that every time they apply the brake on one of those big trains it does cost a few dollars.

Mr Mahon—There is some very good vehicle technology coming through from the US at the moment; for instance, technology that can measure levels of alertness for a driver and then take control of the vehicle and park it to the verge. That is not George Jetson stuff any more. It is actually out there in pilot vehicles. So in the order of five years, there would be a real prospect of that sort of technology being more widely available. The same goes for GPS tracking and speed control. With integrated chips in vehicles, it is not inconceivable that, within the next 10 years, you could have a circumstance where, through GPS technology, you could, in fact, decelerate a vehicle. There is a whole range of other issues involved in that, not the least of which is privacy. But what I am saying is that the technology is out there that will permit this type of approach.

Mr St CLAIR—Is there a free exchange of that sort of information? Are you dealing with the people who are in that business?

Mr Mahon—Yes, we are. We have made very good network connections, particularly with the US or the North American experience—both Canada and the USA. Between the North American continent and ourselves, I would suggest we are more advanced than the European experience. The Europeans, to me, are continually heading down the ‘regulate them into submission’ path—more and more technology and more and more controls—and I am not so sure that, at the end of the day, that really achieves what you are setting out to do.

Mr St CLAIR—What is your view on ripple strips on shoulders?

Mr Mahon—They have been an excellent intervention. We have a range of reports that demonstrate their contribution to the reduction of the road toll. There are some technology issues there in terms of sustainability of the product and those sorts of things, but the general concept is very sound.

Mr St CLAIR—What has happened with the cost of the product? We have taken some evidence that it has fallen rather dramatically.

Mr Mahon—It has fallen fairly dramatically. It is still a little bit cost prohibitive, but we have done a lot of work with the road engineers. And in Queensland now, you will find that, generally speaking, where any road improvements are conducted, rumble strips or that type of approach are incorporated into the plan, rather than coming along after as some sort of retrofit.

Mr St CLAIR—Road conditions are a passion of mine, because I believe our road networks generally in Australia are falling to pieces—whether it be national highways, state highways, state roads or local government roads. What role is that steady decline in the asset going to do to fatigue management, even with modern vehicles?

Mr Mahon—I think it would be reasonable for me to say that Queensland always welcomes federal contributions to improving our roads.

Mr HARDGRAVE—But we are not at that conference.

Mr Mahon—My comment would be that whilst it would always be nice to improve conditions on roads as best we possibly can and within an affordability dimension, in terms of managing fatigue there is also that issue of driving to the road conditions. Now, it is not reasonable to say, ‘I became too fatigued and crashed because your road was not good enough.’ You should be driving to the conditions. It is no different from wet weather, speed or any other factor. It is a key issue in terms of driving a vehicle over any distance—whether you have been in an office all day for 12 hours or whatever and then are going to drive an hour home, or whether you are actually driving for a living. It is an element that must be considered, and it is generally not very well considered or recognised

Mr St CLAIR—It is interesting, because I live in the middle of a fatigue zone between two national capitals, and I watch people come out on long weekends who have been at work in an office all week. They jump in their cars at 5 o’clock in the afternoon, pack the kids up, and five hours later they are dead. Some of them, as you say, do not drive to road conditions. Others just have no idea of fatigue management.

Mr GIBBONS—You mentioned that about 80 per cent of the companies involved in the transport industry have five or fewer employees. What percentage would be the owner/drivers, where it is just one owner and one driver, or the driver owns the rig? And how successful have you been in getting them to adopt a fatigue management? I imagine the pressures on them would be probably more severe, given that they have to find the lease payments, et cetera.

Mr Mahon—In terms of the proportion of owner/drivers within that 80 per cent, I could not tell you off the top of my head. I am not sure whether we even have those numbers.

Mr GIBBONS—Would it be significant?

Mr Mahon—In terms of the ABS profile, five employees or fewer is that 80 per cent. In terms of what we are doing for owner/drivers—one of the things we have done in the FMP approach is develop an owner/driver model. One of the important issues for us in developing the FMP concept was that it was applicable to everybody in the industry. The profile in the

phase 1 operators is from owner/driver right up to companies in the order of about 40 or 50 vehicles with 80 or 90 drivers. The owner/driver model was one that took us quite a considerable time to develop. In fact, the first owner/driver only got under way about November last year, which was well behind the company model. The company models—there is a level of complexity to them and a lot of challenges, because we did not have a reference group to work with; we were breaking new ground. But you can generally take a QA-type model and apply it to a business that has a business system in place, whereas with an owner/driver, more often than not the spouse is at home doing some paperwork and the man or woman in the truck has most of the rest of it with them.

We have developed a model that has been accepted by those owner/drivers who are participating with us. They have had it in operation now for about six months, and the feedback is quite positive. So when we go to Phase 2, which we are in the throes of right now, we expect to have some more owner/drivers to further test that model. We wanted a system in place so that, whether you are one driver with one truck that only did a couple of hundred kilometres a day, or you were the largest organisation in the country, the same set of principles apply.

CHAIR—I would like to fire off a few short questions now, if I could. Do you supervise the Driver Reviver Program?

Mr Mahon—No, I do not. It is within the division within which I work, but I do not directly supervise it.

CHAIR—Have we had a submission on that?

Mr Mahon—We have mentioned it in our submission.

CHAIR—We would like more information on that. Queensland again appears to be a bit ahead of the other states on that.

Mr HARDGRAVE—New South Wales, I think you will find, is ahead.

Mr Mahon—We would probably contest that view.

CHAIR—If there is a bit of rivalry, so much the better. In the course of asking questions about that in Adelaide and Melbourne, there was a suggestion that, when a highway is redirected, the old road could be used as a truck stop. And there were some pros and cons for that; the pro being that the road is already there, therefore, you do not have to develop it; and the con being that, if it is not properly lit, some people see them as dangerous—those loops—for robberies and so forth. What is your plan for—I do not know what you call them—these sorts of bypass loops for resting and so on?

Mr Mahon—We take each case on its merits, basically.

CHAIR—I do not see a lot of them, and I drive a lot.

Mr Mahon—Where the opportunity presents itself, we incorporate them.

CHAIR—But is there a proactive program of improving these and identifying them?

Mr Mahon—Not a program as such. Certainly in our planning and management deliberations with the engineers who make those decisions, it is incorporated in the decision making. But more often than not, we find that they are not suitable. The traffic engineering consequences and other implications often do not—I mean, in theory it sounds good. But we find that, more often than not, it does not particularly suit the circumstance.

CHAIR—Do you think they prefer to go to those large truck stop/service station-type arrangements?

Mr Mahon—Generally speaking.

CHAIR—What do you do in a case like this—and you probably know the area; it is in my electorate at Benaraby, just south of Gladstone: there is a Caltex service station and, all of a sudden, they all seem to go to that one for some reason, and there are semitrailers everywhere. It is almost like the Royal National Show.

Mr Mahon—I think you will find that, generally, they will follow the food, or a servo that is prepared to give credit.

CHAIR—You do not make more loops around there to encourage them to stay—

Mr Mahon—In terms of deviations, you would be best, I think, to call someone from Main Roads. Whilst we contribute to the considerations on those decisions, that is effectively a Main Roads decision.

CHAIR—Do not answer this if it is not applicable to your study, but we are going to look at both highways between Sydney and Brisbane—probably Kempsey and Armidale—for a number of reasons, including the bus crashes you are aware of, and also there is a large service station in Mr St Clair's electorate that we want to have a look at. Does Queensland have a proactive program in conjunction with the oil companies to see that there are appropriate truck stops developed—I mean developed truck stops as distinct from these loops we talked about before? And on that same point, you talked about diet and so forth. Have you had any meetings with the service station owners association or with the oil companies about the diet that might be available to truck drivers? It seems to me that you go into all these service stations—even the truck stop ones—and there are piles and piles of greasy stuff—which I love, I might add, but I should not be eating—but I do not see many with salads or perhaps nutritious stews and things that might be available. Are you doing any work on that?

Mr Mahon—We are not in particular. We essentially support those who do. The Australian trucking association, for instance, has had a fairly significant campaign—

CHAIR—Have you ever sponsored a seminar, for example, with the oil companies?

Mr Mahon—No, we have not. We have an alliance with the AMA. And in a lot of publications that we produce we actually have health tips in those publications sponsored by the AMA.

CHAIR—Given the work you have done and the networks you have established, and given that there is a big building program going on with all the oil companies in Queensland at present, and given—as you have just said—that you have things with the medical profession, have you ever pulled that together as a supplement to your own program? Would that be a good idea?

Mr Mahon—At this stage of the development of the concept, to be honest, we believe we need to do more work with the attitude of drivers, because there is some evidence to suggest that if a Mobil or an Ampol service station, for instance, somewhere suddenly became extremely healthy and provided a lot more lettuce rather than hamburgers, the drivers would just move on to the next stop. So you need to get inside their minds first about believing in the need to change diet and then get them to start looking for the places that provide that.

CHAIR—It is a two-stage process?

Mr Mahon—Yes.

CHAIR—I would like to hear your views on this. These are two things that have been put to us. It has been suggested to the committee that the National Occupational Health and Safety Commission should declare a national standard or code of practice in relation to fatigue in the workplace. Do you have a view on that? Or do you like your method of self-regulation?

Mr Mahon—I believe it would be reasonable to develop a standard or an expectation within the industrial environment about the fatigue issue.

CHAIR—A frame, if you like, in which you would fit these other things?

Mr Mahon—Yes. I have given presentations to mining organisations and other types of industries—quite unrelated to transport—where they are starting to consider a lot more the issue of fatigue and levels of alertness whilst people are on duty and undertaking their tasks. Again, I could not have agreed more with your previous witness about the issue of working, for instance, between 2 a.m. and 6 a.m.. Your circadian rhythms are such that you are in the slump during that period and to be making significantly responsible decisions during that period is to be avoided and/or better managed if at all possible. So in terms of the work environment, for a whole range of people, I do not think that it is unreasonable to declare. As an example, in our regulation it says for the FMP that the owner signs up to a commitment that they will ensure that any driver of any of their vehicles, whenever driving, will always be in a fit state and proper health and condition to do so. An up-front performance type of statement in the workplace would be a quite reasonable thing to do.

CHAIR—Let me take it another way. What would you think of the concept of a government department, in Queensland in particular, requiring that before the government

will do business with certain firms and certain suppliers they must have a quality assurance program. What would you think of linking fatigue management to quality assurance programs?

Mr Mahon—It is a reasonable prospect. We have had one example already with the BHP Cannington mine in the north-west province. We did quite a bit of work with that particular operation in developing an innovative vehicle for use on public highways. If I can digress for a moment, it is a double B-triple. It is a vehicle of 166 tonnes capacity. It operates on the open road at a significantly improved dynamic performance to an ordinary road train. One of the things that BHP agreed to is when they let the contract for a transport operator to both build that vehicle and operate it, one of the essential elements in that contract was to be a participant in a fatigue management program. That is a large organisation that is prepared to both recognise and manage, or attempt to mitigate, the risk in terms of fatigue with vehicles that are operating on their behalf on the open road. Again, there is that element of voluntariness. My general concern is that if you start imposing conditions upon people, you will meet the usual Australian resistance as against—

CHAIR—No, I am talking about just a general part of the QA profile.

Mr Mahon—Again, I think the trick would be in the implementation, because you would be seeking voluntariness. An alternative, for instance, would be that if you do not have a fatigue management-type program in place, you do not get as many points on that particular dimension as another company would.

CHAIR—You say that companies need to be mindful of fatigue in the broader elements of their business activities such as when negotiating workplace agreements. What has been done to ensure that employers and employees are adequately informed about fatigue when they are negotiating these things? You heard the last witness. It was interesting—this is not said with any criticism of him—that there is a fatigue problem with these 12-hour shifts and yet the employees or the union, I am not sure which, would still prefer the four days off rather than having a day between the two blocks of 12-hour shifts. What has been done in that field to make sure that people understand that there is an upside of having adequate rest?

Mr Mahon—That is a cultural issue. In some of these cases, it is a question of people not knowing what they do not know. One of the things that we have found in our fatigue awareness training in road transport is that there are many drivers who believe they know quite a lot about managing fatigue but, in fact, they are based on myths or false premise. We have done quite a bit of work in terms of the issue of publications in journals, in getting our views published in terms of PR work, promotional-type activity to raise the level of awareness. I would have to say that, in the past five years, I do not think that there would be anyone in the industry who would necessarily differ from this view in that fatigue management is now a high-profile issue.

CHAIR—On that point, can I just take you another step? You say that you see that there should be a higher priority for the Commonwealth. What do you mean by that? What part could the Commonwealth play in this? It is essentially Main Roads and fatigue management

in relation to state laws. It is very much a state issue. Where could the Commonwealth have an overarching role?

Mr Mahon—There is a range of areas. The funding issue is one. Provision of rest areas is a costly enterprise. I am not speaking on behalf of the government.

CHAIR—No, I understand that.

Mr Mahon—But from a personal point of view, any support in that regard would be well placed. The support—

CHAIR—What? Extending, say, the black spots program to take in rest areas perhaps?

Mr Mahon—It could be. There has been a variety of considerations in the past, but that is one. Again, it is an area where, for instance, I believe there is some room to consider workplace programs for the long-term unemployed. They are not—

CHAIR—The Work for the Dole program might help to develop a framework—

Mr Mahon—I am not going to make any political comments.

CHAIR—No.

Mr Mahon—All I am saying is building rest areas is essentially labour intensive.

CHAIR—I am not asking you to speak on behalf of the government. I am talking in the broad generality of you as an individual. That is the style of thing you are saying, that is, to master resources to get better rest areas.

Mr Mahon—What I will say is that the building of rest areas is a labour-intensive operation, or a labourer-intensive operation, and I think that it is well worth considering in that context. Support of initiatives that promote change in culture—

CHAIR—Could you discuss that matter for us with your colleagues in Main Roads and, if they have a view on that, come back to the committee? If you want to develop that concept with your Main Roads colleagues—

Mr Mahon—Sure.

CHAIR—We would like to hear how you might envisage that, because that is one thing that cropped up in Adelaide and Melbourne about the adequacy of these loops for trucks and rest areas. My colleagues and I from New South Wales are very interested in these driver revivers and whether that program has been sufficiently developed. If you would like to convey that to Main Roads, we would be most grateful.

Mr Mahon—Sure.

CHAIR—Mr Mahon, we will have to leave it there. It has been a very interesting exchange. Yours is an excellent submission, as those from Queensland Transport generally are. I would like to thank you, even if you do not get Kessels Road right. Whenever we have one of these inquiries in Brisbane we always get told, ‘Have a look at Kessels Road.’ We would like to thank you for your evidence today. You will receive a draft of the *Hansard* transcript. If you want to refer to your evidence, it will be on the parliamentary Net.

Mr Mahon—Thank you.

CHAIR—Thank you once again. We now call Nolans Transport.

[10.08 a.m.]

NOLAN, Mr Darren Raymond, Quality and Development Manager, Nolans Interstate Transport Pty Ltd

NOLAN, Mr Terrence William, Managing Director, Nolans Interstate Transport Pty Ltd

CHAIR—I would like to welcome Mr Terry Nolan and Mr Darren Nolan to the inquiry and thank you for your attendance. Might we also say that yours has been an excellent submission. We appreciate that very much. I have to caution you, of course, that although you are not under oath, these proceedings are legal proceedings of the parliament and need to be treated with the same respect as proceedings of the House itself. The giving of false or misleading evidence is considered a contempt of the parliament. Also, when you have finished, if you use any quotations or proper names, would you be good enough to defer to the Hansard reporters so that they could get those accurately. Would either or both of you like to give an opening statement?

Mr D. Nolan—Yes. I will keep it very brief because I am aware of timing. We have been part of the fatigue management program initiative with the Queensland Department of Transport for the past four years. We have been in operation since the early 1900s and we transport predominantly refrigerated fruit and vegetables to various destinations throughout Australia. We have probably, since the inception of the pilot program, injected about \$250,000 into this program to ensure the success of our business. We believe that, whilst we are doing everything that we can possibly do, it is only one very small step in the very big overall picture that needs to be addressed and I have discussed some of the shortcomings in our recommendations in the proposal. The program to date has been extremely successful for our organisation.

CHAIR—Just starting on that point, you have participated in this fatigue management program for some time. How has it impacted on your company? Can you give us just a few examples? How do the realities fit with your work profile and the sorts of products that you carry? How has it affected your drivers? Have they been more responsible as a result of it?

Mr D. Nolan—We would certainly like to hope so. We have certainly seen a cultural change that has happened within our organisation over past years. I think one of the problems that we did experience when we did say that we were going to join part of this program was the actual timing that it took to get the proposal up and running. That was due to a number of reasons, but it took well over 12 months to finally get the proposal through and finalised.

We see that it has helped drivers become aware of their fatigue levels. We have done extensive training with them. We have also incorporated occupational health and safety practices into that program. It is a quality-based system which we have incorporated those various areas into. So to answer that, yes, I would certainly hope that that was the case.

Mr St CLAIR—Just one thing, Darren. You are long serving. I have known your company, as you are aware, for more than 25 years. Over that period, you have been one of

the few companies that, firstly, has been at the cutting edge in leading some of the technological changes in the professionalism of drivers, but you have also been a company that has had long-term employees. I know some of your drivers have been with you for a long, long time. How are they coping with this change to fatigue management, particularly some of the ones who have been there for—

Mr T. Nolan—Yes, to answer that question, since we have been in FMP, we had a little bit of resistance at the start because it was an unknown quantity; no-one knew what was going to happen and they thought that maybe I was trying to get at them. But when they found out the nuts and bolts of what was going to happen, they were more than happy with the outcome of what they do now. If you put someone out of an FMP, it is like cutting his wages \$100 a week; he just wants to get back in as quickly as he can. We have put a few guys out of the program, because they have done the wrong thing. There are about four, I think, who we have put out of the program. One guy told lies—there are a few different things—and we have brought two of them back in since then. They keep reminding us all the time now, ‘We have got only two weeks to go before we get back in the program.’ It has changed their outlook wholly and solely on operating transport, operating trucks between capital cities.

Mr St CLAIR—Can you just explain to the committee, if you would, that when you say ‘in and out of program’, your company, obviously, is in the program but your drivers individually are in the program. Can you just let us know how that works? In other words, what happens? Is there an incentive for being in the program? What do you do to get out of it and what do you do to bring them back in, other than keep their job?

Mr D. Nolan—The incentive to be in it is the incentive to work for our organisation as a whole. We try to get the employees motivated and involved in what we do.

Mr St CLAIR—How do they infringe to get out of it?

Mr T. Nolan—If they do something wrong under the FMP regulations, it is brought to my attention. We had a guy who told a lie about a logbook. It happened three times. After the third time, we put him out for three months. He had to operate under the old system. He had a logbook in his truck, but he did not fill it out. He told a lie. That was one instance. A couple of other instances have happened where guys have not done the right thing. A guy who came with me today, Johnny Gallagher, reads all of the logbooks. All of our trucks have computers, which we download. He corresponds the computer records with the logbooks. If everything does not match, he or Darren tell me about it. I will want to know why. I then start asking questions.

If a guy steps out of line, we put him out of the program until he can prove to us that he is worthy to go back into it. It might take three months or six months for me to be happy that they are prepared to listen to what we want to do and understand that it has to be done properly. I cannot put everyone else in jeopardy because of one or two guys. They have to toe the line all the way through. If they do not do that, we do not want them in the program.

Mr St CLAIR—Is there any fatigue management, for example, at the markets? Are they still shifting up in the line as they keep going through, or can your drivers get a proper rest at that time?

Mr T. Nolan—About a month ago I went to a market meeting in Sydney. Sunday morning is always a problem, because they will not let you in the gate until 6 o'clock.

Mr St CLAIR—Is that 6 p.m.?

Mr T. Nolan—That is 6 a.m. on a Sunday morning. My suggestion to them was to open the gate at 4 o'clock and, instead of getting a build-up of trucks, they should let them flow in normally, which would get rid of the waiting time. In that way, everyone would not just be sitting there waiting to move backwards and forwards all the time. It does create a problem. However, 90 per cent of the time the trucks that go on Sunday do not come out on Sunday; they usually have to wait until Sunday night or Monday morning before they come out. So they do get a break 90 per cent of the time.

Mr St CLAIR—Coming from the airport to here, I noticed one of your vehicles in a yard obviously waiting to get unloaded this morning. It had no prime mover attached to it. Is some mechanism in place that would enable them to get somewhere where they can rest properly, or would that be a driver who may be resident here?

Mr T. Nolan—All of our drivers are resident here. We do not have anyone who lives interstate. It was probably a B-double prime mover unhooked. He cannot get in with two trailers, so it would be unhooked. If it is the B-double I think it is, he would have got in on Saturday night. He will not go out until tonight. He will unload today and then he will come back home. We will load up the truck and call him in at 7, 8 or 9 o'clock at night before he goes away.

Mr MOSSFIELD—How many employees are there in your company?

Mr D. Nolan—We have over 90 employees.

Mr MOSSFIELD—How do you communicate with them, in particular in relation to the fatigue program?

Mr T. Nolan—Every morning I ring each driver and ask them what time they left Sydney, what time they arrived in Brisbane or where they are, and how much sleep they have had. I then make a submission to the operations guy as to whether we use him or leave him sit until tomorrow and whether he has had enough rest. When they come home to our yard from unloading the truck—some of the guys do not; they come to Gatton and we unload it; it all depends on how much rest they have had—we send them home. They might get into our yard at, say, 7, 8 or 9 o'clock in the morning. We will send them home until we have the truck loaded—say, 1 or 2 o'clock in the afternoon. We will call them in, they hop in the truck and away they go.

Mr MOSSFIELD—Is there any group discussion in relation to the implementation of the fatigue management program?

Mr T. Nolan—We have been through it with Gary Mahon and all of the officers from the Department of Transport. We set up our proposal and put it all together. One of the things we put in our proposal was that we have to manage the guys' fatigue in our fatigue management program. We have to be in control of what they do, not the drivers. We have to ask the question to the drivers, and they tell us whether they have had the amount of sleep or not. We make the decision whether we let him go or not.

Mr D. Nolan—When the driving hours schedules were first developed they were developed with no management at the meeting. That was done so that the drivers felt free to develop the schedules that were based around their needs with a bit of flexibility built in. We did not want to be there; that would enable the drivers to be comfortable doing the scheduling the way they were doing it. We worked our business around their requirements.

Mr MOSSFIELD—This is the point I was getting at, namely, what employee input there is. You indicated that initially you did have employee input and that they met separately. Is there a means whereby the employees as a group can monitor the program and have their own input?

Mr D. Nolan—When they come back from their trip, after each trip they always come into the office to hand in their paperwork and whatever else they need to do. We keep them individually updated as to their progress every single time they come back from their trip—if we see them, of course. We also produce newsletters every month with health information and topics on the back of it, as well as updates on the FMP. We send those out to all of the drivers, including their family as well. We speak all the time to our guys, where we can, on the telephone and when they get back again from unloading. In fact, it is now standard practice that they come in and ask whether—

Mr MOSSFIELD—Does the union have any input at all?

Mr D. Nolan—We are a non-union oriented yard.

Mr MOSSFIELD—There is no union input?

Mr D. Nolan—Correct.

Mr MOSSFIELD—Do you have any problems with other companies not abiding by this policy?

Mr D. Nolan—Absolutely. We lost some small business upon the inception of this program. As Gary Mahon from Queensland Transport said, we have also gained exceptional business from the program. That is because we have been able to demonstrate that we are a safe company in terms of what they do. The problem that remains for us is that if we say no there are always three other transport companies down the road from us that will quite happily say yes. That is the way it works.

Mr MOSSFIELD—What recommendation do you think this committee could make to overcome that problem?

Mr D. Nolan—I know the National Road Transport Commission has released the chain of responsibility legislation. But we definitely need help with it. Every quote that we send out always has, ‘All loads must be loaded in accordance with this and drivers must not be asked to do this’ and so on. But we are only one company that is doing that. Customers are not aware of their responsibilities, their legal responsibilities or the position that they are putting themselves in. I certainly feel that, whilst we have had education sessions with our customers, we certainly need a lot more and we need a bit of help to do that as well. Again, as I said, we are doing that, but our opposition down the road, for example, are not doing that.

CHAIR—That raises a very interesting point. In your submission you state that customer demands are impacting on fatigue. To what extent do you think we can educate the retailers and consigners about the effects of fatigue management on drivers? My second question leads on from this. You have just alluded to this in response to Mr Mossfield. You say that you have congestion at the markets. Being from Gatton and being in the horticultural transport field you probably see this more than most. What initiatives does your company undertake with fruit and vegetable growers and so forth to ensure that the markets are more responsive—either the consignors or those receiving your consignment?

Mr T. Nolan—The problem in the city markets is that there is just not enough room. Now they are taking some of the room off the market authority. There is just nowhere that the trucks can go. They just have to wait in turn so that they can get unloaded.

CHAIR—How much time can they waste there?

Mr T. Nolan—Up to two hours.

CHAIR—That is at the end of, say, an eight, nine, 10 or 12-hour shift?

