



Transport Committee

Oral evidence: Offshore helicopter safety, HC 992 Monday 27 January 2014

Ordered by the House of Commons to be published on 27 January 2014.

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Members present: Mrs Louise Ellman (Chair), Karen Lumley, Chloe Smith and Martin Vickers

Questions 1-89

Witnesses: **Luke Farajallah**, Managing Director, Bond Offshore Helicopters, **Duncan Trapp**, Vice President, Safety and Quality, CHC Helicopter, **Mike Imlach**, Director, Bristow Helicopters, **Steve Todd**, National Secretary, RMT, **Captain Colin Milne**, Chairman, British Airline Pilots' Association Helicopter Affairs Committee, and **John Taylor**, Officer, Unite the Nation, gave evidence

Q1 Chair: Good afternoon, and welcome to the Transport Select Committee. We have decided to bring our Committee here to Aberdeen today so that we can learn at first hand about helicopter operations, as well as carry out our inquiry and speak to our witnesses. Indeed, we have been learning a lot this morning during the time that we have been here.

I would like to ask the witnesses, please, if each of you could give us your name and your organisation. I would like to declare that I am a member of Unite. Let's start at the end, please. Could we have your name and the organisation?

Luke Farajallah: Yes, good afternoon. My name is Luke Farajallah. I am the Managing Director of Offshore Helicopters, which is part of the Avincis Mission Services Group.

Duncan Trapp: Chair, good afternoon. I am Duncan Trapp. I am Vice President of Safety and Quality for CHC Helicopter.

Mike Imlach: Chair, good afternoon. Mike Imlach and I am the Managing Director of Bristow Helicopters.

Steve Todd: My name is Steve Todd, National Secretary, RMT.

Colin Milne: I am Colin Milne. I am the Chairman of the BALPA Helicopter Affairs Committee.

John Taylor: John Taylor, Regional and Industrial Organiser, Unite.

Q2 Chair: Thank you very much. No doubt you have read the latest bulletin that has been published by the Air Accidents Investigation Bureau on the Sumburgh crash. That states that the pre-

flight safety briefing was flawed in relation to information on the emergency breathing system used on the flight. It appears that the briefing on the safety on the flight did not correspond to the helicopters that were being used. Do you think this is evidence of complacency in relation to the operating safety procedures? Who would like to start on that?

Duncan Trapp: I would like to perhaps change the wording of the AAIB bulletin, which certainly highlighted an area for improvement, but I do not think to describe the safety briefing as flawed accurately captures what we put in place. As the Committee saw this morning, there is a comprehensive safety brief for all passengers going offshore. The bulletin rightly identified an area where improvement and clarification could be provided on that particular piece of safety equipment. That is the recommendation that they have made and that is the recommendation that I know all of the operators are—

Q3 Chair: Yes, but Mr Trapp, what I am asking you is if what happened was evidence of complacency. I do understand that changes are being made, but do not you think what happened did show complacency?

Duncan Trapp: I would not agree with the term “complacency”, no. I believe there was a comprehensive briefing in place and the recommendation to further enhance that has been made and adopted by all of the operators in question.

Q4 Chair: Who is responsible for the content of the briefings and making sure that the correct briefing is given for the specific flight involved?

Duncan Trapp: The operators work together with the CAA on the content of the briefing package. As was discussed this morning on your familiarisation trip, the briefing used to be somewhat longer and it was curtailed and then shortened to define the key safety aspects. That was approved by the regulatory authorities some years ago.

Q5 Chair: Yes, but I am talking about the application of the approved briefing to the specific flight involved. Does anyone else on the panel want to give me a view? I am just wondering if this particular incident does highlight complacency.

John Taylor: I think it is quite clear that this is part of the problem that we face, that when things that went wrong are discovered there seems to be an argument to say that it was no one’s fault, it must be complacency, and for those people who were involved in drawing that up a mistake has been made. This was a very important piece of equipment that was brought in to help save lives. If that has been taught well, then there is a fundamental problem and we need to deal with that and it should have been dealt with before it was identified.