Mr T. Nolan—That is not all the time. If you get in the peak hour between 3 and 4 o'clock you might have to go down the bottom and park there. They will unload you when they can get to you. You can go to sleep. They will take it off when it suits them, because there are just too many trucks. There is just not enough room.

Mr D. Nolan—That will probably only increase with the Olympics coming as well.

CHAIR—What sorts of problems do you have at the retailers' consignments end?

Mr T. Nolan—We bring up a lot of stuff from Sydney. Last week one of the big companies in Brisbane where we had to unload was eight hours behind on its timeslot management. We had to pull the driver out of the truck and send another bloke down in a ute to unload the truck. It was an eight hour sit. If you do not sit, you miss your turn.

CHAIR—What is the answer to that problem?

Mr D. Nolan—I think better management practices, particularly at the chain stores. Whilst the top people have the information, it is not filtering down through the bottom. I think better designing of the premises is one thing. There also need to be appropriate parking

spaces and a better time designation, as opposed to booking ahead and trying to run to meet that time. They should arrive and be given a time for unloading.

CHAIR—Do you have a truck association?

Mr T. Nolan—Yes, we are a member of both of the two organisations. The problem—

CHAIR—Do they have meetings with Woolworths, Coles or Franklins?

Mr T. Nolan—You really cannot. If you try to dictate to them—

CHAIR—No, I do not mean that you have to be confrontational. Do you have a seminar with them on better methods of facilitating this? It must suit them to get their product in a more timely fashion.

Mr D. Nolan—We are one very small pea in a pod.

Mr T. Nolan—You cannot rock the boat within these organisations, because they will just go elsewhere. For example, the other day I rang a particular guy who had given me a load. I said, ‘We’ve got to sit there for eight hours.’ He said, ‘I employed you to do the job. You just stay there.’ We got nothing for it. We sat there for eight hours for nothing. That is the problem.

Mr GIBBONS—You mentioned before that one of your employees was not playing the game fairly and you moved them out of the program and put them under the old system. Can you run that by me again? What disadvantage is there in being put under the old system?

Mr T. Nolan—For example, if they get booked for a logbook they have to pay the fine. Anything to do with their pocket they are really frightened of.

Mr GIBBONS—I can understand that.

Mr T. Nolan—You know what truck drivers are like. There is also more flexibility in the FMP for the drivers, because they do not have to have a continuous six hours off. I heard a gentleman say earlier that between 2 and 6 o’clock is a problem. It is in some areas, but we find that we have more problems with the younger guys needing sleep than with the older guys. The older guys do not seem to need as much sleep as the younger blokes. Do not ask me why that is the case. I am the same. I only have four hours of sleep a night. That is my make-up. A lot of guys are not the same as me. There are no two people the same. That is one of the things that the guys on the logbook system cannot do. They have to have a continuous six hours off.

For example, I sleep four hours a night. What would I do with the other two hours? I have to walk around for no reason. Under the FMP, if he only needs four hours of sleep, he has four hours of sleep. He gets up, puts a load on his truck and away he goes. He goes up the road for one, two, three or five hours and, if he needs to have a couple more hours of sleep, he can do it. Under the logbook system, you cannot do that. All it is doing is creating fatigue. Some people will not listen.

Mr GIBBONS—You mentioned that each truck has a computer monitoring system?

Mr T. Nolan—We have Execulog computers in each truck.

Mr GIBBONS—My knowledge of the transport industry is quite vague. Many years ago they had a tachograph in trucks.

Mr T. Nolan—No, that is old hat.

Mr GIBBONS—Is it the same principle? Is this a very sophisticated version of the old tachograph?

Mr T. Nolan—It is 10 times better than that. We are in the process of putting satellite tracking in all of our trucks. We signed up the other day for it. We feel it is better than the Execulog computers. We can monitor everything that happens within our organisation. We can monitor where our trucks are. If you are fair dinkum about transport, you have to do these things; otherwise you might as well not be in it.

Mr D. Nolan—In relation to the earlier question about whether we have done any work with our customers, recently we attended the fifth annual Australian watermelon conference. I gave a presentation about the transport industry, the effects that fatigue has and how they could better design and manage the way they do business to fit in with the transport organisations to make things easy. As I am sure you are aware, a lot of the farming communities, particularly in the western areas, have no facilities for weighbridges or anything like that. A lot of the time they are picking as they need to pick and loading straight off the farm. That brings problems straightaway.

CHAIR—You have to contain their problems, too, such as when they want to get a crop off before the sun gets too high in the sky and things like that. By the way, just another small point: have you ever had a talk about the design of markets and the design of entries into supermarkets and so on? Has your association ever had a meeting with the Institute of Architects?

Mr D. Nolan—I am not aware of such, no.

CHAIR—It seems to me that in Queensland especially, there are so many new supermarkets being built.

Mr D. Nolan—I know that the Australian United Fresh Transport Advisory Committee are doing some fairly extensive work. I know they were looking at getting some transport help and going down to address the market sector to do with duty of care and various other things to do with the fresh produce industry.

CHAIR—If you have any papers on that or any information, could you let Mr Cunningham in our office know about that?

Mr D. Nolan—I know they have produced a code of practice for road transport of fresh produce. It does discuss fatigue very briefly and discuss fatigue management programs, but it does not go into specifics.

Mr HARDGRAVE—What about the current level of enforcement of these laws? Is it adequate?

Mr D. Nolan—In terms of—

Mr HARDGRAVE—You have talked about the operator down the road undercutting you if you are going to stick to these standards while the bloke down the road does not, and then you will lose the job. Is the level of enforcement that backs good operators like you sufficient at the moment?

Mr D. Nolan—No.

Mr T. Nolan—We had a problem when we first got into the FMP that everyone sort of flogged us—the enforcement did—until they sort of understood what we were about. Now that has sort of backed off—not backed off, we still get pulled up, don't get me wrong, but they have sort of taken a lesser view. They still pull us up and go through us and check us all out. However, there are still not enough enforcement people on the road to check the guys who are not doing the right thing.

Mr HARDGRAVE—That is Department of Transport inspectors as well as police?

Mr T. Nolan—There are just not enough people.

Mr HARDGRAVE—What about the arrangement of fines? You said that truck drivers will wear the fine, but there is this effect up the line.

Mr T. Nolan—But how can you be responsible for your driver after he leaves your yard? You can keep him in control, but if he wants to do something that suits him, you cannot be responsible for that.

Mr HARDGRAVE—What if you are not a good transport operator like Nolans Interstate Transport Pty Ltd and you are putting pressure on your truck drivers?

Mr T. Nolan—We are not perfect.

Mr HARDGRAVE—I know you are not because your trucks speed up Kessels Road, too. You can laugh, but it actually is all part of the overall problem that you have described in your submission, that we have the poor management and congestion at central markets and chain store warehouses such as the Coles one down at Braddon Road at Sunnybank Hills and all those sorts of distribution centres. So trucks are actually in the traffic in cities like areas in my electorate and others right around the country at a time when drivers are tired, drivers are at the end of a run, drivers have just faced the frustration of waiting for five, six or seven hours, whether it be Flemington Markets or the Rocklea Markets, which are also in my electorate. Either way, at the end of the day, problems are being encountered in traffic

all around the country. What I am wanting to know is: is the level of penalties—the sticks, if you like, that are taken to the drivers, the operators as in the company owners and those who consign and those who expect certain deadlines or put other problems, if you like, in the way of safe driving—sufficient?

Mr D. Nolan—No, they are not. In my view, they are not.

Mr HARDGRAVE—What sort of penalty structure should you see to back up companies like yours that are operating well or better than others?

Mr T. Nolan—It is very hard to put out a figure because it all depends on what the guy is doing. You really have to go into his company and find out the structure of what he does within his organisation. You really cannot sit outside and pick out what the guy does because you really do not know; you are only just picking on one person. You really have to go into the company itself and you have to get the nuts and bolts of how they do things and how they structure what they do with their drivers, and then you can make an assessment of what you can do to that particular company. You just cannot sit on the outside and say, ‘This guy is doing something wrong’ unless you really know what has happened inside. That is where it all comes from—it comes from inside the company.

Mr HARDGRAVE—Is there sufficient investigation? I do not expect you to be part-time coroners or crash investigators, but every industry talks amongst itself. Do you believe there is adequate investigation up the line into companies when there is, say, an accident like something at the bottom end of the Toowoomba range? We have had a couple just up the road from your depot in the last few weeks. I do not want to get into specifics of those particular accidents. Likewise, we had one in the Valley last week. Are there sufficient inquiries up the line into companies’ practices after crashes?

Mr T. Nolan—To my knowledge, I think that the Department of Transport is sort of pushed on the issue because there are only so many people who can go around. Like everyone else, they probably need help. This is only my opinion, by the way.

Mr HARDGRAVE—Your opinion is very important.

Mr T. Nolan—For the police to be able to control everything, it is going to be very, very difficult and it is going to be very hard for them to be able to go right through the company because there are just not enough people to do it. I believe that, when there is a bad accident, they do move in to different companies. They come and do an audit on us quite a bit. We are happy with that because it shows that we are trying to play the game down the middle. To get back to other companies, I cannot speak for them. We know what they do and how they do it, but it is not for me to say. I cannot tell you what other people do; it is up to you guys to find out for yourselves.

Mr HARDGRAVE—One other thing is your reflection on the comment from Mr Mahon from Queensland Transport. I am sure Mr Mahon said that most operators—most transport companies—have five or fewer employees. Does that itself make it difficult? I have nothing against privateers; I believe in private enterprise, but the concept of the cowboy and

enforcing the cowboy on the road becomes harder when there is not a lot of support, a lot of organisation around that driver.

Mr T. Nolan—That is always a problem and an issue because the guys in the little field are sort of pushed into a corner. I do not think that is all your problem, either. I think the problem is our opposition that are as big as us. That is where our problems are. It is scooting the 80 per cent down the line—they have problems, too. It is an issue that has to be looked at from all different angles and avenues as to where you go and how you do it.

Mr MOSSFIELD—In your submission you indicate there has been a dramatic reduction in vehicle accident rates and employee turnover as a result of the fatigue management program. Can you give us some actual figures on that?

Mr D. Nolan—I have not got the statistics on me, I am afraid, but I can certainly get them to you.

Mr MOSSFIELD—I think the committee would appreciate that.

Mr T. Nolan—We have done probably about eight million kilometres in the FMP. We have had no fatigue related accidents as such in five years. We are quite happy with that. Our instructions to our drivers are, 'If you are tired, pull up and go to bed. I would sooner you ring me up and say, "I slept in," than tip the truck over.'

Mr St CLAIR—Terry, did you want to say something else?

Mr T. Nolan—I think there should be more of them—everywhere. The problem is that too many guys are getting away with too much. With the Safe-T-Cam, no-one gets away with anything because everything is monitored. We had one of our guys who went on a back road and he got there I think with a 10 seconds—

Mr D. Nolan—It was approximately a minute.

Mr T. Nolan—difference from what time he left, and we got a letter. So it is really good. They are right on the ball. There need to be more of them in different places and it needs to be monitored like they are doing it now. If someone steps over the line so many times, 'Okay, we will go and check this guy out. He must be doing something about his business. We have to see how he is operating. Why are you doing this? Why are there so many times that you have gone through quicker?' or whatever.

Mr St CLAIR—Is Safe-T-Cam in each of the states?

Mr D. Nolan—It is only in New South Wales, as I understand.

Mr T. Nolan—I think it is in Victoria, too.

Mr St CLAIR—You have not heard of any plans to bring it into Queensland?

Mr D. Nolan—I have heard a whisper, but certainly not anything that I am fully aware of.

Mr T. Nolan—We would be the last to hear.

Mr St CLAIR—We have taken evidence over a period of time with this inquiry, which I have to say has been interesting not only for road transport but for all transport in the nation. In terms of measuring whether the driver is fit to work when he turns up to you to get into the truck, are there any mechanisms that you know of or are there any systems that you work or is there any mechanical system—because we have had a look at one—that you are aware of to measure whether someone is fit for work?

Mr T. Nolan—I am only speaking on how we operate. There is no method of how we measure it. When we send the guy home, 90 per cent of the time the wives are not home, they go straight to bed. We ring them up half an hour to three-quarters of an hour before they are ready to come back to hop in the truck and go. We feel that with the wives being away, most of our guys are older guys and they have their rest and they are rested ready to come back to work when we want them. They have had a good break.

Mr St CLAIR—As I say, we had a look at a system, which was most interesting, being trialled in the mining industry. It is a track ball system which checks whether you are ready for work or not. If there was an option to be able to trial something like that, is it something that your organisation would look at? Do you see a benefit there?

Mr D. Nolan—I think we would certainly look at any initiative to improve any gains.

Mr T. Nolan—You really cannot get into people's personal lives when they leave work. You only trust that you educate them and go right through the system with them. You can only trust that they do what you have told them to do. You cannot follow them into their homes. It is an invasion of privacy, I feel.

Mr St CLAIR—It was just that, as I say, we trialled this thing physically.

CHAIR—Terry, I would like to touch on another question while we still have a few minutes left. You talk about incentives for best practice. Just how do you envisage that working?

Mr D. Nolan—I certainly do not know.

CHAIR—Say it as you see it. This is what an inquiry is all about.

Mr D. Nolan—For those companies, organisations or individuals who are doing the right thing, I think that, whilst there should be reduced enforcement, I do not think they should be totally left alone, otherwise there are no crosschecks to see whether one is doing the right thing. A lot of the times I hear that drivers are the ones who are getting fines and a lot of it may be brought on by other freight forwarders or organisations that are doing it. I think that certainly needs to be brought back down along the line. I also understand, though, that resources are very scarce when it comes to enforcement to do that type of thing.

I think education levels certainly need to be increased dramatically throughout. I do not know how to do that. I do know, though, that the majority of information that goes into publications is predominantly in trade magazines, which transporters read but which not many of the general public would read or know about. Things like industry codes of practice and combining quality systems with truck safe systems, with fatigue systems, environmental policies—all of those types of things—I think you might be able to look at as some of the solutions as well. It is a very difficult question to answer, but I certainly hope I have.

CHAIR—Terry, could you just give us your philosophy again on this matter: you emphasised that you support the non-prescriptive form of control. Is it just in this—what is it called?

Mr T. Nolan—FMP.

CHAIR—Are you talking just about that when you are talking about non-prescriptive, or do you have a wider vision? Are you talking about codes of practice?

Mr T. Nolan—We have all our codes of practice put in place and we have a little handbook that we make all the drivers read when they first come into the FMP. Everything is plotted out—everything that they have to do is all in there. They have to sit down and read it when they first start with us. When a guy comes to us to work, we put him through the questions—150 questions—first and then we give him the book to take home and read. He might work for us for three months before we will even consider putting him in the FMP and then Darren and John will come and ask me, ‘How is he performing? What is he doing?’

CHAIR—Are you going to have half your staff on each program?

Mr T. Nolan—You just cannot go and put anyone in the FMP unless you are happy.

Mr D. Nolan—Unless they have been with us for three months and showed—

Mr T. Nolan—I just will not throw anyone in because I need to know that that guy is doing the job right, the way I want it done.

CHAIR—Is that your own booklet that you have put out?

Mr D. Nolan—Yes, it is.

CHAIR—Could we get a copy of that?

Mr D. Nolan—Certainly.

CHAIR—So you do the FMP and you have the booklet. Do you ever have a seminar with your drivers to say, ‘This is our booklet. Can we do it better? Are you finding difficulties with it?’ Do you get feedback from the drivers?

Mr T. Nolan—We have quite a few meetings. Probably every six weeks we have a meeting with the guys and I ask them whether there is any way we can improve anything to improve our business.

CHAIR—What percentage of the drivers would attend any one of those workshops?

Mr D. Nolan—It depends how many are away.

Mr T. Nolan—If there is a meeting, it is put on the blackboard and everyone who is at home has to be there, and if they are not there I want to know why.

CHAIR—Are most of your drivers Gatton based?

Mr T. Nolan—Yes.

CHAIR—Do you have any other comments?

Mr T. Nolan—I think the FMP, from our point of view, has been a great asset to our company. In the early part of it there were some hairy moments and it took a little bit of organising to get it through. From an industry point of view, I feel that if people are fair dinkum and they want to improve their business, the FMP is a great thing because you do not put the driver under the pressures that he is under with a logbook system. He has flexibility. In the logbook system he has no flexibility and he is pushed to the limit all the time.

CHAIR—Do all states now have FMP?

Mr D. Nolan—I think New South Wales has a transitional system. That is one of the other issues, I guess. The acceptance statewide is sometimes a difficult thing for any program—

CHAIR—Which states have FMP?

Mr D. Nolan—I believe New South Wales and Queensland.

CHAIR—Only New South Wales and Queensland at this stage?

Mr D. Nolan—That is right.

Mr HARDGRAVE—Would you be the biggest trucking company in Australia involved in something like this fatigue management plan?

Mr T. Nolan—I would believe so.

Mr D. Nolan—Possibly.

Mr T. Nolan—We do not really know who else is in the transitional one, but we were the first ones with the fatigue management program with Gary Mahon and the guys from the Department of Transport in Brisbane.

Mr HARDGRAVE—So you have been more or less an odd one out doing the right thing?

Mr T. Nolan—We have been sitting out on the pedestal for quite a while, actually.

CHAIR—Darren and Terry Nolan, thank you for your evidence. You will receive a copy of the *Hansard* proof of today's proceeding from our office. If you want to refer to your evidence, it will be on the parliamentary web site shortly. I thank you for your excellent submission and for the frankness of your answers.

Mr D. Nolan—You are welcome to come and view the program if the committee needs to. We would certainly invite you.

[10.48 a.m.]

MAHON, Mr Gary Leonard, Director, Road Use Management and Safety, Queensland Transport

CHAIR—Mr Mahon, could you come back to the table for a moment? Could you tell me where the other states are at with the FMP at present?

Mr Mahon—Queensland is the only state that actually has the legislation in place to establish an FMP program.

CHAIR—Are the others committed to it?

Mr Mahon—New South Wales, Victoria and South Australia have reached agreement with us on the working group and have issued permits to recognise FMP operators to operate in their states. That has been the case for about four years. So Queensland is the only state with enabling legislation to introduce an FMP. The other three regulated states have put permit arrangements in place to recognise operators sourced out of the Queensland program.

CHAIR—They have not adopted their own programs yet?

Mr Mahon—No. When we set out we had to change tack a little bit. We found in the end that the phase 1 operators best served us by assisting us to develop a program that we could live with in terms of the outcome and that the industry could live with in terms of managing their businesses. With the phase 2 operators we have taken a much more hands-off approach so that we can properly evaluate the before, the during and the after. We set out to actually evaluate FMP with phase 1. We found that they ended up serving a different purpose. Phase 2 is the one we are actually evaluating from start to finish. The largest operator coming into phase 2 is Finemores, which is one of the biggest in Australia.

CHAIR—I know this is crystal ball gazing a little bit, but how long before you have your full assessment of it in Queensland, and what time span would you put on the other states getting involved in it?

Mr Mahon—This is being optimistic in terms of its outcomes, but we are working to a timetable of reaching ministerial sign-off at the Australian Transport Council for the introduction of full FMP from 1 January 2001. We have the rest of this year plus next year to complete the evaluation, finalise the reports and go through the processes of getting through to ministerial council by the end of next year.

CHAIR—Thanks very much for coming back. We will now break for morning tea.

Proceedings suspended from 10.50 a.m. to 11.15 a.m.

BAND, Mr Kevin, Executive General Manager, Safety, Queensland Rail

COUGHLAN, Mr Gregory Edmund, General Manager, Metropolitan Freight and Regional Operations, Queensland Rail

CHAIR—I welcome to the table the representatives of Queensland Rail. We thank you very much for your attendance. Thank you for your submission. As you are aware, the committee does not require people to give evidence under oath, but these proceedings are legal proceedings of the parliament and warrant the same respect. Any false or misleading evidence is considered a contempt of the parliament. If you have any proper names or quotations, if you would defer to the Hansard reporters before you leave for the sake of accuracy, we would appreciate that. Would you like to make an opening statement?

Mr Coughlan—At the outset, I thank the committee on behalf of Queensland Rail for the invitation to appear before you today. Queensland Rail is Australia's largest rail operator and, through its Q-Link business, operates one of the largest commercial road vehicle fleets in Queensland and is therefore concerned with the effects of fatigue in both transport modes.

Over the past four years, Queensland Rail has invested significantly in the research, development and implementation of the fatigue management program, concentrating on train crewing functions initially. In this context, we recognise fatigue as a major hazard to our business and are seeking to manage the risks it poses responsibly. Our research has shown that fatigue-related accidents, injuries and associated community and process losses are estimated to cost the Australian economy in excess of \$1 billion annually.

From the perspective of risk between rail and road transport modes, there were 188 deaths involving articulated trucks during 1997. The proportion of road fatalities involving articulated trucks has been fairly constant since 1990 at around 10 per cent. The Australian Bureau of Statistics estimated the national cost of road accidents to be \$6.1 billion in 1993. However, by contrast, the cost of rail accidents in Australia was estimated at only \$69 million per annum. Rail transport has an extremely good safety record, maintaining a strong ongoing focus on all aspects of safety management.

It is important to recognise that there is a relatively high degree of self-regulation and close management of fatigue-related issues within the rail industry relative to the road industry. This is a result of several factors, including the respective industrial relations environments and the centralised control and protection systems and safety focus technology associated with rail transport.

Therefore, QR believes that this committee of inquiry will benefit from giving particular attention to fatigue management in regard to road transport for the following reasons. Firstly, it is important to focus on the area where substantial gains can be most readily achieved for the community and, secondly, to ensure the high standards of safety management within the rail industry do not contribute to a competitive disadvantage within an increasingly difficult competitive environment for rail.

Approximately one-third of QR's 14,000 plus work force work either regular or irregular shiftwork. The around-the-clock and around-the-calendar operations of QR pose unique challenges to our business, our people and, of course, their families. In preparing its submission, QR was conscious that the committee of inquiry was likely to encounter considerable repetition if narratives drew largely from the immense amount of literature available on the subject. Instead, our submission highlights the practical activities and approach to fatigue management that we have commenced to undertake in QR.

The consequences of fatigue in transport may be brought into high public profile during critical incidents. A combination of consequences may result in death or injury, environmental damage, financial or economic loss, or emotional or psychological trauma, and the resultant impact of legal and/or political processes may further exacerbate the effect on individual businesses and the community. However, the day-to-day impact of mismanaged fatigue is also likely to impact on these areas. Its effect is perhaps more insidious in that it may be masked; that is, the effects may not be so readily quantifiable. As a result, it is virtually impossible to accurately measure the high cost of fatigue in industry. Fatigue cannot be eliminated, but it can be better managed. Management of fatigue is a shared responsibility of governments, employers and employees.

QR is making an internationally recognised contribution to fatigue management. Our organisation is one of five railways involved in an Australian rail consortium national shiftwork and workload study coordinated by the University of South Australia, particularly its Centre for Sleep Research. The work of the consortium has been ongoing since 1995, building on its initial objectives: to develop a comprehensive training and education program addressing the causes of fatigue and recommending a range of countermeasures that can be adopted to manage fatigue—some of these materials have been provided to the committee by way of example—and, secondly, to develop and validate practical tools to measure fatigue in the workplace. The study involved some 253 train drivers working at 14 different locations across Australia, including two from Queensland. An immense amount of data was drawn from the study and continues to be evaluated today.

Some of the key findings that emerged from the study included: the time of day at which the shift occurs is the major determinant of fatigue; fatigue is cumulative over a work/sleep, day/night cycle; and, despite being regular shiftworkers, train crew continue to attempt to live their lives like non-shiftworkers, with most sleep occurring at night. We believe this is in fact so for all other shiftworkers. Other findings were that sleep was accumulated more quickly in breaks beginning at night rather than breaks during the day and that shift length had no effect on performance or alertness. The conclusion drawn by the study was that the time of day, circadian rhythms and lack of biological adaptation to irregular shiftwork were the main contributors to fatigue.

The consortium has recently commenced a second three-year phase of the study with the following goals: firstly, to evaluate fatigue management training programs being undertaken by consortium members across the rail industry; secondly, to evaluate the effectiveness of fatigue modelling software developed in the first phase of the study and develop and validate guidelines for its application; and, thirdly, to continue review and assessment of the immense amount of data generated from phase 1 of the study and to explore the linkages of fatigue to performance loss in a practical and quantifiable way.

Queensland Rail believes that fatigue management is important for three primary reasons: firstly, to improve safety and reduce loss; secondly, to improve productivity; and, thirdly, to improve the quality of life for its shiftworking employees. In doing so we are seeking to balance the interests of three parties—our customers, our employees, and our business and its stakeholders. It is our belief, based on our experience, that fatigue management is not solely confined to managing work-related fatigue. Any effective strategy will target educating workers, their families and, of course in the workplace, their supervisors.

Queensland Rail's fatigue management program has three main focuses: firstly, a fatigue management awareness training and education program that we are rolling out throughout our organisation; development of predictive roster modelling linked to the identification and control of fatigue-related risks based on validated outcomes; and progressive industrial changes aimed at moving from an industrial regulated system of prescriptive hours of duty to a performance based environment in which risks are properly assessed, controlled and in which validation takes place. QR encourages government to support and promote industrial dialogue that moves towards flexible win/win/win solutions for customers, employees and the business to manage fatigue based on sound risk management and behavioural principles rather than prescriptive hours or service frameworks.

Within the Australian road transport industry, QR understands that governments and regulators are establishing deregulated mechanisms for truck operators to work more efficiently and flexibly based on alternative compliance frameworks built around fatigue management. Whilst QR may harbour some concerns regarding the validity of some of these programs, it supports the objective of deregulation and recognises the benefits that this can ultimately bring to Australia's competitive position. However, the benefits will not be realised if the relative rigorous controls of the rail sector result in a misallocation of resources away from rail transport. Deregulated situations are only effective if organisations within a given sector have the discipline to self-regulate. Currently, QR is rigorously self-regulating. However, QR is conscious that this may place it at a competitive disadvantage as it competes in the transport sector with some organisations that do not take a similarly rigorous approach, particularly some road industry competitors.

QR has no intentions of suspending or diluting what it judges to be a responsible approach to fatigue management but would support government efforts to introduce consistent standards and control systems for managing fatigue. Specifically, QR believes that there is a need for a standardised approach, in all transport modes across Australia, to managing fatigue in the transport industry. If such standardisation were to be introduced, it is QR's belief that the most appropriate mechanism would be through a self-accreditation process to validate the systems implemented rather than an inspectorial system. However, QR would be concerned if validation processes and self-accreditation allowed a continuation of extended hours of work within sections of the road industry.

The argument extends beyond simple consideration of competitive advantage and disadvantage. There are potentially life-threatening consequences of mismanaging fatigue. The relevance of QR's competitive neutrality argument is that, while competition is good, responsible participants in the transport industry should welcome a curbing of the potential harmful impact of unbridled competitive pressure.

Queensland Rail presented a more extensive analysis of the competitive disadvantages of rail transport relative to road transport within its submission to the Neville inquiry into the role of rail in national transport. The fatigue management issues need to be addressed with due regard to this broader context.

CHAIR—Thank you for your kind comments about our previous report. Have you noticed any discernible difference in fatigue between your road drivers and your rail drivers? You said that you are participating in the FMP program for your road drivers. Do you have a parallel program or do you have any similar methodology planned for your rail drivers?

Mr Coughlan—That is not quite right. Our road drivers in the Q-Link business do not participate in the current FMP programs.

CHAIR—I thought you said that you did?

Mr Coughlan—No.

CHAIR—I must have misheard you. You don't participate in that?

Mr Coughlan—No. Our Q-Link drivers do not. They operate on an award based prescriptive hours system.

CHAIR—And are you happy with that?

Mr Coughlan—The business is happy to proceed along with those arrangements at this point in time, but is in the throes of having discussions with unions at this point in time about a new agreement, which may include a move to a deregulated system.

CHAIR—Philosophically, do you favour the FMP model?

Mr Coughlan—Philosophically I believe that is the appropriate way to go, yes.

CHAIR—And you are negotiating with unions at this stage?

Mr Coughlan—Yes.

CHAIR—Have you noticed any significant differences in the fatigue levels of the two groups of drivers?

Mr Coughlan—We have not done any sort of formal examination of the comparative fatigue levels between the two drivers. In fact, I think it would be fair to say, based on the research we have carried out with the national shiftwork workload study, that the type of work does not really impact on the levels of fatigue that an employee has, impacting on their way of work. It is more the time of day that the employee works than the type of work the employee carries out.

CHAIR—In relation to the upgrading of the Brisbane to Rockhampton line and the fact that trains are now going very much faster on that route, especially the tilt train, have you

upgraded your safety requirements in regard to fatigue? How long does it take to pull up a tilt train going full speed?

Mr Band—The tilt train, because it is new technology, also has some of the better braking capabilities on it. So a tilt train at high speed can still stop much more quickly than a conventional high speed train or a high speed freight train. In the last three or four years, though, we have totally overhauled our safety management system. Before we introduce any changes nowadays we have to consider all of the safety implications. A safety case was created—quite a substantial document—for tilt train that considered in excess of 500 hazards that could potentially exist, and controls are in place for them.

CHAIR—Is fatigue prominent amongst those?

Mr Band—Not directly, but indirectly, in as much as we have medical fitness standards for train drivers.

CHAIR—Are they higher for tilt train drivers than for other drivers?

Mr Band—No. Because the cursory examination that was undertaken—because of the times of day and shift patterns—was not dissimilar or different from anything else that we did, there was no need to change the medical fitness standards as a result.

Mr Coughlan—We do have systems on the train which protect against the driver's alertness. They are called vigilance control systems. That particular train is also being fitted out with a system called automatic train protection, which supervises the driver. And if the driver, in fact, does not obey a red signal or travel a train at the correct speed, then the system takes over and takes remedial action.

Mr MOSSFIELD—I am interested in the methods you use to communicate with your employees on the issue of fatigue, particularly relating to employee input, and also industry and union cooperation and the reaction of the employees to your program.

Mr Coughlan—Queensland Rail has a very comprehensive consultative framework within which it deals with its employees and their unions. In the context of the fatigue management program that we have rolled out with our train crew, rostering is a major issue in the train crewing area because it has such a big impact on the social aspects of our employees' lives. In the context of rostering, we have a roster code of practice, which is a comprehensive document that really talks about the behaviours we should bring to rostering with our crews. In terms of the fatigue management program that we are implementing, we have just completed the roll-out of a half-day workshop for all employees and their families—or the members of their families who were interested in coming along—where we have a facility video and a workbook that they can take home and work through, which really addresses some of the issues both in their work life and their personal life that can help them to manage the issue of fatigue better.

Mr MOSSFIELD—You indicated that you had a study into shiftwork. What is the length of time that your employees would be involved in one shift? Do you have 12-hour shifts?

Mr Coughlan—We have the ability to work our employees for 12-hour shifts, but our industrial instruments require that we have two people on a locomotive in those situations. The norm for our train crew is that we work either 11-hour shifts or, where we work driver-only operation on our trains, they work shifts rostered for a maximum of eight hours 45. But in terms of the relief, that is, where they expire their hours, they in fact can work as much as 11 hours under our award.

Mr MOSSFIELD—Do you have a view on whether a 12-hour shift would be too excessive from the point of view of managing fatigue?

Mr Coughlan—I do not believe the shift length itself—to a limit—is something that adversely impacts on the issue of fatigue. The work we have done indicates that it is more the time of day that the employee works. Obviously, at certain times of the day it is less appropriate to have employees working long shifts than at others.

Mr Band—Could I add a comment to that? Just over four years ago, and prior to coming to Australia, I used to be the head of safety policy at the British railways board, and we undertook a massive evaluation of driver hours for part of the trade protection systems. It is probably the biggest study of train drivers, I suspect, that has ever been undertaken in the world. The committee may be able to track that down, if you found that useful. But the findings were quite intriguing in that the drivers were at risk from all sorts of exposure—be it just occupational injuries like tripping over to passing signals at danger—but they were always at risk between the second and third hour that the graph climbed, and it just tapered off up until 11 or 12 hours. It was totally counter-intuitive.

What was quite interesting was that, at the same time, the health and safety commission were undertaking further work in the mines, and they came up with exactly the same studies and exactly the same findings as did the nuclear industry. There seemed to be something unique between the second and third hour. There are some experts—people like the circadian rhythm institute in Canada—that put it down to circadian rhythms. It was interesting. It was only in the mines in the UK where they did allow working beyond 12 hours, and from about the 13th to the 16th hour you could really see a steep increase. I am reasonably confident that with respect to that study—because it was so deep and covered literally millions and millions of hours of work—there was something common about those findings that, for two or three hours, we have the risk, and then it tapers off, and probably up till 11 or 12 hours, and then it exponentially increases.

Mr St CLAIR—It is interesting that you say that, because in some of the evidence that we have received so far quite often the issue is, ‘Yes, I feel tired after an hour in the business.’ The self-regulation of hours, which we heard about previously, to my mind, is a much more beneficial way of managing fatigue. I also thought that you had the fatigue management program on your trucks in road transport until I reread the submission, where you talk about competitors. In your submission, you call for minimum regulations to support fatigue management programs across all transport modes in Australia. How would this be achieved or how could you achieve it?

Mr Band—The railways in Queensland are predominantly covered, from a safety perspective, under the Transport Infrastructure Act. In the last two or three years we have

built up a very professional relationship with our regulator at the Department of Transport. That approach is one that allows the railway operator to identify all the hazards that it is exposed to, to evaluate those hazards, and demonstrate to the regulator that it has controls and mechanisms in place to manage those hazards. We have only had two or three years experience at working within that model, and we are already demonstrating considerable success.

I guess that one of the things we have to be cognisant of, though, is we have to consider top-level hazards first. I mean, the key issues for us are things like train collisions and derailments. We need to ensure that our infrastructure is sound and highly competent in order to manage that. And when you find black spots, you then dig down and look a stage further. One of the key issues for us about three years ago was the number of signals being passed at danger, and we said, 'We have to address this', and address it we have. We have been able to reduce that by more than 60 per cent in the Brisbane suburban area in the last couple of years. Now, having got rid of that problem, we have to look a stage further. I guess that collisions or accidents that are caused by fatigue are fortunately few and far between, because we have built on 130 years of tradition, and we have so many secondary protection measures built into our system—things like vigilant systems—that do not occur in trucks on the roads. So we have many mechanisms that are built in, and we build onto that.

Going back to the regulatory model—we have to submit every accident to the regulator. We have to submit the accident investigation findings to the regulator. We measure trends. This year, we have moved on to them auditing us—not in everything that we do, but auditing us into areas of high-risk exposure. I believe that an extension of how we operate now is how fatigue will be managed. It will eventually come to be a top-level priority. That is not to say it is not a priority now, but in terms of the broad exposures that we have to address—there are four or five deaths a year at level crossings. We have to manage those. We have derailments, and we have to manage those. We have to prevent train collisions. They are predominantly not caused by fatigue, even though it can be a factor. Progressively, as we eat into it, it probably will be the only factor in 20 or 30 years' time, and then I guess it will get what it deserves in much more research.

Mr St CLAIR—Who do you think is going to be responsible for developing the minimum standards? Is it occupational health and safety?

Mr Band—The Rail Safety Committee of Australia has, within the last month or so, held a workshop where the industry has agreed to go down a risk tolerability framework. That is exciting news for the Australian rail industry. Broadly, it sets tolerable levels of safety for passengers, public and employees. Now, I can assure you that we are well on the safety side of any levels that would be set. I mean, our safety performance for passengers in Queensland is literally the best in the world. We are three times safer than the railways in the UK, which are deemed to be a very safe railway. Our employees are as safe at work as they are driving their cars, and we are getting safer still. With respect to public safety levels in Queensland now, I know there is one fatality per million of population, but those levels are as good as anywhere in the world. Using that framework, we then dig down a stage further and ask, 'What is our next biggest risk exposure?', and we go down and down. Regrettably, as yet, in terms of fatigue, it is something we are cognisant of, but it is not our

single biggest risk. And we have to manage the highest risks. That is where we get maximum safety benefit.

CHAIR—What are higher risks than fatigue?

Mr Band—A train driver could have other accidents that are not fatigue related—non-observation of rules. He could be wide awake and not fatigued at all. So we have many mechanisms there. With respect to our technology, we have \$10 billion worth of assets there. Our rail has to be maintained, because we will have buckles in our rail, and they will lead to a much higher risk to us. As I say, because of the automatic warning systems we have, because of the vigilant systems we have and because of some of our trains having automatic train protection, even if a driver nowadays is fatigued, we have systems that come in and take over and prevent the disasters occurring in many regards, but not always.

Mr St CLAIR—How high does the level of fatigue management go up the corporate ladder? Are you only talking about drivers? Or are you going on to maintenance crews or executives?

Mr Coughlan—We are concentrating on our regular shiftworkers at the moment, particularly in the train crew in the general operations area. That is being progressively rolled out to the other employees who work shiftwork. The concentration has been on shiftwork to this point in time.

Mr St CLAIR—Do you see it coming in, for example, for executives? How is your chief executive—if he or she works from six in the morning to midnight—going to make a decision?

Mr Band—That is covered—not directly as a fatigue program though. Our executive managers have an annual health assessment that is done by the Wesley health people here, and a substantial part of that is stress. Often executive managers suffer stress.

CHAIR—We did not know Vince O'Rourke slept at all!

Mr Band—I hope he does. He is a very busy individual. But taken through the initiatives that we are going through at the moment, it does put pressure on our managers, and we have to be cognisant of that. We measure things like their weight, their stress factors, et cetera. Fortunately, for most of our managers, they are able to sleep at night. That is one of the things with our shiftworkers. As Greg spoke about earlier, our shiftworkers who work at night still live a nine-to-five activity and their family live a nine-to-five activity, and they are the sort of people who are getting sleep deprivation.

Mr Coughlan—Unlike blood alcohol levels or something like that, measuring and assessing fatigue, particularly in individuals, is really a difficult thing to do. We really do not have something where we can determine that there is a specific fatigue problem. We have to look more at the systems in terms of—

CHAIR—Do you do any of Drew Dawson's profiling of your shifts?

Mr Coughlan—We do.

CHAIR—Where do they stand on this 140-odd scale?

Mr Coughlan—It depends where you go. We are still in the process of trying to validate the particular scale that has been developed through the fatigue management study that we have carried out. The difficulty with it is that it really takes a very pure look at the world in terms of work, rest and those sorts of things and makes assumptions as to what the individual has done in their time off and then relates that back to assumptions about how the roster is formulated. It is okay. It is a tool that can help, but effectively it does not look at all the hazards and all the controls that manage fatigue, both in terms of the individual and the system he works in.

Mr HARDGRAVE—What is the most likely work schedule or environment that someone working for Q-Rail would find fatiguing? Is it a goods yard? Is it running on a long-distance train? Is it doing a suburban run? Is there a delineation between the tasks?

Mr Coughlan—I think it is all of the above. Our work environments go from, on the one hand, having to work in very boring, monotonous terrain on long, straight tracks for 11 or 12 hours on all-night runs where you get to another location where you have an eight-hour break and then do the same thing going back, to having to run around the suburban area for nine hours, which, in fact, can become very monotonous and fatiguing. We run the whole gamut through our operations.

Mr HARDGRAVE—Would you say then that those most monotonous and fatiguing routes, such as a suburban rail run, would be better supported by systems than something that would require more attention, such as shunting in a goods yard?

Mr Coughlan—Yes, in fact, they do. With the level of systems we have around our work processes, our train operations in Queensland are probably superior to those of anyone else in Australia. We have invested an awful lot of money, time and effort into putting best practice safety systems on our trains.

Mr HARDGRAVE—Why have you not then shown the lead in trying to get something as far as fatigue management is concerned with regard to your trucks?

Mr Coughlan—I cannot really go to the reasons why in the Q-Link business, because I do not specifically manage it. I believe one of the factors may be around the industrial characteristics of those sorts of discussions.

Mr HARDGRAVE—But at stake is a signal to the industry itself. We have had a responsible private operator give us evidence this morning that they have literally been out on a pinnacle, feeling the chill of the industry for bringing in a fatigue management plan of one Queensland department. We have another Queensland department that has industrial relations problems preventing it from, at the very least, offering support to a private company that has at least been willing to take on those sorts of programs.

Mr Band—I think there are two issues that you have raised there. Perhaps we should treat them separately. The first issue is the fatigue in operating trucks. We are only as good as the measurement systems we have. We are much better at managing accident statistics of our operational trains, because we know about them; our train controller oversees them and monitors them. A train driver really cannot get away with anything. He will get caught.

Our truck drivers are not necessarily in that same issue. We do not necessarily have the evidence and the intelligence that we would need often to be able to draw a conclusion that our truck drivers are less safe or more safe. We have introduced this year in our safety plan an objective that encourages—in fact, it mandates—a blame-free culture. We are encouraging our employees this year for the first time to report any faults or flaws in the hope that we can be aware of it, evaluate it and address it.

Whether that will cause any of our truck drivers or, come to that, other staff to highlight and address issues, such as, ‘I nearly fell asleep at the wheel,’ or whatever, we do not know. Hopefully it will. Then, I guess, if it was deemed to be a higher-risk issue than perhaps we envisaged or knew about, a program would, I suspect, automatically follow.

Mr HARDGRAVE—As you have already acknowledged, this committee used the chairman’s surname in its report title, the so-called Neville report into Australian rail. I am not about to retry that inquiry. One of the things that came out to me in evidence that we took on that was the competitive disadvantage that rail has over road, with infrastructure problems and all those sorts of things. It would seem to me that, if you are going to take on some new programs in the next 12 months, it would be good for your business plan to be able to compete more directly with companies like Nolans that are at least in there trying to do their best.

Mr Band—The second issue that you did raise was the issue about the trade union type relationship that we have. We meet routinely with our trade unions and we ask them to put forward schemes that we could control. It was their initiative this year that said, ‘Let’s go for a blame-free culture,’ looking into the broader issues. They have not yet asked for us to look at the fatigue in truck drivers, but I will take that forward at the next meeting with them and ask them to evaluate whether there is a need there.

We have a very sound relationship with our trade unions. The working relationship that we have with them in reducing the number of signals passed at danger is very considerably down to their support and their commitment. If we get them on board on initiatives, as we invariably do with safety matters, because they are more effected than we are, we have had tremendous successes. When it comes to things like fatigue, it is a bit like alcohol and drugs. We are finding a reluctance to have any of the proactive measures that you would think might be in place to test a person’s alertness at the start of their shift.

I guess over time that is where we need to work with them, because there are many mechanisms nowadays that you can use to test people’s degree of alertness at the start of their shift. If someone were a high-risk character, you would not even let them take the controls of the train or the truck. I suspect as we educate our work force, as we are doing at the moment—and Greg’s programs have been about education and training—as we bring

them over, perhaps in the future there will be more of an acceptance of some of those tools where they can self-monitor and maybe take some of those initiatives into their own hands.

Mr HARDGRAVE—You would agree that fatigue is a very real and telling factor. Based on your experience, is it reasonable for people to work 12-hour shifts in the middle of the night? Do you expect peak performance from those people?

Mr Coughlan—You really cannot answer that without looking at the system or the environment that they work within. It may not be the fact that they have worked 12 hours; it may be a whole range of other factors that have produced the fatigue. Then further, there may be a whole range of controls put in around that work environment that enable a fatigued person to operate quite safely.

Mr HARDGRAVE—That is fail-safe safety mechanisms?

Mr Coughlan—Yes.

Mr MOSSFIELD—In its submission, National Rail suggested that the reports of investigation of rail accidents should be published. What is your view on that? Would that be a potential contribution towards managing fatigue?

Mr Band—I guess we might give our view on whether the reports should be published rather than comment on National Rail's views. I am a member of the Rail Safety Committee of Australia that has been tasked with looking at investigation reports and whether they go into the public environment et cetera, so I am quite informed on the issue. There is more work and research needed by the industry to understand what those principles mean. We have about 10,000 events a year, often of a minor nature. Would they all go into the public arena or just a few? In my view, the ones that go into the public arena are there in any case, because, if there is a train crash and 50 people are dead, the public knows about it and it does get into the arena by definition.

There are many ramifications in terms of coronial investigations and legal proceedings. For example, the National Rail were involved in a train collision at Hines Hill about three or four years ago. The legal cases are still going on. You have to be very careful what goes into the public arena. We are looking at the moment at how we can more proactively work together as an entire industry, with regulators and others included, to ascertain what should go there.

In my view, what needs to go into the public arena are the real causes, the underlying causes and the intelligence as to how those causes might be better managed. There is a tendency in some parts of the world that we put it into the arena, but all that goes out there is noise and gossip and the negative vibes.

CHAIR—We made a suggestion in our last report that we have a regulator at arm's length from the industry that looks at safety, such as something similar to BASI.

Mr Band—In my experience and from my background I have dealt with railways in many parts of world. I have not personally in the railway environment seen reports—for

example, in Canada where they do this—that are actually any better than a report that is done by a railway in-house if that railway truly wants to get to the bottom of what happened. It is a subject that is very important to me. I have personally trained 450 of our own people in the last two years to better investigate—and not only to investigate—and to better write their reports, because railways are not good at report writing. We are getting better.

I believe that some of our last reports, which we would happily share with you if you wanted to see them, are as good and, in my view, much better than some of the things that come from the Canadian railways. You might be at arm's length, but that might give you lack of knowledge in some regards. There is a balance between the two.

CHAIR—There are two things that I would like you to comment on in the remaining moments. Firstly, you say it is yet to be determined to the extent to which fatigue impacts on performance and that you are assessing this at your driver training centre in Rockhampton. Firstly, what is the early evidence coming out of that, be it anecdotal or otherwise? Secondly, have you used any of Professor Dawson's methods? You said that there are methods of testing people before they go on shift. In fact, we tried one of them last week ourselves with varying degrees of success. Are you planning as part of this investigation to trial one of those in Rockhampton? What methodology do you use other than the simulators?

Mr Coughlan—In many ways it goes back to Mr Hardgrave's question about the involvement of unions in processes around fatigue management. Our experience is that the whole process is one of evolution rather than revolution. In fact, when you start to look at those sorts of issues in a demonstrable and practical way, you are challenging some really old paradigms that exist. In Queensland Rail, we still have the same award provisions around hours of work for our train crews that existed in 1917. A lot of the history that we have goes back a long way.

There are two parts to your question. In terms of the practical measurement of fatigue in an environment using our simulators in Rockhampton, that particular program was to be carried out in association with the University of South Australia and it was to start in July. We got to a point where we consulted with our people in the area. We were drawing crews from a whole range of depots in central Queensland to carry out the study. It has not started, because there are now concerns from one of our unions that we may use that research in some way against them. We are currently working through that particular issue with the unions.

We believe that it is only at that stage that we can start really to validate what performance effect fatigue has in a practical way on driver simulators where we can control the experiment that we will understand exactly what the effects are on train drivers and train driving from the perspective of fuel management, mechanical wear and tear, train handling, train dynamics—the whole thing. At this stage we believe that we should be able to get over those hurdles through some consultation with unions in the next few weeks and proceed on with that work. That work will also be carried out in New South Wales by Freightcorp using their simulators as well.

In terms of the testing of performance at the start of work, we have done an awful lot of work on that in Queensland Rail and there are any number of proprietary systems around the

world that you can adapt for that purpose. The University of South Australia used one, which is a trackable type of instrument. We have a number of others in Queensland Rail that we have on board, which we are also trying.

CHAIR—Can you test all of these at Rockhampton?

Mr Coughlan—You can do that. The difficulty with those is that you really need to validate them against a population before you use them practically. Again that is something that we are also working through. We believe there is a lot of potential in that sort of instrument.

Mr St CLAIR—Just going back to the competition between rail and road—and this question relates to the fatigue management that you are putting on your rail and not on your road—you were saying that your road transport side works a different system. Do you have a logbook system? How do you work with fatigue management or how does the log system work there?

Mr Coughlan—As I understand it, there is not a lot of long distance driving that is done by the drivers in the Q-Link area. There are some long-distance journeys undertaken. A lot of it is the distribution of goods around local areas. So they would comply with the standard conditions that apply under the transport regulations for those operations. In terms of the way the drivers work, they work in accordance with award provisions.

Mr St CLAIR—Have you got set kilometres around an operating area as they do in New South Wales?

Mr Coughlan—Again, I really cannot comment in a lot of detail on that. If you want that, I can get that for you.

Mr St CLAIR—Right.

CHAIR—I would like to close by asking this: what fatigue management do you have in your workshops? How many depots do you have? Do you service trains overnight? What sort of shift arrangements do you have in those depots?

Mr Coughlan—The people who work in the depots that carry out maintenance on our trains work standard shift patterns, eight to four, four to midnight and midnight to eight.

CHAIR—Do you have a pressure problem as do the airlines between, say, midnight and 7 a.m. or 8 a.m.?

Mr Coughlan—Not specifically, no.

CHAIR—Do you have enough locomotives to spare to get around those sorts of problem?

Mr Coughlan—Our locomotives work to timetables where there is usually some time rostered in servicing depots for maintenance. So there is not a fatigue issue that I am aware

of in our servicing depots. In terms of the numbers we would have, there would be 10 or 12 around the state.

Mr Band—We do have in addition to our requirement that before trains move they are tested so that if, let us say, a maintenance engineer had failed to connect the brake system, our train driver and others are involved in a practical brake test to test that it is working in any case. So the critical components, I guess like the airlines, are tested.

CHAIR—Thank you, Mr Coughlan and Mr Band, for your evidence. It has been very stimulating, as it generally is, from Queensland Rail. The committee is a great admirer of the best practice procedures that you have in many fields. You were great contributors to our last inquiry and we thank you for that. Not only were you great contributors but you demonstrated that in a practical way in letting us look at some of your new trains. Obviously what you are doing here today is also well advanced and at the cutting edge of safety and fatigue. There were a number of things mentioned there. The report from the UK: if you could let the secretariat know before you leave where we might get that report?

Mr Coughlan—Yes. We can probably provide that and there was one that was produced by the Federal Department of Transport in the United States that looked at a similar study within their rail operations.

CHAIR—Right.