Q6 Chair: Do you think that this was just a single incident or do you think it is perhaps representative of a general lack of attention to detail or a general complacency or it is just a one-off that happened?

John Taylor: I think that part of the problem is that the industry regulates itself in some areas. I sat on the first inquiry into the first helicopter crash and I now sit in this one. Some of the things that were given as recommendations from the internal committee that we sat on, some of the things that were given as recommendations previously, have not been enforced with the industry. That is a mistake and it is down to weak regulation.

Q7 Chair: Are there any examples of problems you have encountered in relation to workers knowing about survival procedures and the use of equipment? Is there any general problem?

Luke Farajallah: Madam Chair, good afternoon. We are not aware of any general problems. I would also go as far as to say that I believe the procedures that are in place are extremely comprehensive. I think it would be very difficult to question the length and detail that we do go through in terms of training in actual scenarios, which then leads on to the daily briefing that takes place before every single flight. I think, as you have seen this morning, this far exceeds anything that we may have seen perhaps in the civilian or fixed-wing world. For me, the amount of information that is passed to the individual I believe is coherent, I believe it is relevant and I believe it does in fact aid the survivability of any accident.

Q8 Chair: Does anybody else want to comment on that? Is there a general problem?

John Taylor: I think the issue that has been raised time and time again by the offshore workforce is the ability to escape from a helicopter, and it is a general problem; that is the main concern our members have, about getting out of a helicopter if there is a crash or a controlled ditching.

Q9 Chair: Have you or others made representations on that issue? Would anyone like to comment on that?

John Taylor: I think it has been discussed within the industry for a number of years in connection with escape from a helicopter; the same has been discussed within the industry for a number of years about the use of Dacon scoops when that is the main ability to rescue people. To be honest, there is no facility for the workforce representatives to have discussions with the regulator, unlike the facility that is shared with the Health and Safety Executive.

Q10 Karen Lumley: Just on that point, Chair, Mr Taylor, do you think perhaps that the training that people who work on platforms get is enough? I am referring to when they learn how to get out of a helicopter. Do you think it is strong enough and robust enough for them?

John Taylor: If you are talking about a controlled landing, then in the main, yes, the training is good enough. However, it is very difficult to train for what is an uncontrolled landing and a ditching. The ability to survive and get out will be based on how far the helicopter is coming down from. So I think it is a difficulty. What it has identified is that there are some questions that we need to look at in the sense that only one or two people remembered that there was an air pocket at the top. We need to look at the issue about the rebreathers, how they are used and whether or not those rebreathers are the ones that they should be using and are fit for purpose.

Q11 Miss Smith: Thank you very much for that answer, Mr Taylor. Can I take it up from there and ask you a bit more about the research that I understand Unite did on what actions the workers ought to be taking to improve safety? Can you talk us through some of the top results there? I can see 95% of workers supported the creation of a larger offshore fleet. Can you talk us through why that would be important and what would need to be done to do it?

John Taylor: One of the concerns of our membership is the fact that, if something goes wrong with a helicopter, there is no replacement with spare helicopters to take up that slack. That means that to get that helicopter back in the air they are looking for spare parts, all that sort of thing. So our members are quite clear that if you have spare capacity, then those helicopters that need repair can be put to the side and you have that spare capacity to get people back and forwards offshore.

Colin Milne: Could I perhaps expand on that point a little from a pilot's point of view? In terms of spare capacity, it is very important to have a diversified fleet as well as redundancy within each individual fleet. For example, nearly two years ago we had the grounding of the Eurocopter EC225 fleet, which was becoming very much the predominant aircraft on the UK North Sea. The grounding of that aircraft caused an immense problem in terms of availability of aircraft. By

contrast, in the Norwegian sector where, although the 225 perhaps was not predominant, there was plenty of spare capacity. My understanding is that not a single flight was lost by the Norwegian clients because they had invested in sufficient spare capacity to cope, not only with weather delays—because clearly in the North Sea there are quite often severe weather and fog delays and you have to have catch-up capacity—but they also had the ability to cope with grounding of half of the fleet.