Mr HARDGRAVE—Mr Chairman, I wonder if they would be able to let us know if they are able to negotiate a new set of circumstances with regard to their road transport operations as well—just update us at some stage down the track?

Mr Coughlan—Yes, we can do that.

CHAIR—You will receive a draft of the *Hansard* transcript and if you wish to view your evidence, you can see it on the Parliament House web site. So once again, thanks very much for coming.

Mr Band—Thank you for the opportunity.

[12.04 p.m.]

PULLAR, Ms Beatrice Margaret, Professional Speaker, Psychologist and Irlen Clinician, Response Ability

CHAIR—Ms Pullar, you have been developing the Driver Alert For Life Program. We welcome you here. I have to caution you, of course, that while you are not under oath, these are proceedings of the parliament and need to be treated with the same respect. You will recognise, too, that any false or misleading evidence will be regarded as a contempt of the parliament. Would you like to commence by making a short opening statement?

Ms Pullar—Certainly. I am a professional speaker and author. My professional background is as a psychologist. I have had experience being a lecturer in special education and in various clinical appointments in the past. My business name is Response Ability. So I come to you as an individual who has made a commitment now in my retirement to present programs which I hope will make a difference to people.

About 18 months ago, I presented the procedures by which I came to write the books and tapes. Since then I have had an opportunity to really think about what is really going on here. I am more convinced than ever that behind everything that I have been doing is the fact that there is a driving culture, particularly on the roads, which is based on arrogance and aggressiveness and it applies to all sectors. So it is not just motorists; certainly transport drivers are equally involved in this sort of behaviour.

Basically, drivers tend to think that they are good drivers, that they have a right to drive and they resent friends, family, health professionals, the police, courts or anyone else who has ever challenged this right. They tend to drive as if they own the road in front of them and they have little regard for sharing the road with others. They believe that they have a right to teach bad drivers a lesson, that they have a right to drive at whatever speed their vehicle is capable of doing and that, if they are running late, their right to speed is going to override any rights that other people might have. This particularly is where transport workers become implicated, because so often we hold them responsible for getting goods to us on time and we place enormous demands upon them. So quite apart from any scheduling, they are constantly under pressure to get whatever it is there on time. The practical reality is that the majority of drivers are totally oblivious to the number of mistakes that they make every time that they drive. Being complacent or casual about driving can lead to casualty. Driving aggressively and becoming frustrated by traffic delays contributes to the levels of fatigue and inattention in transport.

This driving culture that I referred to, I believe, is learned from childhood. Parents behave badly in cars and children learn how to drive—even little children learn from grandparents when they are playing with their cars and will quote what the grandparent has been saying to other drivers on the road.

Most of the attention in considering fatigue in transport is based on things like sleep disorders and actually falling asleep at the wheel, but I take a much broader view, and that is that it begins from being anything that would disturb your attention. That can be something that physically is disturbing you, such as attention deficit disorder, which is an obvious

example of something that prevents you from being able to pay attention continuously. Most people are preoccupied in our modern society and they drive without any attention to what is going on on the road. They are stressed and all of these factors—these mental factors—affect fatigue. They contribute to the process of not being able to stay awake on the road. Some people have a problem with visual perception. It has been estimated that 90 per cent of our decision making on the road is based on visual perception. So sustained visual attention is a problem for some people. They tend to fall asleep while they are reading or watching television or driving.

People who have sleep problems or attention problems, or stress or anything of the sort, I believe, have an overriding responsibility. It does not matter whether they are driving their family car to work or they are going to get into a truck—or whatever they are going to be driving—they have the responsibility to be fit to drive. My programs have been developed totally about trying to get people to recognise these faults within themselves and to take steps to correct them.

In the corporate sector, there are huge obstacles to overcome, because people are in a situation of worrying about, 'If I admit that I have this problem, will this mean that I am not fit to drive, that I cannot continue to drive my vehicle?' In reality, it has been going on for years and people can, in fact, be assisted, I think, in a program where they have strategies in place to reduce the number of incidents.

I think that is most of what I have to present about the program. One of the most critical strategies I used was to make it in basic English, so that people could read anything that was written. I found when I was at the fatigue and transport conference last year that a number of people were saying that the forms that I had in my booklets were far easier to read and to follow than the ones that were in the government publications. I think that is a very critical factor. We also have a lot of people coming from non-English speaking backgrounds. Whatever is there needs to be in a simplified form. I think I will leave it to you to ask questions from here on.

CHAIR—Yes. Strangely, that was the first thing that I was going to ask you. You have just alluded to it. What do you think the answer is? Are these manuals in public service speak or are they just too technically superior for the average person's perception? If so, what do you see as being the solution?

Ms Pullar—That is partly why I went for a book and tape format, because a lot of people really cannot read very easily at all. In fact, a lot of my professional work as the Irlen clinician involves seeing people who have difficulty reading. I might see a child whose parents cannot read very well either. So, yes, everything has to be put into very basic English. I think that we overload people with a lot of information.

CHAIR—You have been here all morning?

Ms Pullar—No, just this last—

CHAIR—Did you hear Nolans Transport?

Ms Pullar—No.

CHAIR—They have their own manuals. They seem to get very good feedback from their drivers.

Mr MOSSFIELD—I have some general questions that I would like to ask relating to fatigue. We have heard this morning from some submissions that it is really not the length of time that a person is driving or behind the wheel but rather the time of day. Have you got any views on the length of time after which it would become dangerous for somebody to be driving?

Ms Pullar—A lot of fatigue accidents occur within 45 minutes of driving, so it is not a matter of how long—

Mr MOSSFIELD—That is interesting. How do you know that they are fatigue accidents?

Ms Pullar—Police reports and insurance reports tend to stipulate that they are fatigue related. I actually had an ophthalmologist who used to fall asleep at the wheel between Southport and Runaway Bay.

Mr MOSSFIELD—Regularly, at the same point?

CHAIR—Southport to Runaway Bay?

Mr HARDGRAVE—What time of day?

Ms Pullar—The end of his day. So he would shut up shop at about 6 o'clock—

CHAIR—You might just explain for the sake of my colleague the distance involved.

Ms Pullar—We are talking about a 20-minute drive.

Mr MOSSFIELD—These are just practical things.

Ms Pullar—Yes.

Mr MOSSFIELD—Do you feel as though age has anything to do with fatigue? There is a well-known saying that if you see an old man driving a car with a hat on, you stay well away from him. I am probably going a bit to the extreme there but, if we are talking about people in the industry, are we talking about the age group of young drivers, say, between 20 and 30, or 40? Do you have any views there?

Ms Pullar—I would see the age factor as relating to the young driver. The young drivers tend to play very hard and do not get enough sleep. They are often sleep deprived. But I think your question is more looking at ageing effects that would make people less able to concentrate on driving.

Mr MOSSFELD—What I am looking at is the effect that fatigue would have on people of different ages in the industry. We have been told that the younger person is more likely to have fatigue related accidents than the older person. I am talking about working-age people.

Ms Pullar—My biggest concern is complacency and arrogance. For example, some people say, ‘I have driven all my life. I have never had an accident. Therefore, I don’t need to do any more training. I do not need anyone to tell me to fill in forms. I am an excellent driver.’ To me that is the most serious problem. The roads are changing all the time and people do get fatigued. There is no question about that.

Mr MOSSFELD—Have any of your programs been tested by any organisations or government authorities, for example?

Ms Pullar—In terms of research specifically, that is the case only with respect to those people who have asked me to speak and decided to implement the program. I have been negotiating with some fairly major corporations. This is the public version of what I do. There is a program which I adapt. For example, the needs of somebody in the delivery industry are very different from those of people in real estate, who have to drive along pointing out houses. Bus companies and other people all have different needs and they have to be looking at how to monitor fatigue. No, I have not been in a position to have any research funded. It is their records.

Mr HARDGRAVE—I could probably use you at about 10 minutes to 3 during most question times when the House of Representatives is sitting. I think the air in the chamber deteriorates and carbon dioxide fills our brains and we start to drift away. No-one else is going to confess to it, but I will be honest. In all seriousness, do you think people are allowed to take on the responsibility of driving—the most accessed form of transport—too easily?

Ms Pullar—I missed the beginning of the question.

Mr HARDGRAVE—Do you think people are given drivers licences too easily?

Ms Pullar—I do not know about their being given a drivers licence too easily, but I do believe very strongly that we should be retested regularly. My program hangs completely and utterly on continuous training. Since we are not obligated to be retested, we should be retesting ourselves all the time. We do fitness training and all sorts of other training. In any job you retrain, but nobody makes us retrain as drivers unless we change vehicle types or industries.

Mr HARDGRAVE—That would be especially the case for professional drivers. Is there not a regular checking of the skills of aircraft pilots? Do they not have to undergo regular testing?

Ms Pullar—I believe so, yes.

Mr HARDGRAVE—Later this afternoon I will ask that question of the people involved in marine piloting. But what you are saying is that people in, say, the trucking industry, for

instance, should be made to improve their skills or undergo a reassessment? Should they be put under a bit of pressure to show that they are learning from this experience?

Ms Pullar—I believe so, yes. The oil companies that I am aware of have individual performance indicators. They look at the individual's record. That person is under some sort of bond with the company to actually monitor how often they have problems—near misses, whatever they might be—to reduce the number of accidents that they have.

Mr HARDGRAVE—There is a real psyche that has to be cracked?

Ms Pullar—I believe so.

Mr HARDGRAVE—At the moment across all modes of transport there is potentially this sort of psyche that has to be cracked?

Ms Pullar—In the past, through all of the public education programs, we have seen things on television and in the newspaper. But we basically ignore it; we think it is the other drivers who need to pay attention. But if anyone monitors any one of us, we see that we are all making mistakes all the time.

Mr HARDGRAVE—You have spoken about offensive drivers, but what about defensive driving courses?

Ms Pullar—Defensive driving courses are a one-off situation. I tell people who attend my programs, which basically involve talking and so on, that they should seek out the opportunity to go and do a defensive driving program. I am looking at not just learning skills one day, but making sure you keep up those skills forever after—for a lifetime. That is the reason that I have Drive Alert for Life; it is not just for a short period.

Mr HARDGRAVE—This is a different way of looking at it, but I think it has a great deal of merit. The skills to drive successfully on the south-east freeway in Brisbane are different from the skills required to drive along a suburban street or the Warrego or New England highways. Is that a fair comment?

Ms Pullar—I believe so. I have done a fair bit of outback driving. Certainly in the afternoon you can just doze off very easily, with the endless plain going forward. Earlier you asked about the time of day and mentioned 3 o'clock in the afternoon. That is when the circadian rhythm problem comes in. The time that schoolchildren come out and everybody is running around going shopping and to sport and going home is the very time when a lot of us on the road are very weary.

Mr HARDGRAVE—Is there a standard pattern?

Ms Pullar—There supposedly is a standard pattern for people who work during the day, and that is that it is much worse at 2 or 3 o'clock in the afternoon and then again in the wee hours of the morning.

Mr HARDGRAVE—Years ago they used to publish figures showing that if you drove between five and seven on a Friday and Saturday night or between four and six on a Sunday afternoon you were more likely to have an accident. Are there any things like that of which you are aware?

Ms Pullar—Every now and then somebody puts out figures that refute that. I think it has to do with whether it is football season and various other factors. For example, people are drinking and gathering together in enormous crowds. Getting very frustrated on the road is one of the very big things that tires people out.

Mr St CLAIR—My colleague was speaking about truck drivers being retested. You raised the issue of frustration. One of the greatest frustrations is people who drive around the city every day and then hook a caravan onto their vehicles and disappear down the highway. There are some anomalies in the laws. For example, in New South Wales the speed limit is 80 kilometres an hour if you are towing a trailer of 750 kilograms. No horse trailer on the roads in New South Wales should be travelling at greater than 80 kilometres an hour. Yet the vehicle requirements to tow the float legally are that it has to be of a certain weight to get the job done. Frustration arises when a caravan driver drives at 80 kilometres an hour and will not get off the road to allow heavy transports, which have a speed limit of 100 kilometres an hour, to pass. What can we do to educate or improve the skill levels of people towing caravans?

Ms Pullar—To bring their level of skill up? Part of what the whole program is about is trying to get all people to recognise that every individual has to share the road with every other person on the road. As motorists, we have to give more space and time to truck drivers. Equally, they have to understand that there will be people on the road who are towing caravans.

Mr St CLAIR—In respect of fatigue management, there seems to be more emphasis being placed on the professional driver than on the weekend driver, who is non-professional and allowed to do basically what they please.

Ms Pullar—I believe so. Indeed, that is where I started from. I believed that there was a lot happening for the transport industry and that a lot of money was being sunk into buses, trucks and so on. I immediately thought that I could address the needs of the ordinary motorist. That is why my initial programs were developed for them. But as soon as I developed them and started talking about them, people said, ‘You should come and talk to us.’ I realised that there was a need for the translation of the material into something that people understood—something that made it simple and easy to follow. More particularly, we had to get people to want to change and being prepared to admit—

CHAIR—You state in your submission that knowledge is not enough to change behaviour. If knowledge is not enough, what programs do you propose for the average driver, be he the caravan driver, the truck driver, the engine driver or the maritime operator?

Ms Pullar—These booklets had to be made interactive. It might go to CD-ROM, too. We have to engage people and get them to say, ‘I’ve got this problem.’

CHAIR—With great respect, I am sure you have a very fine program, but not everyone is going to have the opportunity to buy your program. What is the essence of your program that replaces knowledge? How does it tweak knowledge to become more relevant to the fatigued driver or to the dysfunctional driver?

Ms Pullar—In respect of professional transport workers of any sort, we have to ask them to fill out questionnaires about their behaviour and about what happens to them. They then become involved by actually admitting that this annoys them and that this behaviour occurs.

CHAIR—How do we do that in the broader community? Could that be done through television programs or talkback radio? I am sure your targeted programs are excellent. But we are only ever going to reach perhaps 2.5 per cent to five per cent of the population. There are a lot of dangerous people out there. We as a committee will be making recommendations to the federal government. If knowledge is not sufficient, what other elements do we need to be attacking or providing?

Mr HARDGRAVE—You said before that people do not think there is anything wrong and so no-one is going to volunteer to do anything.

Ms Pullar—It is not exactly volunteering. A program on *A Current Affair* recently featured some young women drivers. One of them in particular was quite proud of the fact that she had had 12 accidents. To my mind, somebody should have stopped her in her tracks perhaps after the third one and said, ‘You will go straight back to basics and do another training program.’ We should not be able to get away with it. For example, if you lose 12 points you lose your licence. Why not stipulate that if you lose six points you are required to do a retraining program? In the United States you can buy back points by doing one of these sorts of programs. If you do a half-day program, it is three points; if it is a full-day program, it is six points.

CHAIR—That is the sort of thing we are looking for.

Ms Pullar—Insurance companies put out bonuses for people who do training courses. By doing fitness programs people are improving their health, and health funds take care of that. In respect of driving, it should be acknowledged that people have done the right thing by doing some refresher training.

Mr HARDGRAVE—You are saying that it is a carrot and stick approach. We have to have a stick in the sense that, if you have breached the law and you have been pulled over for speeding umpteen times or had accidents or whatever, you have reached some sort of set measure that indicates that there is something wrong with you as a driver and says, ‘The chances are that it is to do with your delinquency as far as attention is concerned, whether it be some sort of ADD or whatever. Either way, you need some further training, retraining or refreshing or skills upgrade or something.’ Do you see that as a way of preventing accidents for all forms of transport?

Ms Pullar—Absolutely. There is that, plus, for example, someone was asking me one of my dreams, which is to get onto talkback radio and things like that. But there are people listening as they are driving, and that is the moment you can get their attention and get them

to pay attention and really question what they are doing. I have spoken to a lot of people. I do a talk called 'Thank God Dame Edna Does Not Drive'. I talk to Rotary groups and Probis and all that sort of thing.

CHAIR—We should have got you to demonstrate it for us.

Ms Pullar—I have the wig on. Everybody gets a condom for their key, but the thing is when I do that talk, everybody can see themselves in the situation and it is using tricks like that to actually engage with people and to get people to say, 'Hey, I can do something about this.'

CHAIR—Do you have that speech on tape—seriously?

Ms Pullar—No, I do not, but I should do. Every time I do it, I mean to record it and somebody forgets to press the button.

CHAIR—If you do it over the next two months, would you send us a copy?

Ms Pullar—Certainly.

Mr HARDGRAVE—The sad part is I think I was following Dame Edna on the road the other day.

CHAIR—What do you think of the idea of linking fatigue management programs—be they the more didactic ones that might come through industry or the more generalistic ones that might come through the sort of things you are talking about—to quality assurance? With respect to a lot of government contracts today—and, in fact, those of a lot of big companies—they will only be awarded to companies that are quality assured. What do you think of either formally or informally linking quality assurance to fatigue management?

Ms Pullar—Are you talking ability—

CHAIR—Having fatigue management as one of the denominators of quality assurance. If you are a transport company—

Ms Pullar—and you have a contract to deliver something somewhere—

CHAIR—and you have not got a fatigue management thing, you just do not get the appropriate rating that will be necessary to satisfy government and some of the larger companies.

Ms Pullar—I think that is really important. Just a few weeks ago I was down in Newcastle and I was talking to three people who are in totally separate industries who have managed to be exempt from any program because of the nature of the businesses they were in and yet they were driving trucks. Immediately I thought, 'I can't believe this, that you would actually deliberately make sure that your vehicle was the right size, shape and whatever to avoid being controlled.' It seems to me that everybody would want to preserve life, would want to make sure that they can perform at their peak level.

Mr HARDGRAVE—If a company is involved in a fatigue management plan—I do not know whether you know the full ins and outs of this one; I do not pretend to. It has been operating as a pilot with Nolans Transport. The companies that may want to get involved in a fatigue management plan program for their drivers—they reach a certain standard, they are able to work under different conditions because they know how to manage fatigue. Do you think that they themselves should factor in things such as doing other courses, improving skills of drivers and all those sorts of things—a bit like your points buyback example from the United States? It is quite an incentive, I think.

Ms Pullar—One thing that worries me about the fatigue management plans is that they measure fatigue in a particular way. They look for certain factors to be recorded. There are a whole range of other things that I am concerned about that do not enter into their equation.

Mr HARDGRAVE—A lot of it is to do with the quality and the ability of the person behind the wheel?

Ms Pullar—Yes. People just do not recognise it. For example, I could go on at length about various conditions that people might have and that they might be getting medications from their doctor for, but over 50 per cent of medications that people consume these days are bought from health food shops or over the counter. So who is adding up how much of what this person is consuming is going to make them drowsy behind the wheel? If they have allergies and they take antihistamines at night, are they drowsy in the morning? No-one is monitoring that.

Mr HARDGRAVE—A full bladder affects your performance.

Ms Pullar—That is right.

CHAIR—So does red cordial.

Mr HARDGRAVE—That is true—all those sorts of things.

CHAIR—Thank you very much for your evidence today. You have come from a totally different dimension from the other people we have interviewed thus far. It adds another dimension to our work, which is important. We thank you for the interest you have taken to make yourself available. You will, of course, receive a copy of the *Hansard* draft, and your evidence will be available shortly on the Parliament House web site.

Quite seriously, if you do that talk again—we have talked about management control mechanisms for structured organisations like transport companies and railways and the like—if you have some left field approach to the public in general in one of your talks, we would be interested to have a look at it. At one of our meetings in Canberra some time, we might put the tape on and have a look at it. Once again, thank you very much.

Ms Pullar—Thank you for inviting me.

Proceedings suspended from 12.35 p.m. to 1.39 p.m.

SUTTON, Mr Perry, Managing Director, Queensland Coastal Pilot Service Pty Ltd

CHAIR—Mr Sutton represents the Queensland Coastal Pilot Service, operating under the call signal of Torres Pilots; is that correct?

Mr Sutton—That is us.

CHAIR—I have to caution you that, although you are not under oath, these proceedings are official proceedings of the parliament and as such have to be treated with the same respect as proceedings of the House. Any false or misleading evidence will be taken as a matter of contempt of the parliament. I ask too that, at the end of your presentation, if you have any proper names or quotations, you might defer to the Hansard reporters for the sake of accuracy.

I may have to leave the chair for five or six minutes. If I am not back in time, Mr Hardgrave will ask the first question. If I leave, please do not think it is because of any lack of interest in your presentation. I have to do an interview. Would you like to start now with an opening statement and then we might move to questions. Would you like to give us an overview of your submission?

Mr Sutton—Queensland Coastal Pilot Service Pty Ltd has approximately 26 contracted pilots who provide pilotage assistance in the Great Barrier Reef, primarily in the Torres Strait and another compulsory pilotage area of Hydrographers Passage.

I think my presentation pre-empts what I am going to say—that is, that fatigue seems to be an unknown factor, particularly in the maritime industry. It appears to me that there has been a lot of investigation and research done, primarily in the aviation field. There has not been a lot of research or inquiry made in the maritime field, as far as I am aware.

I would suggest that the research that AMSA has undertaken with coastal pilots since AMSA undertook responsibility for licensing coastal pilots on 1 July 1993 is at the cutting edge as far as Australian marine pilots are concerned. We have had one preliminary report and we are somewhere in the second stage of a further report into fatigue for marine pilotage. I think it is probably fair to say that the second report still recognised that there was far more work to be done on assessing the extent of fatigue with marine pilots.

My own presentation, I think, highlights the difficulty with the fatigue factor and that it appears to me there are two distinct elements in fatigue. Again, I have referred to it in my submission. Can I just pre-empt my remarks by saying that I am not a pilot, nor am I an expert in fatigue. I am a CPA. I am perhaps unique in that position in the Australian maritime industry in that, even including the government-run pilot services, I am one of the few non-pilots to be running a pilot service.

Having said that, to me there seem to be two distinct types of fatigue. The first one, as I understand it, is generally referred to as circadian fatigue. That is, if you are on the job from 6 o'clock in the morning to 8 or 10 o'clock at night and you have been on the job continuously during the day, you are bushed, you have had enough and you need a break.

Then there is fatigue which is accumulated over an extended period of time and is probably more related to the marine pilotage industry and related to those industries where people are working 24 hours per day at various times of the night and day. That is where over a period of time—it might be days, it might be weeks—the pilot has interrupted nights of sleep. I refer to this as chronic fatigue.

This seems to me the area which is of greatest concern to coastal pilots and most likely to port pilots. In the case of a port pilot, he might be actually working for only an hour of that particular night, but the fact of the matter is that he has had to report to the pilot station at 1 o'clock and commence out to a ship at 2 o'clock in the morning. If you do that three nights or four nights in a row, there is fatigue from having broken your normal sleeping patterns. Having said that, I think there needs to be a lot more research in that particular area so that working rosters can be looked at and made more safe.

ACTING CHAIR (Mr Hardgrave)—Based on six years experience in running the pilotage service, mainly in the Barrier Reef waters and Torres Strait, can you comment on the sorts of retraining or measures that are taken to try to ensure that pilots are focused on their skills and always refreshing their skills to try to beat things such as fatigue?

Mr Sutton—Before I answer that question, I make the comment that, under the old system that operated prior to 1 July 1993, when we were a Queensland government regulated monopoly, the monopoly pilot service there was administered by a secretary appointed by the Marine Board of Queensland. I was the secretary of the pilot service since 1984, so I have had experience in operating and as a monopoly service provider in a government regulatory environment to what we now call a deregulated commercial environment.

ACTING CHAIR—Thank you for clearing that up. What about the retraining or refreshing, if you like, of pilots' skills and abilities to try to combat things such as fatigue which I think are probably recognised now more than they were, say, a dozen years ago?

Mr Sutton—Apart from the dialogue and the participation of the pilots in the fatigue studies, there have been no particular courses that I am aware of for pilots particularly focusing on training to enable them to combat the fatigue factor. Up until July 1993 we had a very informal system in terms of safety regulation in many aspects of the health requirements of pilots and of the actual initial training of the pilots. AMSA then embarked upon various programs to complement those informal systems which, I should say, had worked very well in the environment at that particular time.

As part of the ongoing development of the safety issues, AMSA has been in discussion now with the coastal pilots collectively from the different organisations and it has now developed professional development programs that the pilots are just commencing and undertaking, but those programs have not been fatigue specific. They have covered technology factors and updating pilots' professional skills, use of radar and new techniques recognised for communicating on the bridges of ships—what they now call bridge resource management.

ACTING CHAIR—Really, yours is an industry with 24 hours a day call, is it not? If you are a pilot on a ship, you are not clocking off, going home and playing tennis after work. You are there 24 hours, are you not?

Mr Sutton—That is right.

ACTING CHAIR—What additional difficulties does that factor into the job? You cannot help wondering why there is not more focus on things such as fatigue.

Mr Sutton—As I said, there have been two separate independent studies commissioned by—

ACTING CHAIR—But nothing has been implemented out of those studies?

Mr Sutton—Yes, there has been an immediate change already implemented to rest breaks between ships, recognising optimal hours of sleep. Up until that change, which was about November last year, they recognised pilotages in the inner route of the Great Barrier Reef. It had been recognised that there was a need for a minimum break of 24 hours between pilotages. After the first study was completed it was recognised that there was a need for optimal hours of rest. So now, in addition to that, a full night in bed for the pilot must be included in that 24 hours. If that full night in bed is not included in that 24 hours, the pilot cannot start duty until 6 o'clock in the morning following the full night in bed.

ACTING CHAIR—How has that change been regarded in the industry? I remember six or so years ago when the Queensland government system was taken over by those dreadful people in Canberra. There was a great to-do amongst longer-term, longer in the tooth pilots in particular that Canberra would not have a clue what was going on in the Torres Strait and all of those sorts of things. How are these new measures regarding fatigue being confronted by those who are actually affected directly?

Mr Sutton—I think the pilots as a whole have generally endorsed the implementation of those new standards. What is recognised and what has been pre-empted by AMSA is that the changes that have been introduced were a short-term solution. It was recognised that medium- to longer-term measures were to be looked at. We are still in a dialogue with AMSA as to what those medium-term measures are to enhance the safety factors.

Mr St CLAIR—I am just trying to get an idea of what you do. You say you have 21 pilots. Where do they operate from and to where, to give the committee an idea as to where you are actually operating?

Mr Sutton—There are three principal pilotage areas and there are two compulsory pilotage areas. The highest usage pilotage area in the reef is from Cairns fairway to Torres Strait itself. That is a compulsory pilotage area. The second area, again, is a compulsory pilotage area. That is through Hydrographers Passage. Hydrographers Passage is a passage to the outer reef which effectively joins the coal terminals of Hay Point and Dalrymple Bay to the shortest route to sea for ships proceeding principally to Korea and Japan. They go out through Hydrographers Passage and head virtually north for east of New Guinea, then Korea and then Japan.

The third pilotage area is a non-compulsory pilotage area. It is a recommended pilotage area—recommended by both the Australian government in a marine notice and the International Maritime Organisation. That is through Torres Strait and the Great North East Channel. So if you are proceeding from the Arafura Sea, heading in an easterly direction, you really have only two choices. Both of those choices necessitate going through Torres Strait. You can either go out through what they call the North East Channel and out to the Coral Sea or you must come down through the inner route of the Great Barrier Reef. That outer route is an international waterway. It is used by vessels which are not calling at Australian ports as well as ships that are calling at Australian ports.

Mr St CLAIR—We have had evidence before this committee of all sorts of different lengths of pilotages. What do yours range from and to?

Mr Sutton—If you took a bulk cargo carrying vessel, as opposed to a container carrying vessel, which is a high percentage of the trade, which is travelling at about 13 knots, the respective times for the pilotage are: through Hydrographers Passage about 10 hours; through Torres Strait and the Great North East Channel, a similar time; and through the compulsory area of the Great Barrier Reef, the inner route, about 36 hours.

Mr St CLAIR—And for the 36-hour journey, does that mean you have multiple pilots on board?

Mr Sutton—No. All pilotage is conducted by one pilot, but in the inner route there are certain recognised rest areas where the pilot can get a short kip.

Mr St CLAIR—Are there short pilotages under your business?

Mr Sutton—There are low usage—

Mr St CLAIR—Half an hour?

Mr Sutton—No.

Mr St CLAIR—They are all long?

Mr Sutton—They are all longer passages. Perhaps it should be clarified that we are quite different from port pilotages in the services we offer. I respectfully suggest, without being a mariner myself, that the coastal pilotage is more akin to navigation. In some areas we are working in confined areas, but not nearly the same amount as inside a port, where the key factor is ship handling taking into account things such as wind, use of tugs, lines and so on, in very confined spaces. In Torres Strait itself there is a great deal of usage of tides. The channel is very narrow, but it is a different sort of pilotage altogether than that which is encountered in a port.

Mr St CLAIR—Has there been an increase in shipping? Is it something that is growing?

Mr Sutton—In all areas in Australia I think it would be fair to say that, generally, there is a tendency towards increase in vessel sizes. Certainly there are economies of scale there. I think it would also be fair to say that certain facilities are now being used by a size of vessel it was never contemplated would be used. There is certainly a tendency to push the envelope, if you like, with shipping in general.

Mr St CLAIR—What about frequency of shipping?

Mr Sutton—Our cargo volumes and our ship numbers have been very much related to Queensland bulk exports. The principal cargo carried by the ships that we pilot is coal. Probably the secondary cargo is sugar. Because those volume exports have increased over the years, our statistics indicate that the total number of ships requiring pilotage generally grows by about six per cent per annum. I also note, just through reading industry literature, that the volumes of, for instance, containers in the capital city ports seem to grow by a similar statistic—about seven per cent to eight per cent.

Mr HARDGRAVE—Are we seeing an increase in the number of pilots as a result of this?

Mr Sutton—The number of pilots under the Queensland government regime licence was 44. That was as at 30 June 1993. My understanding is that now there are approximately 58 pilots licensed.

Mr HARDGRAVE—So we have a few extras. Given the increase in volume of cargo that makes sense, but what about the circumstance of ships still coming through that narrow international passage? Basically, if they do not take up the option or recommendation but not a requirement of using a pilot coming through there, are we now finding fatigued people on international cargo vessels hopefully finding their way through what can be quite interesting waters, to say the least?

Mr Sutton—Yes, I would agree with that statement.

Mr HARDGRAVE—So there is a real potential problem impact on the Great Barrier Reef and our integrity, from an environmental point of view, at the very least?

Mr Sutton—Unpiloted ships in the Torres Strait and the Great North East Channel, yes, definitely.

Mr HARDGRAVE—So that is something that perhaps needs a closer look by AMSA?

Mr Sutton—I think that is an issue AMSA and previous governments have looked at extensively. As I understand it—I am no expert on international law—you have the right of innocent passage. From what I understand, it would be very difficult to make it compulsory.

Mr HARDGRAVE—That is probably for another committee and another hearing, but thank you for that.

Mr St CLAIR—Can I just ask what that means—innocent passage?

Mr Sutton—It is an international waterway. And whilst the international shipping community readily does acknowledge the unique qualities of the Great Barrier Reef, at the same time they are very reluctant to set a precedent, because there are other equally sensitive areas. In the Bosphorus, for instance, they have quite astronomical traffic volumes through there. It might be 500 or 600 ships a day. It is amazing. There are a couple of hundred tankers a day going through there. We are probably talking about that quantity of tankers going through Torres Strait per annum—not much more than that. Most of the tanker traffic that is coming to the east coast of Australia that proceeds through Torres Strait does go through Torres Strait and the Great North East Channel. As far as I am aware, the four major oil companies that are bringing the ships down to their refineries have adopted a policy of not bringing ships through the inner route. This is not to say that there are no laden tankers coming through the reef, but I would say the majority are proceeding through that Torres Strait and Great North East Channel.

Mr GIBBONS—You said that one of the tours of duty took some 36 hours, and the pilot was able to have some rest periods within that 36-hour period. At what stage during the tour of duty would the first rest period be, and how long would it last for?

Mr Sutton—It is very much dependent upon the conditions on board. I would not like to try to quantify it in definite terms. It would depend not only on the conditions on board but also on the characteristics of the vessel. The pilot would have to make an assessment of the competency of the people there. It would also depend, for instance, on the draught of the ship. It would also depend on the weather conditions at the particular time—a whole host of different factors.

Mr GIBBONS—So it would be feasible that a pilot might have to work or constantly be at the task for longer than 12 hours?

Mr Sutton—There might be short periods that he can get away from his duties, but I would say that would happen on occasions, yes.

Mr GIBBONS—Is there any evidence that pilots take stimulants to try to keep awake? Have you ever heard of that?

Mr Sutton—I have never heard of it in anecdotal conversation, no.

Mr MOSSFIELD—In your submission, you have made the point that the pilots were required to undergo biannual examination by the certified medical inspectors. What are the results of those examinations? Do you have any records? Are there any fatigue-related illnesses and those sorts of things? And what are the ages of those people involved in the industry?

Mr Sutton—There is a list of people certified, if you like, by AMSA who are able to provide the medical certificate of fitness. It is not just a matter of going along to the GP. It has to be someone who is recognised by AMSA themselves. The actual content of the medical examination, I am not aware.

Mr MOSSFIELD—I think you are suggesting that there is a need for more research into factors such as age and health.

Mr Sutton—I definitely agree with that, yes, when you consider that the inner route pilotage is an arduous task. There certainly needs to be some consideration of the age of the pilot. To me, there does not seem to be any question that your physical ability will diminish as the years progress. But I just wonder how you can possibly do that in a non-discriminatory way when it seems to be so difficult. We have all seen the Qantas case with the Qantas pilots, with Qantas endeavouring to have the ability to make it compulsory for their pilots to retire at a certain age because in certain jurisdictions their licence will not be accepted if they are over a certain age—in America. But I understand that, despite appeal and counter appeal, it has eventually been decided by the High Court that Qantas cannot make them retire.

Mr MOSSFIELD—The reason I am asking the question is that in some of our earlier submissions today it has been suggested that, particularly as far as road transport is concerned, in many cases the more reliable and safer drivers are the people in the upper age group rather than the younger people.

Mr Sutton—Rather than classify it on an age bracket, I certainly think that there is a quality which is very hard to label, but there definitely is a quality where some mariners are better suited to the pilotage task than other mariners. It is not necessarily a technical skill. Perhaps it might be an innate skill that somebody definitely has a better ability to handle a task than others. And perhaps it is a skill that cannot be acquired. And certainly that would be another area that could be investigated. Of course, it is very hard—when you cannot quantify something like that—how you could possibly screen your applicants as to their suitability. It is something, as far as I can see, that you can only ever assess after they have actually got their licence. So that does not particularly make for the safest environment.

Mr MOSSFIELD—There is a different area again that I am interested in, and that is the opportunity for the pilots themselves to have an input into decisions relating to fatigue. Do you have a group discussion, or are they represented by an organisation that can put their views? How does it work?

Mr Sutton—The pilots themselves have their own professional organisation. And in conducting these inquiries, AMSA have gone through an extensive consultative process with the individual pilots and collectively with the pilots and at all times asked them for their own input. So it could never be said that the changes that have been implemented so far have been without consultation.

CHAIR—We heard in evidence in one state about a privatised pilotage organisation that still worked to a port authority—the port authority, of course, being an instrumentality of the state government. The same state government had very strict rules for particular trucking and motoring organisations with regard to the management of fatigue, yet their own port authority was not increasing the number of pilots and not increasing the amount of payment which would allow the pilots to increase their employment level by a commensurate number of pilots. I suppose the question that flows from that is: now that you are a privatised organisation, what internal mechanisms do you have to ensure that you employ sufficient

pilots to handle your increased workload and that you do not put that strain back on your existing pilots?

Mr Sutton—I guess before we have to consider an internal mechanism there is an external mechanism, and that is that AMSA stipulate certain breaks. Internally, the pilots have constituted their own leave roster. We generally recommend to pilots the minimum number of pilots who are required to perform the task at any particular time, allowing for a timelag in training and what have you. I think it would be fair to say that, generally, we err on the side of conservatism and are generally pushing for more pilots than the pilots are themselves, because the pilots realise that, under the system that generally works for all coastal pilots, not just those who are contracted to our organisation, it is a fee for service and pilots want to maximise their incomes. Having said that, at the same time we always want to make sure that we have sufficient manning so that we can cope with peak loads.

CHAIR—Do you have competition in any areas for your services by other pilotage services?

Mr Sutton—There is another pilot service provider in the inner route and the Great North East Channel. There are another two pilot services in the Hydrographers Passage area. So there are three pilot services in total, but one of those other pilot services restricts its operations to the Hydrographers Passage.

CHAIR—The other question that leads off that is: what responsibility do you think that a pilot organisation such as yours bears to ensuring that fatigue is managed? What responsibility do you feel you have to manage fatigue amongst your employees?

Mr Sutton—I think there is a very strong responsibility to manage fatigue. I think this has been reflected in the fact that, in the past, where pilots have said, ‘No, we are quite happy with the numbers of pilots we have at this particular time’, we have insisted that ours will be the casting vote and that if we believe there is a need for additional pilots then we will recruit additional pilots. We work in quite a democratic fashion. And because the existing pilots are training new entrants to the service, and it is the pilots who have to work mostly with the new people, we listen to their input in terms of who they would prefer to join them as professionals and who they would think is best suited to join the service. But we have had a view that they have generally understated the need for pilots and perhaps their own capability. So I would endorse AMSA’s view, and the recommendation of this last fatigue study, that there needs to be a further investigation into the cumulative effects of fatigue—chronic fatigue. And I do not think it is best left to self-regulation. I believe it should be regulated—the working periods—to have some minimum working periods to cover that particular factor.

CHAIR—Is your organisation quality assured?

Mr Sutton—It is.

CHAIR—What would you think of the concept of the management of fatigue, or fatigue management, being a dimension of quality assurance and subject to audit?

Mr Sutton—I do not see a problem with that. But to be able to set up that sort of regime, you must have the knowledge and the measure of the fatigue. I guess what I am saying is that I do not think we really understand the fatigue factor, particularly as it relates to broken nights' sleep over an extended period. I think we can all pretty easily understand how it might affect you in one day if you have extended periods of work in one particular day. There are undoubtedly times when the pilots get off a ship and they are absolutely beat because the weather has been very bad or the ship's officers and navigational aids have been of a lesser than acceptable standard, and they have been very tired when they have got off the ships. But we still do not know what the cumulative effect of encountering several ships in a row—what that fatigue effect might be.

CHAIR—The Australian Marine Pilots Association has called for the establishment of a national standard which would allow for the accommodation of the unique requirements of each port pilotage area. Is that possible to achieve? What is your view on that?

Mr Sutton—I think it is going to be difficult to establish national standards or the same standards being applicable to coastal pilotage as to port pilotage because of the very nature of the way the work is carried out—the hours involved. It could be an all-inclusive set of rules, but it would seem to me that one set of rules would be needed to apply to short hours of work and another set of rules applied to extended hours of work.

Mr St CLAIR—How do your pilots get off the long pilotages? Helicopter or boat?

Mr Sutton—Primarily by launch—pilot motor launch.

Mr St CLAIR—The 36-hour one—is that the one that goes straight out to sea?

Mr Sutton—The 36 hours is coming down along the coast of Queensland.

Mr St CLAIR—So when you say that you pick them up by launch, does that mean a long launch trip back? How physically does it happen if he is 36 hours away?

Mr Sutton—There is a launch facility in Cairns and there is a launch facility in Torres Strait. The pilot base in Torres Strait is on Thursday Island, and the pilot might be joining the vessel or being dropped off from the vessel at Booby Island, and that is about 24 or 26 miles from Thursday Island. So they have a launch trip for that period.

Mr St CLAIR—And they stay there and they pick up one south?

Mr Sutton—After they get ashore, then they are required to have their rest break, and a minimum 24 hours, full night in bed. Then they would be able to proceed to another ship.

Mr St CLAIR—And pick up a southbound?

Mr Sutton—Pick up a southbound.

Mr St CLAIR—So they could be away from home for how long?

Mr Sutton—Half of the pilots who are contracted to my organisation live in Cairns. Quite a few of the others live in other Queensland ports. So they would generally get home after a couple of pilotages. The other group are quite different in their demographics. They are of a similar size in terms of pilot numbers but all but about four of their pilots live in Brisbane. So they would go to sea, do a shift for 21 days and then after that they have a priority to come home and have their rest break then.

Mr St CLAIR—Thank you.

Mr HARDGRAVE—Mr Sutton, essentially it is sort of a one-size-fits-all approach, though, is it not? Time on is really the basis of the issue of when it is time for time off. If you have 24 hours on, you will have a day or two off, or whatever, to make up for it. Is that the way the system works, basically?

Mr Sutton—In a nutshell, I think that would be a fair assessment.

Mr HARDGRAVE—Everyone can have a bad day at the office but when you have a bad day as a marine pilot—and I do not like to use extremes, but battling a storm at sea would be a fairly bad day in comparison to a pleasant passage—is there any additional time off allowed after that sort of stress-related encounter?

Mr Sutton—We make this a contractual obligation with our pilots, and it is a licensing requirement with AMSA as well, and that is that the pilot has a personal responsibility to be assured of his own fitness, his own physical wellbeing, to make sure that he is well rested before he embarks on a pilotage.

Mr HARDGRAVE—So fair weather or foul, theoretically, they are afforded the same time off but if it was bad weather and there were 50-foot waves—I am not nautical so I do not understand all of these things, but lots of waves, lots of wind—you would say, ‘I need a couple of days off,’ and it would be up to you to instigate those couple of days off?

Mr Sutton—It would be up to the individual pilot in no different manner than it would be up to the individual pilot if I said, ‘Look, I have got the flu. I am up at Thursday Island and I want to come home.’ We had a case of that last week.

Mr HARDGRAVE—But is there an insistence that they actually do that or is that frowned upon?

Mr Sutton—I would say that happens from time to time.

Mr HARDGRAVE—But there is an expectation that the task is done rather than looking at the physical fitness or the capacity of the pilot? I am not trying to get you to say that you have got people who are half dead piloting ships; I am just trying to get an idea of the way the system works.

Mr Sutton—I think that there would be a certain amount of peer pressure, absolutely. I think there would be peer pressure.

Mr HARDGRAVE—So that in itself highlights the fact that there needs to be some educative means so that the concept of fatigue is accepted as a reasonable responsibility and that everybody has to be aware of its ramifications.

Mr Sutton—I go back to my previous comment. I think that it should not be something that is self-regulated; I think that it is something that should be regulated by the licensing authority, AMSA.

Mr HARDGRAVE—So would you agree then with the verdict of the Marine Pilot Association that 90 per cent of all maritime accidents occur in pilotage waters?

Mr Sutton—That is a fact.

Mr HARDGRAVE—And 80 per cent of it is to do with human error.

Mr Sutton—That is a fact and that is worldwide. That is not isolated to Australia; that is a fact.

Mr HARDGRAVE—So fatigue as a concept should be pushed harder and enforced harder than peer pressure is currently allowing?

Mr Sutton—Yes, but I think also—

CHAIR—Surely that follows from your earlier question.

Mr Sutton—Yes, but I think that it also needs to be said that fatigue is not the only human factor. There are a lot of other factors involved and simply just—

CHAIR—But in the realisation of fatigue—leading off from what Mr Hardgrave said—do you have seminars on fatigue management for your pilots?

Mr Sutton—We do not.

CHAIR—There is a bit of weakness there, isn't there? You can talk about the theory but if you are not doing something about it in practice, as Mr Hardgrave said, you are put in a position where peer pressure will continue to remain the predominant driving force rather than the sensible appreciation of—

Mr Sutton—In the absence of another framework—

CHAIR—A bloke will be seen to be a wuss because he—

Mr Sutton—In the absence of any other framework, I would agree with that, yes.

CHAIR—Thank you, Mr Sutton. That was a very enlightening and very frank response to our questions. We appreciate that. You will be receiving a copy of the *Hansard* draft. If you want to review it, your evidence will be available shortly on the parliamentary web site. So once again, thank you very much for your attendance.

Mr Sutton—Thank you.

[2.22 p.m.]

PELECANOS, Captain Steven, President, Australian Marine Pilots Association

CHAIR—I would like to welcome Captain Pelecanos here as the representative of the Australian Marine Pilots Association. I have to caution you that these proceedings are proceedings of the House of Representatives and need to be treated with the same degree of respect as those of the House itself. The giving of false or misleading evidence may be considered a contempt of the parliament. Would you like to commence with a short opening statement?

Capt. Pelecanos—Yes, I would. The Australian Marine Pilots Association has made its submission to this committee. Provided with this opportunity to make further comment, for which I thank the committee, I simply wish to draw the members' attention to the nature of the marine pilots' job, what is ordinarily required in terms of human performance and the difficulty in optimising the quality of human performance in the current regulatory environment.

Ships are the largest moving man-made structures on this planet. As ships come closer to the shore, the margins of safety decrease and the risks increase exponentially. The pilotage phase is the most hazardous part of the ship's voyage. This is the time when the risk to the ship, the environment and the port's infrastructure is the greatest. It is the time when the combination of big ships, old ships, poorly maintained ships, lack of power, little room to manoeuvre, faulty equipment, noxious cargoes, poorly trained crews, cross-currents, wind, restricted visibility, traffic, tugs and language problems all come together to form a dangerous mix with the potential to wreak havoc on an unsuspecting community. It is this dangerous mix of elements that the pilot must manage and this demands a high level of human performance.

Ninety per cent of all maritime accidents occur in pilotage waters. The cost can range from a few thousand dollars for minor accidents to billions of dollars for major accidents with far-reaching consequences—accidents such as those involving the *Amoco Cadiz*, the *Exxon Valdez* and the *Sea Empress*. It is the consequences of maritime accidents that differentiate them from accidents in other transport modes. This point is forcefully made by the United States National Research Council in the report commissioned after the grounding and subsequent discharge of oil from the *Exxon Valdez*. The report said that major marine accidents can pose severe threats not only to vessels, crews and cargoes but also to the public, environment, property and to the local and regional economies.

As a form of essential risk management, port and national authorities make it compulsory for a ship to take a pilot. A pilot is a local specialist with the critical management and technical skills required for directing the movements of a ship in the high-risk environment. Pilots are the nation's last line of defence in protecting the marine environment, our ports and their infrastructure from the consequences of maritime accidents. Accidents occur as a result of either mechanical failure or human error. The consequences of mechanical failure could be reduced if the pilot continues the competent management of the operation when things go wrong. This requires a very high level of human performance.

The risk of human error can be significantly reduced by creating the environment to optimise the quality of human performance. Among those important factors that affect human performance is fatigue. Fatigue can be caused by inadequate rest, by physical and emotional stress, or by a mixture of both. Looking closer at both of these causes, the following has to be said in respect of marine pilotage. Firstly, rest is something marine pilots have little control over. This is mainly due to the unpredictable nature of the job. Emotional stress is something marine pilots have had to endure a lot of during the course of this decade as they have grappled with the changed environment brought on by national competition policy. However, national competition policy has now become a fact of life; it will not go away and neither will the emotional stress that accompanies it: we simply have to learn to live with it. We can, however, do something about fatigue caused by inadequate rest. So as far as fatigue is concerned, we can do something about half the problem but we will just have to learn to live with the other half.

A pilot's job is to manage a high-risk operation. Whether fatigue is induced by sleep deprivation or by emotional stress, the effects are the same. Fatigue will impair the pilot's situational awareness, concentration, decision-making ability, cognitive reasoning, judgment, motivation, mood and attitude to risk taking and safety. What impact will these effects have on the management of the high-risk operation? Marine pilots will argue that they play a key role in the maritime transport chain. They perform a public service and, in order to provide the public with the benefit of that service, they need to be completely focused on the task at hand. This means that their performance must be underwritten by unimpaired physiological and psychological functions.

One of the greatest dangers associated with fatigue is the ability of human beings to convince themselves that their performance remains unaffected. In this respect, it can generally be said that pilots are normal human beings. When discussing the human factors involved in marine pilotage, nothing stirs the passions or generates such a variety of responses as does the subject of fatigue. The environment created by national competition policy can be roughly described as follows: at one extreme we have pilots who want to work every hour that God gave in order to maximise their income because they do not know if they are going to have a job tomorrow or if their port will sustain the current levels of shipping, and at the other extreme are the pilots who, irrespective of shipping levels, are employees on a guaranteed income and are seduced by the prospect of minimising work time and maximising their leisure time. In the former case, there would exist a tendency to ignore fatigue management principles; in the latter case, there would exist a tendency to go overboard in embracing them.

In between these extremes, pilot organisations respond to fatigue with various degrees of appropriateness. Clearly, neither of the extremes is desirable or sustainable but without a set of national rules to govern the management of fatigue—and at present there are none—a pilot organisation's response will slide up and down the scale in accordance with the wishes of those who, from time to time, put up the most convincing arguments. There will be no uniformity in the approach to fatigue management in this country and, when pilots tender for their jobs, fatigue will be one of those cost items ignored in the process.

There is too much at stake to allow such a situation to become entrenched in our industry. We, therefore, welcome this inquiry and trust that the outcome will provide with us a sensible set of rules that are enforceable by law.

CHAIR—One of the things I was interested in is that you say in your submission that there is a mixed response to fatigue management. You just touched on that in your submission. Is there any correlation between a pilot organisation that is privately owned against one that is publicly owned? What is the likelihood of putting fatigue management practice into place in both types of organisations?

Capt. Pelecanos—In private organisations, pilots depend on the number of ships coming into the pilotage area for their income: the more ships, the more money they make. The more pilots they employ, the less money they make. There is a general tendency—not in every organisation—for private pilot organisations to go for fewer pilots to maximise their income. That is because, as I say, there is no guarantee that that income is sustainable. On the other hand, pilots who are employees, who are guaranteed an income irrespective of shipping levels, tend to the view that they should embrace fatigue management principles. They would be more passionate about embracing fatigue management principles. They are just general statements. I do not talk about individual organisations or individual pilots. Obviously, within an organisation there will be pilots with differing views.

CHAIR—As an association, do you run seminars on fatigue management for your pilots?

Capt. Pelecanos—We are in the process of organising the first seminar now. We have an expert coming out from the United States in October. The purpose of his visit is to conduct a series of workshops around the country for our members.

Mr MOSSFIELD—Is that expert an expert in the industry in which you are involved, or does he have a general interest in fatigue in all industries?