That is something we see on the other side of the median line, but the spare capacity on this side is very tight. From a pilot's point of view, what that does is it puts a lot of pressure on us to do those catch-ups or to cope with a grounding by retraining and flying right up to our maximum duty hours available to cope with all that, and a bit of slack would be a good thing.

Luke Farajallah: Miss Smith, if I may, I think I would like to challenge this notion that somehow a larger fleet brings further and enhanced safety measures or some form of redundancy. In fact, I would go as far as to say I think that is quite counter-intuitive to exactly what we are trying to achieve here, which is an organisation and a culture that is passionately driven by safety and has a number of mechanisms in place to avoid commercial pressure translating from any part of the operation into the mind of the pilot who is about to fly. By definition, a larger fleet means redundant aircraft. Redundant aircraft therefore adds an additional financial burden to any business and simply by having additional aircraft, each of which is a multi-million pound or dollar investment, does not therefore mean we have a safer organisation or a safer fleet.

What is most important is that we are passionate as an organisation for ensuring there are plenty of mechanisms in place to prevent that commercial pressure from translating into any form of pressure to any pilot who is about to fly. I would resist that and I would encourage every employee of the organisation I work for—as I am sure my colleagues would—to ensure that we deliver on our primary function, which is to deliver safe departures at any expense, and not to just provide a larger fleet, because that is completely against what I would consider to be a sensible route towards building a safety contingency.

We also have the joint operations working group, which is looking at exactly these types of measures to ensure that we are much more consistent as operators as far as things like contingency and redundancy are concerned, but more important than anything else is to avoid commercial pressure reaching the pilot at any stage of the process.

Q12 Miss Smith: Have you experience of that happening?

Luke Farajallah: We have many experiences of ensuring that filters are in place to keep the commercial pressure away from the pilots, many, many filters indeed. We have many reporting mechanisms. We ensure that our contractual relationships do not lend themselves to any commercial pressure and we ensure that all of our people, whether it is through face-to-face briefings or through written documentation, training or cultural acceptance, they understand very clearly they are under no pressure to take any flight at any time.

Duncan Trapp: Could I add a couple of words on the spare aircraft? Just to clarify that there are spare aircraft there, there are spare aircraft allocated every day, spare crews fully trained and fully available to fall back as redundancy aircraft, so if one aircraft goes technically unserviceable, there is a spare aircraft ready and waiting in the vast majority of occasions, so that pressure is reduced.

On the training side, just to clarify, the bulletin and the safety brief that you all experienced this morning prior to your flight is only one element of the training and the far more detailed, comprehensive training takes place at the Underwater Escape Training Facility, which is co-located in Aberdeen and other offshore bases.

Mike Imlach: Miss Smith, if I could just qualify the comments on Norway. In our experience, we find that the aircraft in Norway fly a lot more hours than the equivalent flights in Aberdeen and in the United Kingdom. That is partly due to the longer opening hours of the airport. Over here, we have a hard-line stop at 10.30, which can put pressure on flights to get back in time. Whereas, in Norway, they can operate longer than that. In our case—and I am sure my colleague can substantiate that—our aircraft do around about another 50 hours per month more than the equivalent aircraft here in the United Kingdom.

Q13 Miss Smith: I would like to come back on one aspect of the training. Mr Milne might have a starting view on this. If you were to expand the fleet, it seems to me you might also want to expand the pool of pilots as well. Are there pressures within the industry to source sufficient pilots with the right skills and capability that you are looking for, and then indeed to add training on top of that?

Colin Milne: There has been a very substantial recruitment programme over the last couple of years. The traditional sources of supply—that is the Armed Forces—have pretty well dried up these days. Although clearly, when the civilianisation of Search and Rescue comes in, there are guaranteed places for quite a large proportion of the military pilots currently undertaking that.

I work as a line training captain and, therefore, I do the operational training of the crews, as opposed to their conversion on to type, and I can tell you the last year has been pretty full on. We had to retrain people from their previous aircraft on to the temporary replacement aircraft and we have also had to train, ab initio, pilots coming into the industry. The last year has been a continuous stream of training, for reasons outwith the ability of the management of the various companies to control, clearly, because of force majeure. Yes, there are training pipeline issues, especially when there is a huge investment in the offshore industry and a huge ramp-up in the short term of the demand for our services. The training pipeline tends to constrain the speed at which you can absorb new pilots into the industry, and that causes backlogs and a lot of demand on the people who have to deliver that training.