Capt. Pelecanos—He is a former American marine pilot. He has left pilotage and has joined an organisation in America called the Human Factors Group, which specialises in human factors/human performance, one of which is fatigue. He is the only person whom we know of within our industry who has the expertise and practical knowledge to address us.

CHAIR—More so than any Australian?

Capt. Pelecanos—We do not know of anyone in Australia.

CHAIR—Within the same field?

Capt. Pelecanos—No.

Mr MOSSFIELD—One of the things that he would perhaps be speaking about would be the international industry recommendations relating to practices in the maritime industry. To what extent do work practices in Australia comply with the requirements of the various international conventions?

Capt. Pelecanos—The various international conventions really apply to shipping, that is, the people who work on ships, as opposed to any application to marine pilotage. Although there is a move for international conventions to be adopted by pilotage organisations, there is a question as to whether these conventions are enforceable. Bear in mind that the organisation that enforces it is the federal organisation. Pilots work under either local or state regulations. There is always the question of the interpretation of international regulations and conventions. I do not know how realistically they could be enforced.

Mr MOSSFIELD—You have mentioned competition policy. Would that have any effect on the number of pilots available for duty and is it putting pressure on pilots to work longer hours with shorter breaks, which adds to fatigue?

Capt. Pelecanos—Yes. Pilots now work in a competitive environment and there is pressure to reduce the fees. In this country, there is anecdotal evidence—and I can only quote anecdotal evidence—where pilots have had their previous remuneration almost halved, and these are pilots who still have to make their financial and family commitments. They are under pressure to work longer hours to make up that shortfall. So that is the first thing.

The other thing that exists in our industry is this: although we would like to employ more pilots, the pool from which we traditionally employ pilots is quickly drying up. Earlier this afternoon I heard a question about whether or not you can employ more pilots and how you would go about selecting appropriate pilots for the job. Mr Sutton said that some pilots have an innate ability to do the job—and it is true—and others do not take to their job so easily. The way you would ideally filter them out is to take the approach taken in other industries where people are put through some psychometric testing to see whether they have an aptitude for the job. But that is okay if you have a huge pool of pilots or applicants to put through such testing. The reality is that, because our national shipping industry is quickly drying up—it is almost non-existent—and the shipping industry is our traditional source of labour, the United Kingdom, in recent years has gone the same way as the Australian shipping industry, we do not have people coming through. We are forced to take people who are of, I would say, lower quality—

Mr MOSSFIELD—And less experienced.

Capt. Pelecanos—and less experienced—into the pilotage services.

Mr MOSSFIELD—I noticed in the previous submission that the age at which people enter this industry is about 40; is that right?

Capt. Pelecanos—That is right. In this country a pilot has to have a certificate as a ships master and, in most cases, to have sailed as a master. Some pilotage organisations do not have that requirement. Pilots are normally at sea for something like 15 to 25 years before they become pilots. That is the sort of experience they have under their belt before they come into the job.

Mr MOSSFIELD—How long would they stay in the industry?

Capt. Pelecanos—In the pilotage industry?

Mr MOSSFELD—Yes.

Capt. Pelecanos—Normally, the transition from going to sea to pilotage is the last step before retirement.

Mr MOSSFELD—Would they be in for 15 years?

Capt. Pelecanos—If they come in at 40, they would probably stay there until age 60 or 65—some 20 to 25 years.

Mr HARDGRAVE—Is technology providing a ready backup to the increasing problems associated with human involvement?

Capt. Pelecanos—Not really. The use of technology is good; it is just another aid to the pilotage function. When the pilot is on the bridge of a ship he normally has at his disposal all sorts of instrumentation which provides him with information that he uses to make his decisions. It provides better quality information, but the processing of that information is what is important. If you are fatigued, the processing function is corrupted.

Mr HARDGRAVE—I will put it to you in a different way: do you think that those who are not on the ship and who are not experienced seafarers with 15 or 20 years at sea would see technology as being something that is backing up the human element? In other words, at the decision-making level of this industry are there those who are disconnected from the on-ship reality?

Capt. Pelecanos—Absolutely. They are everywhere.

Mr HARDGRAVE—Is that at the heart of these difficulties you are talking about with respect to national competition policy? It is probably the most misunderstood concept that exists in this country. Graham Samuels is running around the country trying to get councils to rehire work gangs where they have been laying them off because they misinterpreted this whole thing. Is there a bigger, broader issue here that, from what you said, is causing fatigue among our marine pilots?

Capt. Pelecanos—Yes. National competition policy is a national policy. But what we would like to see is—I hate to use the word ‘inquiry’—an investigation into how it applies to marine pilotage. I have a personal view about the sorts of people who are making decisions that affect our profession. In general, it is my view that they do not know the pointed end of a ship from the blunt end of a ship, and they are sitting there making decisions that affect us. They have never stood on the bridge of a ship in that environment faced with making critical decisions, but they sit in the comfort of their office and they say, ‘This is the way it shall be.’ Really, we do not have a lot of opportunity to respond to that. The Australian Marine Pilots Association, which is a new organisation, was formed in the hope that we would have a stronger voice.

Mr HARDGRAVE—When the Queensland government-run service devolved as a result of the national competition policy six years ago, I think it is fair to say that Torres Strait pilots were very disgruntled.

Capt. Pelecanos—Yes.

Mr HARDGRAVE—A lot of people with a great deal of experience felt discarded and discounted and put under great pressure to flog their skills against somebody who may have had far less experience. Is that adding also to the question of fatigue?

Capt. Pelecanos—That is right. It is. It comes back to what I said in my opening remarks about emotional stress. That has not gone away. I talk to Torres Strait pilots fairly regularly. Those signs of emotional stress are still very apparent and strong.

Mr HARDGRAVE—This is because expectations of income just are not there. There is a whole bunch of other problems in this industry that perhaps this inquiry will not dig out but which we could at least point to.

Capt. Pelecanos—Yes, that is one of them.

Mr HARDGRAVE—What about the suggestion that peer pressure is stronger than a sensible, acceptable approach in respect of stress-related issues? You were here earlier when I referred in my very un-nautical way to 50-foot waves and force 10 gales. On a day at the office like that there has to be a lot more pressure than a day spent sitting behind a reef with a nice, pleasant eight knot breeze or something?

Capt. Pelecanos—That is right. There is peer pressure. That is more apparent in private organisations than in organisations where pilots work for the government or the port authorities. Shipping comes in peaks and troughs. Ships do not appear over the horizon at regular intervals. For example, one day in the port of Brisbane three ships might arrive. The next day you might have 33 ships arriving. How many pilots is your organisation going to employ? There is an obligation on the part of the pilots to provide a pilot on demand. When 33 ships arrive, they want 33 pilots. Realistically, you cannot employ 33 pilots, because you will have a lot of down time. There has to be a balance somewhere. If a pilot has been working hard or if a pilot has been in rough weather or if for some other reason a pilot feels fatigued and turns around and says, ‘I’m really fatigued. I can’t go to work’, he knows that he is putting extra pressure on his other colleagues to do that work and cover for him. The reality is that there is subtle pressure there.

Mr HARDGRAVE—That is the nature of the sea in itself, is it not? Does technology not also assist in slot management—three ships one day, 33 the next? I know that is an extreme example. But does technology not mean that a ship calls in and says, ‘I will be in the port of Brisbane in 24 hours’?

Capt. Pelecanos—No, not at all. That is a very important point that I try to make about the unpredictable nature of shipping. For example, you can have a ship arriving at the port of Brisbane at 10 o’clock in the morning to berth at 3 o’clock in the afternoon. But the berth that the ship is going to might not have finished cargo and they might say that the ship will not go until 4. Then the ship isn’t going until 5, 6 or 7. You have a pilot standing by in Brisbane by a telephone in his uniform ready to go to work. He does not move. He could be there for half a day or 18 hours. You have a pilot stuck on a ship out on Moreton Bay

waiting for his berth or you might have a ship going to anchor. You cannot predict when you are going to need the pilots. That is the nature of shipping.

Mr HARDGRAVE—Finally, what is the regular regime, if there is one, of retraining and upgrading the skills of pilots to refresh their views of their own abilities or talents? The submission we heard earlier in respect of driving a car was that fatigue can be influenced by the fact that there is a certain sense of satisfaction—I do not like to use the word ‘arrogance’—that there is nothing wrong with my skills or abilities. Is that a problem in pilotage as well or is there regular training to address those issues?

Capt. Pelecanos—There is no regular training for fatigue management in pilotage currently. When AMSA mandated professional development, included in that professional development was an undertaking to do some sort of fatigue training. As far as port authorities are concerned, there is no obligation and there is no training as far as fatigue management is concerned. The only training is skills training.

Mr HARDGRAVE—Is that the good part of the mixed response that you have from AMSA—the skills training?

Capt. Pelecanos—My personal view is that you should have both, and it is a growing view among pilots.

Mr St CLAIR—I have just a quick one. When I came in—and I was sorry I was out—you were talking about the training of marine pilots and the fact that the Maritime Services Board came through that area for some 15-odd years. Is there any alternative way of training pilots?

Capt. Pelecanos—Generally speaking, around the world pilots all come from the sea: we do our training in the merchant navy. There are some places in the United States where pilots are father and son jobs—born on the river, bred on the river, trained on the river. It used to be like that in the port of Liverpool. To my knowledge—I could be wrong—they are the only places in the world where it is sort of an apprenticeship system. When we looked at the report published by the US National Safety Council following the *Exxon Valdez* accident in America, they looked at the number of accidents in the ports around America, and the ports that had this apprenticeship system had by far the greater number of accidents. So in our mind, that speaks for itself.

CHAIR—Are the marine pilots covered by the international conventions?

Capt. Pelecanos—No.

CHAIR—They are not covered by the ILO, I should say?

Capt. Pelecanos—ILO? No, not to my knowledge.

CHAIR—What is the mix of pilotage? We will just take Queensland for example because we are here. We heard from the Torres Strait pilots. Who are some of the other groups? Are they private or government controlled, port authority controlled?

Capt. Pelecanos—All the pilots in the state of Queensland used to work for the Queensland government. We were all government employees. I am a Brisbane pilot. The Queensland government privatised pilotage services in Brisbane in 1989.

CHAIR—Privatised or corporatised?

Capt. Pelecanos—Privatised—private company contracted to the government to provide the service.

CHAIR—Were pilots the shareholders of that company?

Capt. Pelecanos—Pilots are the shareholders of that company. The government at the time did that with a view to doing the same, as I understand it, to the rest of the Queensland coast. But governments come and go and policies change. Recently—I think it was about a year or 18 months ago, or maybe two years ago now—it was a policy of the Queensland government to devolve. After Brisbane, the rest of the pilots remained Queensland government employees. The Queensland government then made a decision a couple of years ago to devolve that responsibility to the port authorities and it was up to the port authorities how they would run the pilotage services in their port, whether they would privatise them or whether they would make the pilots port authority employees.

We are currently in that transitional phase. There is a three-year transition period and in that transition period, as far as I understand it, the Queensland government still picks up the tab for providing the pilotage service, gives so much money to the port authority and the port authority pays the pilots. So currently the pilots are port authority employees.

CHAIR—We had evidence in Western Australia where that system did not work very well. The estimate made of the growth of the port was 15 per cent, and the moneys to be made available to the corporatised pilot in the group was to increase by that amount. But when the figure blew out well beyond that, the government just kept to the 15 per cent. In other words, the pilots wanted to maintain the standard of living; they had to work to a much tougher regime. Have you had any other examples of that sort of thing happening?

Capt. Pelecanos—That is indicative of the—

CHAIR—Indicative?

Capt. Pelecanos—That is indicative of the effect of national competition policy.

CHAIR—I do not want to know about national competition policy; I want to know if you have had any examples of similar circumstances on the Queensland coast.

Capt. Pelecanos—On the Queensland coast? No.

CHAIR—On the east coast in general, where a corporatised pilot body that has no other source of revenue but to work for a port authority or a government quango of one sort or another has been limited by the way in which payment is made?

Capt. Pelecanos—I would have to say yes, but I would have to go on to qualify that if I could.

CHAIR—Okay.

Capt. Pelecanos—I cannot talk about Queensland because Queensland is currently in that transition phase. I know in the port of Sydney, for example, when they put the job out to tender, they told the pilots that the tender had to be at least five per cent cheaper than the current pricing arrangements. So the pilots had no choice. The people making the tender had no choice. It had to be five per cent cheaper. That limits the amount of funds available to run the pilot service and it limits the number of pilots you can employ.

CHAIR—You would hardly call five per cent significant. I was talking 15 per cent or worse.

Capt. Pelecanos—In my view five per cent is significant if you are operating at levels where the margins are tight, anyway.

CHAIR—I see what you mean.

Capt. Pelecanos—I get back to the point I was trying to make before: that seems to be indicative of the trend that is emerging because ports compete with each other and they are trying to keep their prices down. So the port of Sydney, for example, might be pressuring pilots to lower their price so that they can tell their customers that they are cheaper than the port of Newcastle, for example.

CHAIR—How do pilots actually manage fatigue on a long trip? If you are taking a vessel up the east coast somewhere and you are going through cyclonic weather or bad weather and the pilot is obviously going to be stressed well beyond his normal hours, how do they manage that in terms of getting any sort of relief from it at all? There is a limit to how much they can do. Are there any circumstances where you would take two pilots—one to sleep and one to be on the bridge?

Capt. Pelecanos—Not to my knowledge, no.

CHAIR—You would never do that at all?

Capt. Pelecanos—Not to my knowledge, no. That would be in the Great Barrier Reef you are talking about?

CHAIR—Are pilots allowed to catnap in certain waters?

Capt. Pelecanos—Yes, they are.

CHAIR—But they are responsible to say where the ship should be at a particular time if they do that?

Capt. Pelecanos—The way I understand it—and again I am not a Torres Strait pilot; this is based on what I have been told—is pilots who work in the Barrier Reef, where there are those long periods, are meant to be part of the bridge team. They will stay on the bridge for the most dangerous part of the pilotage. There are sectors where there is good, open water without a lot of traffic. They are the periods when they go to sleep, and they leave instructions to the officer on the watch and the captain to be called at certain times and in certain circumstances.

CHAIR—Is it the practice, for example, if you get a rush of ships that are going south to north, for pilots to be flown back to a port?

Capt. Pelecanos—Yes.

CHAIR—Do the same rules of rest and recreation apply then plus the travel time?

Capt. Pelecanos—As far as I know, yes.

CHAIR—I have just one final question. I have asked the other witnesses this. It may not apply so much to your organisation, but I would just like to hear your comment anyhow. A lot of government agencies and large companies will not accept tenders from organisations unless they are quality assured. What do you think of the concept of having fatigue management made a dimension of quality assurance?

Capt. Pelecanos—I do not think it would work. The reason I say that is because quite a few pilot organisations in this country are now quality assured. When you talk to the pilots, you see there is a great variance in the way they conduct their affairs. I am not an expert on quality assurance, but from what I can understand about it, so long as you have everything documented, you are okay. If you document the fact that, for example, a pilot shall have a four-hour break between ships and a pilot has a four-hour break between ships, then he has complied with his quality assurance obligations, but the fact remains: is four hours a long enough rest? I do not see that it should form part of a quality system.

Mr MOSSFIELD—I just have one more question. I think you are in favour of the establishment of a national standard.

Capt. Pelecanos—Yes.

Mr MOSSFIELD—If that is the case, how would these be enforced and which particular organisation would carry out the monitoring of those national standards?

Capt. Pelecanos—I have to confess that I have no clear ideas. When I say that there should be a national standard, that is by far the overwhelming opinion of the members of the Australian Marine Pilots Association. We are saying that, if there is a law similar to the workplace health and safety legislation which exists both federally and in states that requires pilotage organisations—and I have them listed there—to do things like monitor fatigue

levels. When we said non-prescriptive legislation we do not want to see legislation that says, 'The pilot shall be on duty for eight hours and rest every four hours', because that does not take account of the unique circumstances in each place. But if it says that pilot organisations have got an obligation to monitor fatigue levels and that pilots will not go to work when fatigue levels are breached—things like that.

None of us are experts on fatigue and what we would like to see is some sort of investigation conducted into our profession that can come up with recommendations as to what the legislation should contain in respect of marine pilots. We recently met Dr Drew Dawson from the sleep research centre in South Australia. When I say 'recently', that was about 18 months ago, and a number of organisations—partner organisations—around Australia are now starting to work with him to get assistance in establishing fatigue management programs within their organisation. Our organisation is trying to establish a national standard with the assistance of Dr Drew Dawson, but that will only be a standard, and we have not got any power to enforce that standard. All it will be is a standard which is promulgated by the Australian Marine Pilots Association, but it is up to the individual organisations whether or not they want to adopt it.

CHAIR—Thank you very much for your evidence. It has been very stimulating and very helpful to the inquiry. If we have any further questions, we trust you will respond to those in writing.

Capt. Pelecanos—Yes.

CHAIR—You will receive a copy of the *Hansard* draft. If you want to refer to the evidence, it will also be available on the parliamentary web site. Once again, I would like to thank you for your attendance. We will now suspend for afternoon tea. I again welcome any members of the public in the gallery, other witnesses and members of the media who might like to join us for a cup of tea and a biscuit.

Proceedings suspended from 2.57 p.m. to 3.24 p.m.

MAHER, Dr Kevin, Consultant, Australian and International Pilots Association

PROUT, Captain Stan, Medical Standards and Flight Time Limitations Representative, Australian and International Pilots Association

WOODWARD, Captain Richard, Technical Director, Australian and International Pilots Association

CHAIR—I welcome to the table the Australian and International Pilots Association. Dr Maher, Captain Woodward and Captain Prout, thank you very much for coming along this afternoon. I have to caution you that, although you are not required to take the oath, committee hearings are legal proceedings of the parliament and warrant the same respect as proceedings of the House itself. Any false or misleading evidence is a serious matter and is regarded as a contempt of the parliament. I ask, too, if you use any quotations or proper names, that you defer to Hansard before you leave, just for the accuracy of the record. Would you like to commence your presentation with a brief opening statement?

Capt. Woodward—Yes. We felt it was necessary to make an opening statement just to clarify some of the things we have heard in testimony in the last few days, just to balance our submission. It is quite short.

In the transport industry, managing the occupational health and safety of employees is one of the most important contributors to safety for the travelling public, cargo, innocent third parties and the environment. It was clear from the testimony in Adelaide that the other modes of transport in Australia are reliant on occupational health and safety legislation as a vehicle to ensure that they have adequate protections, particularly against fatigue. Unfortunately, state based occupational health and safety legislation does not apply to international operations or even interstate operations.

Also, it was noted that some may believe that aviation sets a good example for other modes of the transport industry. Whilst it is true that the Civil Aviation Safety Authority, as the Australian civil aviation regulator, prescribes such things as minimum hours of rest and maximum hours on task for aircrew, these rules are fundamentally flawed in that they do not take into account modern scientific data on fatigue, circadian dysrhythmia and time awake. To be fair, CASA has recognised this problem and is planning to introduce new flight time limitations that have the potential to better manage the fatigue risk. Having said that, AIPA has some concerns with the rules as proposed and is endeavouring to present an optimised solution to both CASA and Qantas in forthcoming negotiations.

AIPA believes that the importance of implementing a proper fatigue management system in the aviation industry cannot be overstated. Aviation is the safest mode of transport on the planet and Australian aviation is the safest section of the safest mode. Even so, statistics indicate that by 2010 there will be a major aviation accident somewhere in the world every week. The consequences of a fatigue related aviation accident by a major carrier in Australia are almost immeasurable. The dollar cost alone would be in the billions. The related societal damage would be difficult to quantify.

Interestingly, overseas regulators have so far failed in their attempts at introducing meaningful flight time limitations that reflect ICAO recommendations for managing the fatigue risk. Given the existence of ICAO, aviation regulatory authorities and IATA, the Australian public, who unknowingly accept the risks associated with travel, should be able to assume that fatigue is being well managed and in some seamless manner around the world. The concepts of open skies, code share and even virtual airlines may well challenge those assumptions in the future. AIPA believes that this inquiry and the developing rule-making process present an opportunity for Australia to provide worldwide leadership in aviation fatigue risk management techniques. We will be pleased to take any questions.

CHAIR—How do aircrews themselves manage fatigue when they are in flight? Has Qantas approved this new system of catnapping?

Capt. Woodward—It is called ‘controlled rest’. That has been approved. That is backed up by scientific evidence which Dr Maher will be able to elaborate on, but a short nap of up to 40 minutes duration can have some beneficial short-term effects.

CHAIR—Are there any flights where you take two crews?

Capt. Woodward—The long haul flights—for instance, Sydney to Los Angeles or to Buenos Aires, as my compatriot just did—take added or supplemented crew, but there is no two full crew concept. Australian regulations allow us to fly with one captain only and supplemented crew.

CHAIR—Would you like to elaborate on that aspect, Dr Maher?

Dr Maher—On the issue of napping as a fatigue countermeasure?

CHAIR—Yes.

Dr Maher—Yes. For the information of the committee, the position on naps has been a bit controversial over the years, but there has been a fair bit of scientific evidence generated in recent times. The general story seems to be that naps are a good idea for delaying that particularly dangerous event of possibly falling asleep at the job, whatever it is you are doing—controlling an aircraft or whatever. There are some problems associated with it, however. Problems of sleep inertia on waking can reduce the performance capacity of the person who has taken the nap at work. There is some academic nitpicking about how long that period of impairment might last, but it is generally thought that you are not up to par within about 30 minutes after waking from a nap.

There is another problem with naps. That is to do with the duration of them. If a person is really sleep deprived in the sense that they have been on a long duty schedule and they have developed a sleep debt that has accumulated over the days, they tend when they have a nap to go into deep stages of sleep very quickly, and alarms and warnings will not wake them out of that. So it becomes a dangerous thing if the duration of the nap is too long.

I did not know that Qantas had approved 40-minute naps. The outside limit generally in terms of academic opinion is about 30 minutes. It is advised that people have little personal

alarms to wake themselves up so they do not get into this situation of sinking into deep stages of sleep so that they cannot be woken easily.

Mr HARDGRAVE—You represent the long haul flight crew more than the shorter hop ones, but I was interested to talk with one of your Qantas colleagues. Qantas is the only airline I fly, except by accident. I was talking to the cabin crew about hours on and hours off and the situation of working a long day one day and a short day the next—where they literally have a four-hour day and a five-hour day on another day and a 10-hour or 12-hour day the next. Do you want to comment on that sort of irregular pattern and the impact that has on fatigue? Does it increase fatigue? Is knowing that you have a regular set of hours and then a break, and then a regular set of hours and then a break a better way to run your life or is it a problem in the short or long term?

Capt. Prout—I do not think we have a choice, because our rosters are driven by the schedules and when the aircraft come through, they need a crew. We are best described as irregular shiftworkers with the added complication that we move across time zones. To say that tonight we are starting at 11 o'clock does not necessarily mean that if we start 24 hours later it is a regular shift, because your body clock is slowly adapting as you move across the world.

Mr HARDGRAVE—So you have an additional problem with the time zones. When you are travelling into other time zones, do you take note of what your home base time zone is to frame your working hours?

Capt. Prout—I am very conscious of that, because the clock now tells me it is 3.30. I came in from South America just yesterday, having spent the best part of a week there. For me right now it feels like about half past three in the morning. It is a continuous problem.

Capt. Woodward—The short answer to your question is that some people do try to stay on, say, Sydney time when they travel to London and back, and they are up wandering around at 4 o'clock in the morning. Other people do not try to do that and they just get up and eat when they are hungry or sleep when they are tired. That is why one of the requirements of an international airline is that you have reasonable rest facilities at the other side of the world—and reasonable feeding facilities, funnily enough.

Mr HARDGRAVE—I see this 'oneworld' alliance that Qantas has with about half a dozen other airlines. Are you finding that the standard you are wanting to have here is a new idea to other airlines, or are they ahead of us on this area of fatigue?

Capt. Woodward—That is a very good question. I think a lot of individual airlines are aware of fatigue problems, but we made the point in our submission and also in my short speech that the flight time limitations debate has bogged down overseas. The European Joint Aviation Authority tried to issue a planned flight time limitation scheme, but it got so much strong internal objection within the European Union that it has fallen on deaf ears at the moment. Similarly, the FAA put one out a long while ago and it got howled down by the industry because it was unworkable. I notice that, as a result of the Little Rock crash in Arkansas, the NTSB has said to the FAA, 'You better release one.' The FAA has had one, but we, in doing what we are doing in Australia, are probably at the leading edge.

Mr HARDGRAVE—Dr Maher, do you want to comment on this irregular working pattern? Does that have a greater impact?

Dr Maher—It is the key to the problem of shiftwork generally. International pilots have the additional variable with time zone shifts. For example, the circadian desynchronisation that occurs is the same whether it is produced by working night shift or by, say, crossing 12 time zones. If you are working a night shift and crossing 12 time zones, you have something of a double whammy.

Mr HARDGRAVE—What if you are working four hours one day, 12 hours the next and five hours the day after that?

Dr Maher—This becomes a particular problem. Managing fatigue in irregular shiftwork is presenting some fairly difficult problems. I do not know to what extent I can refer to conceptual issues or the variables that are involved in assessing the fatigue generating potential of different shifts, but if I have your indulgence I can perhaps point to a couple of diagrams here.