Mike Imlach: Yes, I think Mr Milne is quite correct. There has been a tremendous amount of training done in the last 15 months. My organisation has put through something like 80 pilots in that period. However, none of the operators are going to take pilots and put them through quickly just to be revenue-generating. They are going to do that to an acceptable standard that meets the CAA regulations and our internal regulations as well, and we are quite ruthless in doing that. Our selection process, we reject over 80% of applicants we receive. Yes, that puts some restriction on the pipeline, but it is done for a very good reason. The reason is purely for safety for our operations and for our passengers as well.

Luke Farajallah: Miss Smith, perhaps a statistic that will help this conversation. The average pilot cannot legally fly beyond 800 hours in a year. It is rare to find a pilot who flies more than 550 to 600 hours in a year. Were it to be the case that there was undue pressure within the system of pilot training, recruitment and so on, I would expect that to be much closer to the legal maximum. As it is, there is a very large redundancy that is available on each pilot flying line. I am sure that is represented across all of the operator groups. That for me is indicative of completely the opposite situation that we are trying to describe here, which is a lowering of the pressure in that organisation. There is never a point in time where we compromise on a pilot's training, whether it is a first officer or the captain's training.

Q14 Chair: Mr Milne, what is your view of that?

Colin Milne: When you look at average pilot flying hours in the year, you can get rather a different picture. Certainly in the last year there have been plenty of pilots who have been butting up against

the 800-hour total and the lower shorter-term limits as well. Some pilots have administrative functions in training, back-up and so on, but the pressure in the last year or so has been quite intense, particularly on the Sikorsky S-92 fleet, which had to bear the burden of the role, and a lot of the S-92 pilots have been right up close to the limit. I can tell you from personal experience, those limits, which are scientifically chosen a few decades ago, are there for very good reasons and, having flown to each one of the limits over the course of my career in the last few years, they are there for a very good reason, because they are there to prevent you being fatigued and not being able to do your job properly. That would be my view on that particular point.

Q15 Chair: Who is putting the pressure on?

Colin Milne: I do not think anybody is deliberately putting the pressure on. As I say, we have been in an unusual scenario recently, but the limits are there, justifiably. If the job needs to be done, as long as the limits are not exceeded, it should be safe and is safe. As a rule, the pressure has generally been through force of circumstances. When rosters are designed, they tend to be designed so that they are inside the limit so that you are not planning to get too close to them. For instance, you would make a roster targeting to achieve, say, about 700 hours a year, which would give you flexibility if you run into a sickness situation where you lose a lot of pilots or some where you do not have qualified pilots, because an aircraft has been grounded. There are extreme pressures, which you should plan a contingency for, but you cannot control when those pressures can come on.

Q16 Chair: If individual pilots felt concerned about the pressures they were under, would they feel able to make any representations or complaints or would they be too concerned about their own position to do that?

Colin Milne: I think that professional ethics demand that a pilot absolutely ensures that every flight is a safe flight. If he or she feels that they are unable to ensure the safety of that flight, if they, for instance, have a personal issue, they absolutely must bring that to attention and decline taking the flight.

Q17 Chair: But do they?

Colin Milne: I personally have done on a few occasions over the years, but I guess it depends on the circumstances they find themselves in. I would not wish to name the company I worked for, but I have never felt that pressure and I do not think anybody in the company I work for has. I cannot say right across the industry.

Q18 Chair: Mr Imlach, do you want to comment on this issue?

Mike Imlach: Yes please, Madam Chair. At the end, the crew and the command have the final say on that point. As management, we would never override that decision. If they felt it was unsafe within a mission they would abort that mission and return to base or not take off. I think that is across the organisations with my colleagues on the right here as well. Safety is paramount. We are not going to put ourselves, our personnel or our passengers in a situation that is unsafe.

Q19 Chair: How many times has concern been expressed? In fact, is there a system for recording that?

Mike Imlach: Chair, yes, there is a system. The unions—BALPA especially—are very strong on that. If they have concerns, they will raise those through the various committees they have to us.

There is a very good system with the offshore personnel through the various UK safety groups, helicopter steering groups, and also we have the CAA oversight as well. If there are concerns that are raised, then they are taken seriously and looked at, and if there is any requirements to do for safety enhancement, whether to the procedures that you have seen this morning or modification to the aircraft or whatever, that will be done.

Q20 Chair: How often has this happened?

Mike Imlach: I would say we get it fed through our organisations on a fairly regular basis.

Q21 Chair: Mention was made before of commercial pressures. Mr Imlach, could you tell us the nature of commercial pressures that operators might be subject to?

Mike Imlach: I guess it would be good to qualify commercial pressures as commercial pressures from the oil and gas companies towards us. We are in a commercial environment, all the three companies here are in a commercial environment, and of course we are in a commercial situation where contracts are awarded. Whether that is on price or safety, I think that is something you need to ask of the procurement departments of the various oil and gas companies. I can honestly say we have never been under commercial pressure where we have felt it is unsafe to continue a flight. If I do not have the full parameters of safety in crews and aircraft, we will not fly, irrespective of the commercial pressure we may receive from a client.

Q22 Chair: Mr Farajallah, could you tell us the nature of commercial pressures that you might be subject to? Even if you resist such pressures, what do they consist of?

Luke Farajallah: The answer to the question is that this is clearly a commercial environment. We run a business, we are in the business of making money from commercial activity—I think that is all understood—like any other business. I think it starts with a contract. We simply would not sign a contract that indicated in any way towards us that we would have to compromise our principles towards safety. Therefore, at the very first juncture, we would avoid the possible invitation of commercial pressure arriving on our doorstep. As we go through the life term of the contract, there is constant measurement and reassurance put in place. We have a number of reporting mechanisms to ensure that we simply avoid commercial pressure from being one of the outputs from that contractual situation. We would simply walk away from that if it meant compromising on our safety values. It is a fundamental thing that we are here to deliver, which is an inherently safe organisation and flight operation.

Q23 Karen Lumley: I am slightly confused from this morning's visit as to when a new aircraft or a new helicopter comes on stream, whose job it is to train those pilots in the use of that particular helicopter. Is it the people who build the helicopter or is it you?

Luke Farajallah: Certainly, in our situation, the training is conducted by us. We have what we call a type-rated training organisation. That is a licence that we own because of the qualification that we have among the experienced pilots that we have. So we use a mixture of IKO standard simulators—the world-class simulators around the world—to train pilots in a simulated environment. We also do a lot of line training on real helicopters with our own instructors, so it is a mixture. But it is not the manufacturer who trains pilots; it is the companies that operate the helicopters once they have been purchased.

Colin Milne: I would add to that that, if a helicopter company is the lead customer for a new type, generally speaking it is the manufacturer that provides the initial training. For instance, the Eurocopter 225, when it was first introduced—it is effectively the Mark III Super Puma—all the crews of the company I work for, which was the lead customer, went to Marignane in France to the premises of Eurocopter to receive their initial training by the design team, who intimately knew the aircraft and, in particular, intimately knew the fantastically upgraded autopilot systems in it, as well as the remainder of its upgraded equipment. From then on—and clearly a high proportion of the initial 42 pilots who went to do that were themselves trained captains—they take the training they have received and deliver it to the remaining pilots under the type-rating training organisation that Mr Farajallah referred to.

Q24 Karen Lumley: Mr Milne, would you say that the crash that happened last year was not in any way due to pilot error, and that they did not know how to use the autopilot on that helicopter?

Colin Milne: You are referring to the Sumburgh crash. That helicopter was the Mark II Super Puma, which I believe has been around since 1996, and had been in service for many years. That was not a new helicopter and, given its time in service, I think it would be reasonable to expect that there were no new developments in it. But clearly, given that it is currently under an Air Accident Investigation Branch investigation, it would be inappropriate to comment until we know what happened.