Essentially there are two summary variables no matter what the shift arrangements are, no matter what time zones you are crossing and no matter what rest periods you are having. There are two summary variables that really can sum up the things of importance in any sort of shiftwork. It is the time of day that the work occurs and how long a person has been awake. Each of those two variables is modified by other things.

The time of day effect is a familiar circadian process that we can see. This graph, if you can see it from there, has hours—which is 24 hours—and an arbitrary scale, which is worst performance for the person during that 24 hours and best performance on an arbitrary scale, zero to 100. That is a familiar function—circadian sine-wave, generalised and idealised. For people who cross time zones and start to adapt to other times, this shifts backwards and forwards. If they are working the night shift, it shifts backwards.

CHAIR—Could you illustrate for us on a graph and send it to the committee? Could we have the two types—one in a regular pattern and one in a time zone pattern? Is it possible to conceptualise that in a graph?

Dr Maher—Yes.

CHAIR—Could you send that to the committee?

Dr Maher—This one in its present form is not suitable. The other function that is of concern is the time awake, which is—

Mr HARDGRAVE—Time of day, did you say?

Dr Maher—No, time of day is represented by a circadian sine-wave function. The time awake is not the same as the shift duration, but it is generally, in an abstract, idealised form, this kind of shaped function. It will not outrage anybody's commonsense. When you wake up, you are not so crash hot. You are not at your peak. You improve, reach a peak and

gradually decline over about 16 hours, which is when you should go back to sleep again, and between 16 and 24 hours you are not operating very well at all. So that performance, again on the same arbitrary scale—worst performance for the person and best performance for the person from zero to 100—is that shaped function.

CHAIR—I will tell you what is running through my mind on this. You can measure alcohol and you can measure speed, but fatigue is less easy to measure or to conceptualise. I am anxious in this report to use some graphs. If you could help us do those three graphs on one page, that might be helpful. We may even use it in the body of the report. That is the reason for the question. It is not to be difficult.

Capt. Woodward—There is no problem with that, Mr Chairman. In fact, the final graph is the most interesting that Kevin has.

CHAIR—You might like to comment. I cut you short there, I am sorry.

Dr Maher—I realise that this has a tendency to be scientifically academic and boring and we are all a bit fatigued at this hour of the day. I think I can make the points fairly quickly. The problem is that those two things interact. The time awake, which is partly the shift duration and partly the time to get up and go to work, interacts. The simplest form of interaction you can propose is that they just average out. So if you superimpose these, for a person who is starting work at 9 o'clock in the morning—an average nine to five worker—and you take that sine-wave function, if you average the two you get a derivative function of this shape.

There is a good reason why nine to five is a favourite shift for lots of workers, because it stops there. This one has been extended out to 16 hours. You can see that performance drops off very badly. But in this period you are in a very high phase of your ability to do work and think and so on, for most of the period of your eight-hour work shift if you are a nine to five worker.

If you do that sort of thing over the whole 24 hours of the day, for start times for 14-hour shifts you get a series of these derivative functions which look like that. The nine to five one is in here somewhere, which looks nice and flat. However, if you do take into account a shift that is beginning, say, in the very early hours of the morning—say 3 o'clock in the morning, which is over here; it is the third one along—it does this. It drops down to a base level and then goes up. That is the derivative function, which is the interaction between the time of day effect and the time awake effect.

Using this approach I have begun to look retrospectively at some old aviation accident reports. I have not got very far in it yet, but some startling effects are starting to show up once you take those two variables into account in that way. If something else goes wrong at the period of the low point of that derivative function, then the flight crew are in trouble. This approach is an approach to attempt to quantify the risk of fatigue in particular shift rosters. You can look at it from different shift durations and different times of day. It is in fact the basis for a number of systems that are being developed at the moment, one of which you may have heard of from Adam Fletcher from Professor Dawson's lab in South Australia.

That is actually being applied in various areas. It is based on the same principles, except that he divides it up into categories.

There are a few accidents here. There is a wheels-up landing that I picked up from Continental Airlines in Houston, Texas. The flight crew woke at 0300, started duty 0402 and landed the aeroplane with the wheels up at two minutes past nine. Two minutes past nine looks like a circadianly good time of day. It was not very long hours; they had been at work only six hours. It does not look like fatigue has an effect. In fact, the US NTSB says:

The flight crew's degraded performance is consistent with the effects of fatigue but there is insufficient information to determine the extent to which it contributed to the accident.

When that occurred, however, is exactly at the bottom of this derivative function. It is interesting. It has many features in common with the Ansett nose wheel accident a couple of years ago at Sydney airport. The very same hydraulic selector switch was the one that was mis-selected so that there was no engine-driven hydraulic power. The crew became preoccupied with the fact that the flaps would not work on the aircraft and forgot that the wheels were not down, which is very similar to what happened in the Ansett nose wheel crash.

Mr HARDGRAVE—Surely what you are saying there is as true for a high profile profession such as flying a 747 as it is for driving a train, as it is for driving a truck, as it is for being in a production line in the middle of the night.

Dr Maher—It think it is true. Obviously various factors affect those two summary variables. For example, if you had a loss of sleep—for a 3 a.m. start it is very likely that the person doing the work has lost about four hours sleep, because it is very hard to go to sleep early in anticipation of an early shift start—these graphs would in fact be worse. They are representing overestimates of performance capacity. With a four-hour sleep debt at the beginning of that, the base would be further down. We are talking about something down around 15 per cent of a person's daily capacity to perform their job.

Mr HARDGRAVE—Are there not enough preparation procedures in that people are not preparing for shiftwork—in other words, that being awake is not good enough? It is getting yourself rested sufficiently to cope with being awake.

Dr Maher—All of these things interact, of course, yes. And if you have lost some sleep ahead of time, then that will change the shape of this function. In fact, it varies depending on the sort of work you do, also. That is just a generic shape that I have used as an idealised form just for this illustration. But if you lose some sleep, you can quite legitimately propose that that shifts down, so that its effect on the interaction with the time of day function will produce lower performance levels. The catch is to try to use approaches of this kind to quantify the risk of fatigue occurring, it seems to me. That is very difficult to do.

You can see that there is something fairly counter-intuitive about trying to mentally juggle those two strangely shaped curves and come up with a resultant from it. That is why I think the techniques that are emerging at the moment, including the ones from Professor Dawson's lab, are particularly valuable, because they give a way of producing a

quantification to say that the risk of fatigue being generated with all these variables that are operating is such and such. The risk of something happening as a result of that, which might be catastrophic, depends on the sort of work that is being done, but it gives you a way of producing a consistent, systematic way of evaluating the risk.

In that area, I think that this sort of approach is useful. It is becoming of concern in the proposals that are being made by CASA for limiting flight and duty times. I should really turn this over to Richard. But they are canvassing an alternative approach—either setting prescriptive regulations that limit times totally or offering an operator-formulated process where the limits are negotiated. And the issue is that it needs some monitoring.

Mr HARDGRAVE—Given all that has been said, what is the satisfaction level of someone in charge of a heavy aircraft knowing that it may have been maintained by an overnight shift having tightened a nut or checked a bolt or checked the hydraulic nose wheel switch or whatever else the Ansett crew did not hit the other year? We heard evidence this morning that there is a lot of fatigue and stress associated with the overnight maintenance of aircraft. That must be a matter of concern to you.

Capt. Woodward—I was fascinated to hear the rail industry say that if it has been worked on in a workshop, the train crew check it before it leaves, and therefore it is okay. I find that an interesting concept on a complex piece of equipment like a locomotive. Naturally, aeroplanes are much more complex. It is of severe concern to us. There are basically three licensed groups in the industry. There are the pilots and the flight engineers, the ground engineers and the air traffic controllers. Two of those groups have regulated flight time or duty time limitations, which are not perfect and should be subject to a fatigue management system.

The poor old engineer in our organisation can be working at work in Sydney or somewhere like that, and suddenly an engine requires changing in Bangkok, and they will throw him on an aeroplane with his tools and the appropriate piece of equipment and they will make him go to Bangkok. And he will have to change the engine there and then ground run it because the aeroplane is waiting to go to London and there are no spare aeroplanes. So that man might have been on duty for 20 hours. And he is signing for the fact that the aeroplane has been set up properly. It is of severe concern. I knew this question was going to be asked, and I actually targeted our engineers association before we came, and they expressed their own concerns, and I am sure they are making their own submissions.

Mr MOSSFELD—Just on the critical times, you have been telling us that a couple of critical times relating to fatigue are the time of day and how long you have been awake, which ties in with how long you have been on the job. We heard discussion about the 12-hour shifts. We also heard other people saying that the critical time for some accidents relating to fatigue is a short period after the driver has got behind the wheel—such as 45 minutes—when it seemed to peak. And then there is a reasonably no-problem area, and then it peaks again at around 11 hours. Would your industry have a similar view to that, and why? What are the reasons?

Capt. Prout—That observation, I would consider, is consistent with the graphical evidence that Dr Maher has been talking to. Depending on what has been going on in your

work history in the days leading up to the particular shift you are referring to—all that has to be taken into account. That is the difficulty with most regulations in the prescriptive form. They look at each shift in absolute isolation and take very little account, if any, of what has happened on previous days. This is ideally the sort of regulation we would like CASA to introduce—one that does take into account a moving window of time on task—so that we can then more readily identify the peaks and troughs you refer to.

Mr MOSSFIELD—How do you feel the CASA inquiry is progressing? Are you quite happy with the opportunity you have to put your organisation's point of view?

Capt. Prout—Yes. There was a very good consultative process that came to a halt about 12 months ago. And since then, CASA has gone on its own path, with guidance that they have picked up from industry along the way. They have now produced a discussion paper, and we have just put a response into that discussion paper on the operator-formulated schemes. I am not certain, but I understand a copy has been provided to this inquiry which details our qualified support for this new process. However, there are some important qualifications, also.

Mr MOSSFIELD—How binding would the CASA recommendations be once they are brought down?

Capt. Prout—They are absolute.

Mr MOSSFIELD—For the whole industry?

Capt. Prout—Basically, CASA writes rules that apply to any operation anywhere in the world by an Australian registered aircraft. So it is a very transportable rule—as distinct from occupational health and safety laws. Of course, we step off the continental edge out here and we are on our own. It would be very useful if we had the same sort of universal occupational health and safety rules. One of our difficulties is trying to tie the two things together, because as soon as you start talking about occupational health and safety there is a tendency to assume that you are talking about an industrial matter. We do need a way to tease those two things apart. I think the last witness was correct when he was talking about a requirement for an independent body who can look at this sort of thing as the umpire when you have disputes that need resolution.

Mr St CLAIR—Can I just take it a bit further? Flight crews from overseas organisations—do most companies employ their own staff? Or are there also independent groups out there that are providing flight crews?

Capt. Woodward—There are independent groups. There is a mix around the world. The major airlines have their own flight crews. Some of these so-called virtual airlines—the European experience is an interesting indicator. In the European summer, all these start-up airlines appear for the European summer in England, and they cobble together crews. They hire them for the three months to fly people down to Majorca in Spain and all sorts of places in the Mediterranean, and then they disappear again at the close of the summer season. Some of the foreign carriers hire crews from leasing companies that lease crews. Some of them hire aeroplanes. Some of our regional neighbours do that. They are short of their own crews,

so they lease. You will hear many an Australian voice all over the world flying aeroplanes around.

Mr St CLAIR—Is there a move towards a global fatigue management as far as pilots are concerned? Is there a standard?

Capt. Prout—The International Civil Aviation Organisation does set out in various annexures the broad rules under which you should operate aircraft, including in there a list of the sort of factors that should be considered for fatigue management. Although they produce a fairly comprehensive list of the items that should be covered, they do not actually demonstrate how to tie all those factors together into a system that you can implement. Rather, they say, ‘Here are the sorts of things you should do. Now, each independent regulator around the world, do your best with that.’ And it is our observation that very few regulators around the world have done anywhere near well enough with it—the FAA being one of them.

Mr St CLAIR—So pilots or planes coming into Australia—we do not know what—

Capt. Prout—They will generally be operating to whatever rules apply for the nationality marks on the side of the aircraft. So if it comes in with a November registration, they probably are working FAA rules. If it comes in with P2—that is New Guinea, for example. And so it goes on.

Capt. Woodward—The interesting aspect of that is that they vary internally within the countries. It might be noticeable that there are a lot of freight operations in and out of Australia at the moment. Freight operations operate under a different regulation in the United States, and there have been a couple of famous crashes where the crews have been on tours of duty for 20-plus hours—24 hours—because that is allowed. You are apparently not as dangerous if you are flying freight around as if you are flying passengers around.

Mr St CLAIR—So when they come into Australia, again we do not know whether they have been working for 20 hours or whether they have been working for less than that?

Capt. Woodward—That is exactly right. It is an interesting point that we can regulate the daylight hours of Australian airlines and make them comply, but we cannot easily make foreign carriers comply.

CHAIR—What are the rules applying to foreign carriers in our skies? Are they our rules, their rules, or a mixture?

Capt. Woodward—Stan raised the point that it is under the ICAO convention; that if it is a signatory state, their rules should be based on the ICAO conventions. They can file modifications of those with ICAO. So they will have rules that are reasonably similar in most circumstances. But to get into the country, of course, they have to negotiate bilateral agreements between the countries. They are then sent out to other organisations. For instance, one country might negotiate a bilateral. It then gets a bit confused because your airline might negotiate a code share arrangement. So even though that country has rights to Australia, they do not have the aeroplanes. They might be a small Pacific island of some

kind. Then another carrier, such as Qantas, could fly that code share arrangement, and they would call themselves Air whatever.

It is getting to the point now where the lines are becoming a bit blurred, and you could have a subcontractor flying that code share flight. So there would be a third country operating that. I talked to Dr Kotaite, who is the president of the ICAO council. ICAO are aware of this, and they have written a new rule—an annexe—to deal with that, but it has to be ratified by all the states, including Australia.

Mr GIBBONS—It seems to me that technology would be a big factor in alleviating fatigue in the aircraft industry. Obviously, an aircraft is a pretty high-tech piece of equipment these days. You talked about that aircraft that had the accident with the wheels up landing. Would it be possible to have a device that tells you when you get to 500 feet and your wheels come up? Has that been built into aircraft?

Capt. Prout—They exist.

Capt. Woodward—Modern aeroplanes have literally hundreds and hundreds of computers and warning devices built into them. In fact, Dr Maher could probably elaborate. You can suffer from information overload or information saturation. And one of the first things you lose when you are under stress is your capability of hearing audio warnings. It seems strange—sitting at the table here—that a crew could land an aeroplane with the wheels up and with the alarm going off, but it has been done, and it will be done again.

There is an interesting graph that Boeing have showing the early technology aeroplanes when the Sopwith Camels were around. You only had one instrument to stare at—or two. Then we did have hundreds. Now we are back into glass TV screens. But the amount of information being presented and the automation of the aeroplane is such that, while the piloting skill level required in some ways has changed to fly that aircraft—very early aeroplanes were very difficult to fly because they were unstable—the management requirements or the monitoring requirements are so high now that that task has become a significant proportion of the pilot's work.

Mr GIBBONS—So that would be a significant part of the workload—monitoring—because you would be on an automatic pilot sort of thing; you would get up to the altitude and then, once you are in the cruise mode, it would just fly itself?

Capt. Woodward—That is very true.

Mr GIBBONS—Your job is to monitor all of those systems constantly?

Capt. Woodward—That is very true. For instance, when you are doing an approach to land in modern aeroplanes, you can program those approaches in the aircraft's flight management systems or flight management computers. That is a second guess of what the air traffic controllers are going to do to you. If they do not match up, you then have to modify it. With some modern aeroplanes, you would have eight or 10 different ways of manually or automatically handling that approach. So during the descent and approach phase, you could select six or seven different modes of operation. The pilot has to be more than aware of

what he has selected and what he expects the aeroplane to do, especially in a modern, automated aeroplane. There have been accidents around the world where the crew have actually lost the concept of what the aeroplane is doing, and it has actually crashed even though it was operating normally, because the crew were not aware of what they had done to the aeroplane and what they had demanded from it.

Mr GIBBONS—On an international flight there would be a flight crew of three people—pilot, copilot and engineer?

Capt. Prout—It is probably not the most appropriate way to describe crewing concepts. It is better to say there is a minimum crew. For most glass cockpit aeroplanes, as we call them now—the highly automated ones—you have a captain and a first officer. It is only the old-style jumbos where we still carry a flight engineer. So when you have just the minimum number of crew on board, that is the minimum; and then we augment as required to extend the time on task. That means that crew have the opportunity to leave a control seat and access a bunk in flight, providing it is of a decent standard so that you can actually get some rest in that bunk in-flight.

Capt. Woodward—As an interesting continuation on that point, I was at a recent conference—I also sit on the aircraft design committee of the International Pilots Federation, which represents 93 countries and 110,000 pilots worldwide—and we were talking to one of the manufacturers, Airbus Industrie, and they were making the point that their aeroplanes are going to go 18, 19 and 20 hours. When you get 400 people in an aeroplane for 20 hours in a dehydrated environment, you get a reasonable chance that some people go a bit ratty, especially if the in-flight entertainment system is not working. So one of the points that is being made is that it might take a full circle—you may have to have another crew member who is there to fix the in-flight problems, the minor equipment problems so that you do not have 400 people rioting in the back because they cannot watch the movie.

CHAIR—Just on that point, you talk about rest facilities for flight crews in flight. Leading off from Steve's question, what form do they normally take and how effective are they as a tool of fatigue management?

Capt. Woodward—That has been an interesting development. Rest facilities in the old days consisted of a seat or a stretcher and then they became a bunk and the bunk was actually just shoved in wherever it would fit in the aeroplane. So the crew could actually crawl into a space where the curve of the bulkhead met the bunk. If you were more than six feet long or sat up suddenly, you would brain yourself on the roof. That has sort of been the case even now. I have said to both the major manufacturers that they have got to stop making rest facilities an afterthought. One of the things that we did do was develop our own crew rest standard. We looked all around the world at the industry standards, we took the best ideas—and Dr Maher certainly had a very strong input into that. We believe that we have the best standard around. I have handed that personally to Boeing and Airbus Industrie.

CHAIR—What does your standard look like?

Capt. Woodward—We can provide a copy. It should be in the submission. It just basically allows for the fact that people are human beings and they need space to sit up

above the bunk. They do not need to lie down every time they go to sit down. For instance, on one of the flights to London, even if you take off in the middle of the night, as Stan quite rightly pointed out, it is effectively in the middle of the day for you. So you do not need to go and lie down; you need to go and sit in the seat away from the flight deck environment and have a rest. You might want to read a book or eat your meal. So there is a strong argument to have a seat and/or a bunk combination for that circumstance. So they are very important for the in-flight relief of the pilots. If you have an 18-hour flight time limitation these days on a modern aeroplane, as Kevin pointed out, eight hours of your body clock says that you should be asleep. There is a situation now where a flight crew actually have to get some good rest on board the aeroplane to compensate for the rest that they are not getting on the ground.

Mr St CLAIR—What work have you done with the cabin quality of air?

Capt. Woodward—I had one of my members do some urgent work on this in the last couple of days because we were aware of the inquiry into the BAe 146 air quality incident. Unfortunately, we cannot really comment because none of our crews operate that aeroplane and it would be remiss of us to make—

CHAIR—Some of your associate crews do, don't they, like Airlink and so on?

Capt. Woodward—Yes, but none of our—

CHAIR—Are they members of your association?

Capt. Woodward—No, so we feel that we could not offer an expert opinion, not having operated an aircraft. I know that the International Federation of Airline Pilots do want to make a submission to that inquiry and as we are their representatives, we may do that on their behalf.

Mr St CLAIR—On the planes that you do fly, what is the situation with air quality? Is it becoming more to the fore? We were in Melbourne recently taking evidence and simply driving around the block with four people in a motor car with a device that measures the drop of oxygen, for example, which is quite significant. Four hundred people in a cigar in the air for 18 hours is obviously going to have the mechanics of trying to keep the air quality at a certain level.

Capt. Prout—The only comment that I would make is that it is not our train set; it belongs to the airlines. It is really a question that could be directed better at them. We are fortunate inasmuch as we are sitting at the front end of the aeroplane and we probably have the best quality air. We also have a humidified environment on the flight deck, which passengers do not necessarily enjoy.

Capt. Woodward—There are some figures on that. The cabin air in a modern aeroplane changes once every two minutes, roughly. About 60 per cent of the air is recycled, depending on the aeroplane. The reason that is done is that it saves fuel, which is a very serious consideration. The other thing, as Stan said, is that the air is humidified for the cockpit crew but even that only raises the cockpit humidity to around seven per cent to 15

per cent. The humidity in the back end of the aeroplane after 12 hours or 15 hours is down around two per cent. The middle of the Sahara Desert is about 15 per cent.

CHAIR—Are either of you or, for that matter, Dr Maher, aware of the work that Professor Wlodarski is doing at RMIT?

Dr Maher—No, I have to confess that I am not.

CHAIR—He runs the sensor technology laboratory. He was set the task of originally identifying carbon monoxide as a dimension of suicide in vehicles, but it has gone well beyond that now; he has a sensor now that can identify whether it is accidental or deliberate, for that matter, in the cabin of any vehicle. Also as part of his research he has found that carbon dioxide provides a dimension of fatigue, or oxygen deprivation, if you like. He has devised a monitoring system now that could be fitted to vehicles, be they cars, trucks or aircraft, for that matter. You have not heard anything about that?

Capt. Woodward—No, I am afraid we have not.

CHAIR—It would seem to be the sort of thing that would be most useful in the BAe 146s—

Capt. Woodward—Yes.

CHAIR—if you could have that. I commend the research to you, anyhow.

Dr Maher—Can I ask a question about that? Is the sensor for carbon dioxide or carbon monoxide?

Mr St CLAIR—And oxygen.

Dr Maher—And oxygen.

CHAIR—By inference oxygen, because you need 20.9 per cent of oxygen in the environment. In the test that Stuart was referring to, it dropped to 20.2 per cent just going around 10 blocks of Melbourne streets.

Mr St CLAIR—And at 19½ I think you start to run into serious problems in the brain.

CHAIR—It is just interesting, especially for people in your work where alertness is so critical. You say in your submission that the AIPA, along with a number of other organisations, are discussing with an Australian tertiary institution the formation of an aviation human factors and medical research foundation. How far advanced is that?

Capt. Prout—The last meeting was held several months ago. It is Griffith University that we are having the discussions with. I understand the formation of the committee is now being discussed at senate level within the university.

CHAIR—But what are they looking for there? Are they looking at another dimension? We have talked about Dr Dawson and we have talked about Professor Wlodarski in Melbourne. What other dimensions might they be looking at?

Capt. Prout—What we are looking at is the longitudinal studies, especially when you are talking about not only the acute short-term fatigue but also the chronic long-term fatigue. There is very little warehoused data on shiftworkers around the world. At a conference in Perth last year, there were some researchers from Scandinavia. They have warehoused, I think it was, 6,000 shiftworkers into an electronic database so that they can then go back through using the sort of techniques that Professor Dawson is using to look for correlation in health issues, tying in with the shiftwork. There is no repository for that data anywhere in Australia, so that if we wish to collect data on pilots from Qantas, Ansett and regional operators, unless those companies have some particular interest in storing that data, it will be lost. So if we can get some independent body where we can warehouse that data, we may be able to do some meaningful longitudinal studies.

CHAIR—You say that your association represents 1,700 pilots. What are the other major bodies representing pilots?

Capt. Woodward—In this country?

CHAIR—Yes.

Capt. Woodward—There is another organisation called the Australian Federation of Airline Pilots.

CHAIR—That is mainly Ansett, is it?

Capt. Woodward—No, they actually were involved in the dispute in 1989, which we were not; we were operating entirely throughout that dispute. They suffered some decimation as a result of that. They actually represent basically the regional pilots of the country now and, to some extent, some of the government pilot employees. There is also an Ansett Pilots Association. They were initially going to join our organisation, but they felt the need to have their own.

CHAIR—How many members do they have?

Capt. Woodward—About 600. So we by and large are the biggest body in the country.

CHAIR—Thank you very much for your evidence. It has been very helpful, very stimulating. If we need any more information can we come back to you, especially on two areas there, Dr Maher—one was those graphs and the other was something else that you mentioned.

Dr Maher—The question about naps.

CHAIR—Yes.

Capt. Woodward—Certainly.

CHAIR—Could you send some more information on that to the secretariat. You will receive a copy of the *Hansard* draft and, in addition to that, if you want to review the evidence, it will be on the parliamentary web site. So thank you once again for coming and we look forward to the rest of this inquiry with some eagerness. I hope that it is of use to your part of the transport profession.

Capt. Woodward—Thank you.

[4.10 p.m.]

SORENSEN, Mr Paul Anthony, State Secretary, Australian Federated Union of Locomotive Employees—Queensland

CHAIR—I welcome Mr Paul Sorensen. Mr Sorensen is representing the Australian Federated Union of Locomotive Employees. Mr Sorensen, I have to caution you that these proceedings are taken to be proceedings of the parliament and, therefore, they warrant the same respect that would attend to the House itself. The giving of false or misleading evidence is a serious matter and may be regarded as a contempt of the parliament. I would also like to ask that before you leave today, if you refer to any proper names or quotations, you defer to the Hansard reporters.