Q25 Karen Lumley: One last question from me. How long would a helicopter pilot's career last for, on average? Is there an average time?

Colin Milne: Potentially 30 to 35 years and indeed perhaps even as much as 40 now that age equality legislation has taken us up to 65. Previously helicopter companies used to sponsor new pilots. It is a pretty aspirational career, as you can imagine, and with relatively easy money a few years ago. A large number of people do undertake pilot training at the cost to them or their loan providers in excess of £100,000, and that is a pretty high hurdle. The situation we are finding now, with the reduction in easy loans becoming available, is that either the banker mum and dad pay or the companies are going to have to start sponsoring again. The problem with the banker mum and dad paying is that then the breadth of availability and breadth of talent out there in the general public is reduced because it becomes only available to those with the financial means to support it.

Q26 Martin Vickers: Mr Farajallah, if I understand it, I think in your last reply you said you would not take on a contract where the commercial pressures would compromise safety. But earlier, if I understood you, in respect of pilots, you said you would protect pilots from commercial pressures. So what are you protecting them from if you would not enter the contract in the first place?

Luke Farajallah: I suppose I can imagine a scenario where a contract, however strong it may be at the signature stage, on an operational day where there are operational pressures and, where there is a potential for there to be a question mark about whether a pilot should or should not take a flight, that is an operational issue. Those are the situations that we put a lot of measures and filters in place to ensure that piece does get filtered down to the pilot on the day.

In terms of a contract, at the start of a contractual relationship we always ensure that it is sufficiently robust to avoid commercial pressures being inherent in the contract itself. In other words, it would ensure that we would be able to deliver aircraft safety in the organisation well within the parameters of the contract; otherwise we would simply not sign that contract. But on a day like today—where the weather is terrible and there are plenty of offshore installations that have not had flights for a very long time—are we putting any pressure on our pilots to fly in weather that

is perhaps out of limits or in areas that they prefer not to go when it starts to become marginal? The answer is: absolutely not, and that that could happen regardless of the type of contract that you signed.

Q27 Martin Vickers: Could I ask, Mr Milne, and the union representative, if similarly you have any experience of any of your members being put under commercial pressure?

Colin Milne: I think the best example that I can probably give, Mr Vickers, is that the weather is a key component of what we do and we all have operations manuals with the parameters that we must follow. But there is such a complex relationship and number of options that we will get one or two pilots with slightly different interpretations of the parameters and whether they can or cannot do the task.

The other thing is that once one has been doing the job for a number of decades, occasionally one will say, “I do not think I am going to do this flight today. It is strictly just legal but I do not have a good feel about it”. That is something where, if one is of my sort of vintage, one has the self-confidence to say, “No, I am not going to take it today. Although at the moment it is okay, I do not like the way it is stacking up”. Then perhaps what you get is perhaps one of the other operators launching their flight and the mood and the culture of the organisation that you are in is saying, “No, do not like the look of this today. We are not going to go.” That is when the client starts saying, “Well, they are launching, why aren’t you?” That is the way that commercial pressures can come to bear, and inevitably one has to be able to justify one’s decision not to go. So it does ultimately impinge, but as an aircraft commander you have to have the self-confidence that you are going to stand by your judgment and do the safe thing, which is not to take the flight if you have any doubts.

Q28 Chair: Mr Trapp?

Duncan Trapp: Yes, I would just like to echo the final statement that, if there is any doubt, the commander of the aircraft has the ultimate say. The nearest flight ops management—all of whom are either current or recent pilots themselves, so they understand the operational environment—are the buffer between the commercial team and the pilot workforce.

It is also worth pointing out on the weather front, which does play a large part in the North Sea, the very large amount of investment that is ongoing or has been taking place in the last few years by oil and gas customers and Oil & Gas UK to improve the quality and the timeliness of the offshore weather reporting, which better informs that decision-making process. But certainly at the end of the day, if the commander says it does not go, it does not go. There is a reporting system that if there is any pressure, perceived or otherwise, then that can be reported back through the safety reporting manager system of all of the operators and that will be dealt with appropriately.

Q29 Chair: Mr Farajallah?

Luke Farajallah: I would also say that it is not just the pilots who have the ability to decline a flight. There is a very strong raised-hand culture among all of the operators—and I am thinking now more about engineers who may feel uncomfortable about certifying an aircraft ready for flight—and huge encouragement for everybody in the company to come forward with their hand raised and simply say, “I am not happy” and our culture embraces that. We have an absolutely clear-cut policy that is written down, signed by myself, and it is endemic in our organisation to encourage people to come forward without fear of recrimination if they feel uncomfortable about releasing an aircraft pilot, engineer or anybody else.

Q30 Chair: Mr Taylor, I think you were indicating that you would like to say something?

John Taylor: I have been a union official for 25 years and there are certain things that are common throughout employment. I have never met an employer that has never made a profit, and I have never met an employer who says they have ever asked anybody to work unsafe. There is a vast difference between signing a contract that you know is unsafe and signing a contract where there is very little, things are tight on the margins, and you sign those contracts—and I am not a representative of the capitalist system—but you sign those contracts either to gain business or to make a profit. Everybody says, “You can refuse to do the job”. As trade union officials, we represent people who have refused to do the job and then they are suddenly dismissed. There is a system offshore.

This helicopter crash was the biggest incident that I have ever seen that has involved the offshore workforce. We received hundreds—as unions, not just Unite but as unions—of emails. Every one of those emails that we received in our office said, “Can you make sure that my name is not mentioned?” and that was from safety reps. There is still an environment offshore where people have concerns about raising safety issues. I do not represent pilots, so I do not know if it goes that far, but I represent a whole wide range of individuals. This is an issue offshore and it is a concern offshore.

I was told once that when you tender for a job, you go into a small room, with a small person on a small table, and he asks you your safety policy. You go next door to a big room, you are a big person with a big table and he asks you how much it is going to cost. So safety is an issue. Whether it is the biggest issue offshore—the argument is: do you get the oil out safely or safely get the oil out? What is the first bit? Is it the safety or the contract? I believe commercial pressure is operating within the industry and there are operators from other parts outwith the UK that are coming into the industry that do not have the same structure that we have, so what we are looking for from this Committee is to take that up.

Q31 Chair: Mr Todd, in your written evidence you have expressed concern about the standards of British companies, apart from Bristow, compared with Norway. Could you tell us more about that?

Steve Todd: What we have said is that we believe there are commercial pressures although people say that there are not. We cannot prove it categorically, but as we have said in our submission, a public inquiry or judicial review looking into every aspect of the operation might tell us differently, and that is why we have called for that public inquiry and the review.

Q32 Chair: Mr Trapp?

Duncan Trapp: Yes, I fully respect Mr Taylor’s view and knowledge on the offshore industry, but the question asked of the operators was, are the crews allowed to make the decision to fly? The absolute categorical answer is, yes, they can make that decision. They do make that decision, and when they do, they are fully supported by all the management and flight ops team of all of the helicopter operators. So the picture painted for offshore may well be different, but when we are talking about helicopter operators, the crew can decline any flight for whatever reason, fatigue, weather, and illness, whatever it might be. Their decision is final and it is fully supported.

Q33 Chair: Mr Todd, you have spoken about wanting to have a public inquiry or a judicial review of some sort. What could that produce that cannot be shown by the inquiry that is underway at the moment?

Steve Todd: Madam Chair, we think that would reveal a lot more about the contractual relationships between the oil and gas operators and the helicopter operators and the whole industry. As my colleague said to you before, throughout the industry we have been involved in for over 20 years, we have seen the pressures of everything and we just think that an awful lot more will come out if this is had.

Colin Milne: I would like to also widen that particular point. BALPA wishes to have an independent judicial inquiry also to look at the two aspects, one of which is that contractual relationship and the amount of control exercised by the oil companies over the offshore helicopter and public transport regime, but also the regulatory aspects and the way in which the CAA has carried out its duties. The reason why we are saying that is that there was a major fatal accident in 1992—known as the Cormorant Alpha accident—and we in recent years we have seen a repetition of the basic themes of that. The themes are aircraft operating in poor visibility, low level and also at night—a theme that was repeated in the Morecambe Bay accident in 2006, the ETAP crash in 2009 and we had a similar scenario in the Sumburgh crash last year.