Resolved (on motion **Mr St Clair**, seconded by **Mr Mossfield**):

That the committee accepts as evidence and authorises for publication the submission from the Australian Federated Union of Locomotive Employees, submission No. 70.1, into the inquiry into managing fatigue in transport.

CHAIR—Mr Sorensen, would you like to give us a brief opening statement, then we might move to questions.

Mr Sorensen—Thank you. Firstly, I would like to thank you for allowing the submission to be accepted by the committee today. I would also like to give just a brief background of our organisation and the role that we believe we should be playing in this inquiry.

Our union is a craft union based in Queensland and has the majority coverage of all train crew in Queensland Rail. Queensland Rail employs approximately 2,500 drivers and guards; 2,200 are drivers alone and we cover approximately 1,700. All officers of our union who represent its membership are ex-train drivers. I was actually employed by Queensland Rail for 14 years, 10 of which was as a locomotive driver in north-west Queensland on the Mount Isa to Townsville corridor for rail.

Over the past 10 years, our organisation has experienced significant changes in the rail industry in Queensland, namely, the reduction of three-person crew trains, where we had a driver, a fireman and a guard on the train, and the further reduction in 1986 to a driver and a driver's assistant on the locomotive. Subsequently, in 1989, between Rockhampton and Brisbane, driver-only operation was introduced. That was introduced along with technology to provide train stop, which facilitated a driver not being able to pass a signal when it was at stop.

In recent times—in 1995—extended shiftworking became part of the locomotive driver's life. An arbitrated decision in Queensland gave Queensland Rail the ability to roster drivers for 11-hour shifts. That would be for two-driver operation. In our discussions in recent times Queensland Rail has indicated that its crewing configurations in the future will be 80 per cent driver-only operation and 20 per cent two-driver extended shiftworking.

We have a long-held concern about fatigue in our industry and we have had numerous discussions and negotiations with Queensland Rail about fatigue among locomotive drivers.

It has long been our belief that all fatigue issues and rosters that deal with fatigue of the driver really are a compromise situation. A roster for a train driver has to meet Queensland Rail's customer requirements. It has to meet the occupational health and safety legislation in place at the time and the significant issue that our union has to represent, which is the needs of the employee at the end of the day. In this submission, I hope to convey, from our union's perspective, anyway, our concerns for the employee and what effects any fatigue management program that may or may not come out of this inquiry would have on train drivers across Australia.

CHAIR—You mentioned 11-hour shifts and the reduction from three-person to two-person crews and in some instances to one. What is the situation with respect to passenger trains? Do they have only two drivers or a driver and an assistant?

Mr Sorensen—No. Driver-only operation between Rockhampton and now right through to Townsville is for all modes of rail transport, whether it be passenger or freight services.

CHAIR—What is the situation if a driver takes ill?

Mr Sorensen—On the job or prior to attending for duty?

CHAIR—On the job.

Mr Sorensen—There are processes in place such that, if a driver is fatigued, which we deem as an illness, Queensland Rail will replace that driver with another. We try to keep our depot staffed to such a level—

CHAIR—Does it act as a black mark against a driver's name if he declares himself fatigued?

Mr Sorensen—Yes. I would say in an off-the-cuff

response that, yes, it is deemed as being perhaps a person trying to shirk his job.

CHAIR—For example, if he was recovering from flu or something like that and had misjudged his fitness and he found two-thirds of the way into a shift that he was seriously fatigued, would it still be held against him?

Mr Sorensen—In most cases when we have had drivers who have indicated that fatigue has been the reason that they requested relief prior to the end of their shift Queensland Rail has undertaken some form of interview with that person. That is certainly not a disciplinary interview but an interview to ascertain the reasons why he was not in a fit state to attend for duty.

CHAIR—Does it happen very often with one-man crews that a train has to pull up for one reason or another?

Mr Sorensen—No. It is far more prevalent in the two-driver operation where we have extended shiftworking—11-hour shifts.

CHAIR—Where would those two-driver crews go to?

Mr Sorensen—All of the coalfields—Gladstone out to Blackwater and the Bluff to the Goonyella coal system, which is from Mackay through to Moranbah and Dysart.

CHAIR—Why do you need two drivers for those?

Mr Sorensen—Mainly because the negotiated outcome for driver-only operation was that where we have signal territory—for example, where the passage of the train is controlled by signals—it was agreed that Queensland Rail would provide a system of train stop, whereby a driver would be unable to pass a signal at stop unless he overrode some sort of safety system. It is quite an expensive thing to introduce, so at this point they have not done that on the coalfields.

Mr HARDGRAVE—What sorts of worker awareness programs does your union undertake in relation to fatigue?

Mr Sorensen—We put out a newsletter on a monthly basis about fatigue. Four times a year after our state conferences our organisation also puts out our train crew journal, in which we deal with workplace health and safety issues and general issues to do with the driver's grade. In relation to providing other information, we have an arrangement with Queensland Rail whereby we have fatigue management programs in place and fatigue awareness sessions being undertaken in almost every depot in the state.

Mr HARDGRAVE—What sorts of things do you tell your drivers to look out for so that they can recognise when they are fatigued?

Mr Sorensen—We do not tell them what to look out for when they are fatigued. We try to focus more on how to stop yourself getting fatigued on the job. We take a much more proactive stance. We try to get our drivers to recognise the need for suitable sleeping arrangements at home. We highlight the fallacy that alcohol will help you sleep better. We highlight that sleeping tablets and those sorts of things are not the best means of attaining fatigue recovery time.

Mr HARDGRAVE—What is peer pressure like in the railways with respect to those sorts of matters? There is an ad for XXXX on television in which two train drivers on a train are talking about how they had a big night out and woke up 'as good as Gold'. Is that the sort of peer/mateship thing that exists?

Mr Sorensen—That ad is not a good promotion for the locomotive driver. It is probably quite poor, considering the role and responsibility he has in the community. In relation to peer pressure for those sorts of issues, I would have to say that when I was a driver—I have been off now for five or six years—there certainly was a culture of that nature years ago.

Mr HARDGRAVE—Get a skinful the night before; you can still drive a drain?

Mr Sorensen—Exactly. It is certainly far different today. One of the things we highlight to drivers is that the blood alcohol content for a locomotive driver is zero. We have in place

blood alcohol measuring machines that are similar to the ones in hotels. If drivers are called in at short notice, for example, after attending a barbecue, celebration or party, we have a drug and alcohol policy in place. If a driver comes in and blows over zero, there are no ramifications if he advises his supervisor and goes home.

Mr HARDGRAVE—Is there X number of hours between bottle and throttle?

Mr Sorensen—We promote 12 hours between bottle and throttle.

Mr MOSSFIELD—Can you give the committee an idea of the shift patterns that the average train driver would operate under, that is, how many days, the hours involved and the rest breaks between shifts?

Mr Sorensen—We have a mandatory 12 hours off between shifts. We were able to negotiate that only in our last agreement. Prior to that you could be called back and paid an overtime rate. But we were able to get a mandatory 12 hours. As to the types of shifts drivers work, I will use as an example someone who drives a passenger train between Brisbane and Rockhampton. He has a diagram that gives him a guide as to what trains or services he will be working. That is all that is—a guide. If Paul Sorensen goes off sick and they have to get someone to replace me, they may have to take that driver off his job and he might have only just got his 12 hours off after finishing an 11-hour all-night shift. There is no regular shift pattern for train drivers whatsoever. Our shifts are dictated purely by the customers' demands. It is not unusual for drivers to be finishing work between midnight and 4 a.m. only to be back on duty at 8 p.m. again that night. That is not the sort of rostering that our organisation would like to see in place.

Mr MOSSFIELD—Do drivers ever finish their shift away from their home base?

Mr Sorensen—Yes, that happens.

Mr MOSSFIELD—What arrangements are in place for a 12-hour rest period in those cases?

Mr Sorensen—That is one issue that I have highlighted in the submission that I have presented today. The negotiated outcome for two-driver operation for the 11-hour shifts produced a significant enhancement for the types of accommodation that train crews would be required to stay in at the foreign depot, so to speak. Enhancements such as sound proofing were achieved by double-sheeting all of the walls. Roller shutter blinds were fitted to all of the windows, the rooms were airconditioned and we fitted the rooms with Posturepedic three-quarter king size beds and clock radios. Those were just simple things to provide a bit more comfort and to try to allow a driver some recovery time when he is domiciled away from home. It has been, by and large, a great success and is certainly well received by the train crews when they have to do extended shiftwork.

Mr MOSSFIELD—Is there any mechanism that would stop the train if the driver failed to recognise a signal? Last week in Sydney we almost had an accident when a train went through a signal and stopped 300 metres short of another train travelling towards it. I would

not like to say where the error was. Is there an automatic mechanism that would activate the air valves?

Mr Sorensen—Yes. For all the driver-only operation that operates between Townsville and Caboolture—40 kilometres north of Brisbane—a driver cannot go past a red signal unless he overrides a system. If he goes past that, there is an automatic immediate loss of air and the brakes apply.

CHAIR—Are those the yellow things you see on the tracks, are they?

Mr Sorensen—Yes, the track-side magnets and those sorts of things are transceivers that give train speed, distance from signals and so on. If the driver is going too fast, yes, it will stop the train.

Mr HARDGRAVE—Is that a first in Queensland in comparison with other states?

Mr Sorensen—Queensland is lucky in that we probably have one of the best driver-only operated main line systems in Australia—probably in Australasia, actually. It is one of the only Australasian rail systems that has train stop on its main north coast line.

Mr MOSSFIELD—You have indicated that your organisation has participated in a number of projects in conjunction with Queensland Rail and the Adelaide Centre for Sleep Research. Are you satisfied with the outcome of that participation and is Queensland Rail accepting the recommendations arising from those discussions?

Mr Sorensen—We have been involved with the sleep research centre and its studies for about four years. Our drivers wore wristographs and we monitored them, conducted tests and so on before and after extended shifts. The outcomes from the sleep research centre are probably very good. It is a research centre gathering a great deal of data and providing it to the stakeholders, which are the unions and rail operators. In Queensland Rail we are adopting a number of the things that we have found from the sleep research centre, but probably not as quickly as we would like. I and our organisation believe that some of the good things that have been highlighted that do cost a few dollars to an employer probably have not been implemented as quickly as they might have been. Disappointingly, in most cases enhancements to rosters or to—

CHAIR—What sorts of things have not been implemented?

Mr Sorensen—Just simple things like crews being required to stay in a small country town such as Hughenden in the north-west corridor. There are not a lot of things to do in a small town of, say, 1,500 or 1,600 people, but a driver might be required to spend 14 hours there. At the quarters where he is required to stay he has a nice room, a lovely kitchen and so on. However, if you are there for 14 hours you are looking for something to do. They could use things such as a bit of exercise equipment and a video player. We already have TVs. Employees could use some very simple home comforts to entice them to spend the time there rather than doing other things.

CHAIR—Instead of going up to the pub, for example?

Mr Sorensen—Exactly. We would rather try to make it as comfortable as possible in the quarters rather than enticing people to have a counter meal and that sort of thing.

CHAIR—How many rest depots do you have? There is one in Bundaberg, is there not?

Mr Sorensen—There is one in Bundaberg, Rockhampton, Mackay, Townsville and Cairns. We have 33 depots. Probably 25 of them would be in places where our crews are required to lay off.

CHAIR—Sorry, Frank, did you have a question?

Mr MOSSFIELD—No, you have really covered the areas I wanted to at this stage. If something else comes to mind—

CHAIR—You say that you can be asked to do anything, but the reality is, is it not, that if you are on the main line going north you generally do not work more than about four or five hours either side of your home depot?

Mr Sorensen—No.

CHAIR—You usually turn around and come back, don't you?

Mr Sorensen—No. That is the problem. One of the things that we—

CHAIR—I know all the argy-bargy that has gone on over the years between Maryborough and Bundaberg because as the trains get faster, they cut out a depot. For this 10 years, Maryborough is the centre. Now the critical centre has moved up to Bundaberg and all the rail employees have to move and the railways say that this is so that the crews can be properly rested, et cetera. You say that that is more rhetoric rather than reality?

Mr Sorensen—Definitely. That is probably right. We have Maryborough and Bundaberg, and that is the classic example. In Maryborough, instead of providing rosters that did allow us to get to Brisbane and straight home again, we made the Maryborough crew bring the train further through the Brisbane suburban area so that they do an eight-hour shift and then lay off in the quarters and then come back and work eight hours home. Bundaberg, who predominantly drive our tilt train—our premium train here in Queensland—has just agreed to do a 12-hour shift so that they do not have to lay off in the quarters. They will bring the tilt train down early in the morning, they have a few hours off during the day while the train is cleaned and serviced and then they take the same train back home again that afternoon.

CHAIR—Do they get a rest facility somewhere?

Mr Sorensen—Yes. They have the same quarters; the same facilities are available to them. I think that highlights that there is a genuine shift from drivers that 'there should no longer be a requirement for me to be laying off at a foreign township or at a foreign depot.'

CHAIR—You would not get a circumstance, would you, that a driver going from, say, Rockhampton up that way to Townsville would be asked then to take a train out on the Townsville-Mount Isa line? They generally stay—

Mr Sorensen—No. Our safety management system in Queensland Rail dictates that, unless you have been deemed competent over a route, you would not be able to drive a train over it. It is the same as you have to be competent in the type of locomotive and that sort of thing.

CHAIR—You talk a lot in your submission about the effect on families. Do you have fatigue management courses in Queensland Rail for their drivers, for example?

Mr Sorensen—Queensland Rail—from the research that has been done with the sleep research centre—has just recently, in the last 12 months, introduced a fatigue management awareness program. That essentially is the type of thing that you are talking about—advising what they should be doing at home.

CHAIR—Do you do that in seminar form or through booklets? What is the method of training?

Mr Sorensen—They actually rostered crews to attend—four hours.

CHAIR—It is actually part of your work day if you go to a rostered seminar?

Mr Sorensen—Yes.

CHAIR—Are the spouses taken to those?

Mr Sorensen—It was promoted to bring spouses.

CHAIR—That was optional, was it?

Mr Sorensen—It was optional, but it was promoted that way.

CHAIR—Did many bring them?

Mr Sorensen—No, not a great deal.

CHAIR—Half, a quarter, a third?

Mr Sorensen—Probably a quarter or less.

CHAIR—You also say that you have serious concerns about the adoption of fatigue management programs that do not consider the employee's needs when developing rosters.

Mr Sorensen—If I could just—

CHAIR—I know what you are saying. If there is a demand for more trains and you happen to be in a tight corner and you are on the route for which you are approved, you are going to cop a bit more work.

Mr Sorensen—Exactly.

CHAIR—But notwithstanding that, is there an effort to get you so many 11-hour shifts a week and then have so many days off? This happens some months of the year. I live in an area that has a lot of shiftwork. In the cane season, for example, the whole place is upside down. My own wife was a sugar chemist, so I know how disrupting shifts can be. But there is also six months a year when that does not happen, and I imagine there are months in the railways where you do not have extra trains and so on to any great extent. What is a typical roster in those circumstances?

Mr Sorensen—In the peak of your seasonal depots, you really would only know 48 hours in advance what your next jobs will be. I should clarify that all the rosters that we have in Queensland are drawn up in conjunction with the workplace representatives from that depot and Queensland Rail roster officers. We try to give some semblance of control of the roster back to the depot that has to work the roster. I say we try to do that; I do not say we achieve it.

CHAIR—Is that the union in that depot or is it the union and QR management in that depot?

Mr Sorensen—Our rosters are actually done—say, from Townsville through to Mount Isa, our rosters are done by a person in Townsville. The workplace rep from Cloncurry would meet with the roster officer from Townsville to discuss how to best set up a roster for the Cloncurry depot. As I said, when it is busy, you really cannot rely on the master roster, which is the guide that hangs on the wall telling you which trains you should be working. You cannot rely on that as being the gospel because it just will not happen. There are too many things that can impact on a roster like illness, extra train services—all those sorts of things that will mean that you might just get your bare minimum off when you might have been planning to have 22 hours off. That is a fairly regular occurrence. What we have been trying to promote in the quiet times of the year is—we believe that is the time when we should be using roster training time to put education about fatigue management—

CHAIR—Were you in here this morning by any chance?

Mr Sorensen—No, I missed it.

CHAIR—There was evidence given this morning by an aviation engineer that a typical roster for them is two 12-hour day shifts and two 12-hour night shifts and then four days off. They found some difficulties with that. You do not even have that sort of certainty?

Mr Sorensen—No. In actual fact, it would not be unusual for a driver in a freight depot who works a two-driver operation—extended shiftworking—to possibly be rostered to work five or six 11-hour shifts in a row.

CHAIR—Five or six 11-hour shifts? Someone could do 66 hours in what? Six days?

Mr Sorensen—I was just talking to a driver from one of our northern depots. They worked from Cairns to Townsville—approximately a 10-hour shift. They have about 11 hours off. They sign on at 10 p.m., so they are in Townsville about 8 a.m. in the morning. They would have the required time off—it might be 10 hours—and they would be back on at, say, 4 p.m. or 5 p.m. in the afternoon, which would get them back up to Cairns at about two in the morning. Then they could be back on to do exactly that same job the next night and be on again the next night. It is not unusual to—

CHAIR—Do you discuss that sort of roster with QR? Are they moving to eliminate that sort of rostering?

Mr Sorensen—Certainly. One of the significant problems we are having is driver training. A large number of our depots are understaffed. Because of the change—

CHAIR—But aren't you considered the leaders in Australia? Haven't you got simulators and the like?

Mr Sorensen—We do.

CHAIR—Especially in Rockhampton?

Mr Sorensen—We have simulators and those sorts of things, but we do not have enough of what we term tutor drivers, who are the people who train our trainees. At the moment in a place like Cairns we have 13 trainee drivers and four tutor drivers. You can imagine that it takes approximately—from the studies we have done—four months to train a person from the time he walks in the depot to the time he signs off as a driver. If you work that out, for four drivers and 13 trainees to get through—and that is in the very best scenario where you can keep the two of them together—it is a long, slow process to upskill people to fill up our depots.

CHAIR—In your two-driver crews, is sleeping or catnapping allowed or is it encouraged? What is the system, and what facilities are on the cabins of those trains?

Mr Sorensen—I listened to some of the comments from the previous people from the airlines about facilities and those sorts of things. Disappointingly, we certainly have not got the facilities that they have. Part of the two-driver negotiated outcome again was that we got our locomotive camps enhanced with new seating, a refrigerator, airconditioning—and the airconditioning is not mandatory; it does not have to be working for the train to go—a tray table, a few simple things again that were part of the negotiated outcome rather than anything else. There are no facilities on the locomotive for—

CHAIR—You cannot lie down at all?

Mr Sorensen—The seats are reclining seats, but they certainly do not make a bed, no. One of the things that the committee should be aware of when we talk about fatigue is that some of the locomotives—not only here in Queensland, but right across Australia—that the

drivers use for extended shiftworking are 20 and 30 years old. The Queensland Rail locomotives, apart from the latest versions, were built back in the seventies. We are rebuilding those locomotives, but even after rebuilding, we are only 0.5 of a decibel below the workplace health and safety standard. The driver is subjected to 84.5 decibels of noise in a locomotive—on a locomotive that has cost almost \$1 million to rebuild. They are significant things. People can say that 11-hour shifts are okay or the eight-hour shifts are fine, but until you start looking at the environment that the person who is working that shift is also being subjected to—

CHAIR—Is noise considered a dimension of fatigue?

Mr Sorensen—Our organisation certainly considers it as a significant dimension of fatigue.

CHAIR—Is QR cooperating with you in respect of work with Professor Dawson?

Mr Sorensen—Yes, they have been cooperating. There have been some concerns raised by our organisation about how the outcomes from the sleep research centre will be adopted. Those concerns really revolved around the ability for an organisation like Queensland Rail to start using risk assessment as a tool to put rosters together. Our concern as an employee organisation is that risk assessments are fine to say that you can do, as you said, three eights and three 11s or whatever, but at the end of the day if I come home and my wife also has a job and I have just finished an all-night shift and my son is sick, I do not go to bed and get my fatigue recovery time; I will be sitting there looking after one of my children or performing my community service if I am in one of the community service organisations.

CHAIR—To the extent that fatigue management has been implemented so far, have you noticed appreciable benefits from that? Has it lowered your fatigue level? You talked about these initiatives of enhancing the depots, but are there other areas where fatigue management has been implemented to the betterment of crews? We have heard the downside of all of this; are there any upsides? QR is considered at the cutting edge of a lot of these things, so are there upsides as well?

Mr Sorensen—I suppose the upside is that we have all the information. It is a matter of us demonstrating that all this information and all this research and all these things we have done should be put in place. I think that is the part that is just missing out of the equation at the moment.

CHAIR—Tying the theory back to practice?

Mr Sorensen—Yes. It is fine to have all the papers telling us what is good and bad for us, but until someone bites the bullet and does it—

Mr GIBBONS—Your union is very active in raising awareness of fatigue. Do you know if there are other unions doing the same thing? For example, does the ACTU have a campaign or is it planning to have a campaign?

Mr Sorensen—The ACTU have started a campaign of raising awareness of excessive overtime, extended shiftworking. In actual fact, the ACTU nationally has recently released to its affiliated unions interim guidelines on extended hours shiftwork and the sorts of things that we should be considering in developing rosters and in negotiations with employers for outcomes. So, yes, there are some things happening there.

CHAIR—Just another interesting aspect, being a union official, you would have a fair idea of what is going on in the other states. How does Queensland measure up in terms of tackling this problem? Would Queensland be considered to be ahead, behind, showing a bit of initiative? Are these better quality depots that you are talking about universal in Australia now or are they a Queensland phenomenon? Can you just give us a bit of a feel for what is happening in the other states—anecdotally. You probably do not know—

Mr Sorensen—One of the things—in 1996 we negotiated our train crew agreement, which gave Queensland Rail a significant number of reforms in the train crewing area. But prior to that being negotiated, we actually went to every rail system in Australasia, from Transrail in New Zealand up to Robe River in the Pilbara. You are quite right, Queensland Rail is probably right up there at the cutting edge of looking at fatigue management and looking after train crew fatigue, providing the right types of accommodation for us to stay in.

As I said, I think we need to take that bigger step, which is to implement a lot of the things that are coming out of the sleep research centre. There are some things in there that I think we all are aware of but might cost a few dollars to do. But, yes, I would have to agree that Queensland Rail is up there at the cutting edge. We do have contact with other organisations like the Brotherhood of Locomotive Engineers in America. They are really only up to a stage where we were with Queensland Rail three or four years ago. We are doing quite well in Queensland, yes.

Mr MOSSFIELD—I might just ask for comment. I think it is in your submission that you say that since 1995 train crews have been working longer hours through customer based rosters with less staff and greater workloads. You have got increased productivity, but you are not getting a corresponding increase in the work force. What is your union doing to overcome that?

Mr Sorensen—One of the outcomes that we hoped for from our 1996 agreement—where we went to an annualised salary—was to do away with the chasing of the overtime, the weekend penalty rates and all those sorts of things, but that did not occur. Because of the shortage of staff, it just meant that the overtime is now paid at a higher rate. So our crews are definitely working longer and harder. But what it comes down to—as highlighted before by the chairman—is that, in regard to seasonal depots, during a seasonal time we are required to do 320 hours in eight weeks, 40 hours per week on average, and it is quite possible in seasonal depots for drivers to be doing 420, 500 hours.

Mr St CLAIR—What is the rough annual salary of a train driver?

Mr Sorensen—The driver's base rate, without any allowances, is \$39,000 or thereabouts.

Mr St CLAIR—And the average in a year?

Mr Sorensen—Probably around \$50,000, \$52,000, somewhere around there.

CHAIR—You are paid overtime from how many hours? From eight hours onwards?

Mr Sorensen—No. We have a work cycle of 320 hours in an eight-week period, and until we get to 320 hours there is no overtime payment. If you come in on your leisure period, there is a 50 per cent penalty applied. That is really the only penalty that you can get until you actually get over 320 hours.

CHAIR—Mr Sorensen, thank you very much. This committee has a bit of a soft spot for QR—not necessarily for management or staff but for QR overall—because they have been great participants in any work that this committee has done at any level. Our last inquiry was all about rail, and they were most helpful. They demonstrated the tilt rail to us and various things. You have only added to the respect we hold for the organisation. I do not think there is any additional information that we were seeking. You will receive a copy of the *Hansard* draft. If you want to look up any of your evidence in the meantime, in a few days it will be on the parliamentary web site. Once again, I thank you for your attendance.

Mr Sorensen—Thank you.

Resolved (on motion by **Mr Hardgrave**, seconded by **Mr Gibbons**):

That this committee authorises the broadcast of this public hearing and the publication of the proof transcript of the evidence given before it at public hearing this day.

CHAIR—On behalf of the committee, I would like to thank all witnesses who have given evidence today and all members of the public gallery.

Committee adjourned at 4.48 p.m.