These are old lessons that are being repeated and, when you look at the evidence that emerges from the Air Accident Investigation Branch, you see a very different pattern in terms of the operations manuals of the companies involved and there is reference being made to gold standards. What pilots want is that we operate a high minimum level standard, and that can only be enforced by the Civil Aviation Authority as the regulator. We do not want to be driven by the clients, although clearly they are a very key stakeholder, but we want an independent and strong, well-resourced regulator to take safety out of the equation and make it something that is not competed on. That we feel needs a judicial inquiry to look at how well-resourced the CAA is, what the experience levels of the Flight Operations Inspectorate are and to get the relationship between the CAA and EASA properly resolved, and to indeed ensure that the financing of the CAA, which I understand is under severe pressure from the Treasury, is properly resourced in a way that they can do the job, because we want to be safe in everything we do. If we are safe, the workforce will be safe as well.

Q34 Chair: Do flight managers ever cancel flights or is it always the captains?

Colin Milne: Flights will be cancelled, but primarily for weather or serviceability of aircraft. Perhaps flight managers might possibly do so for issues that as a day-to-day working pilot I would not be aware of, so I probably could not answer that question adequately.

Q35 Chair: Mr Farajallah?

Luke Farajallah: Madam Chair, flights can be cancelled by a number of different parties for a number of different reasons. The customers cancel flights; flight managers cancel flights if conditions are not sufficiently strong or not sufficiently within the limits. We have a number of different conditions and parameters to reach before a flight can be achieved. If there is simply an engineering or technical problem with an aircraft and on that particular day there is not a spare aircraft, the flight will be cancelled. It will be cancelled without penalty. It will be cancelled without further pressure and be rescheduled. It is a discussion that takes place between the operator and the customer and it will happen at a later date.

Q36 Chair: Mr Trapp?

Duncan Trapp: Yes, just to clarify the instance that Mr Milne refers to. There is no written evidence that commercial pressure was in any way or shape to blame or to contribute to any of those events. I just want to clarify that point. The level of co-operation that Mr Milne talks about is one that is shared by the operators. The Joint Operators Review, which was submitted in our written submission, clarifies that that initiative, which started last year, is now raising what was already in place—in terms of co-operation on safety and quality—to an even higher level through openness with the operations manual. So that what were traditionally proprietary manuals that belonged to individual companies are now shared openly with a view to identifying what truly is best practice across the industry, not just in the UK, but sharing with our Norwegian colleagues, sharing with our colleagues in Brazil and Australia and all the other offshore oil and gas industries. So that initiative is up and running and is taking what was already a co-operative relationship between the operators to the next level.

Q37 Miss Smith: Thank you very much indeed. At this stage, I would like to pick up on the development of the CAA regulation regime into that of the EASA. In your view—to all panel members—what are going to be the changes of that, the improvements of that and any other salient things you can think of about that shift in the regime?

Colin Milne: One of the fundamental benefits of the EASA taking control of European aviation safety is that it will harmonise rules right across Europe. That is important because, in aviation as a whole, we are seeing an internationalisation of large aviation companies operating in many different jurisdictions. For instance, in the European regime, you have small countries with small regulatory authorities with an inability to properly police and investigate, and if you have a large company that chooses to base its aircraft operators' certificates, and hence its regulatory regime, in a country that cannot adequately police it, then there will be potential inducement for a large company to go there. So harmonising the rules so that there is no way of rattling a not very well shut door is a good thing.

The problem that we are seeing in the EASA is that they are harmonising the rules to an average, so they are lifting the standards of the weaker jurisdictions but they are reducing the standards of the stronger jurisdictions, and we have just seen that in the flight-time limitations scenario, which I know your Committee has previously looked at. The outcome of that was that the European Parliament supported non-scientifically based rules, which effectively will reduce what we enjoy in the UK. The problems are that a lot of the enforcement powers of the member states' authorities are becoming more difficult to enforce, because there has been this withdrawal of power to the centre. As I mentioned previously, there are funding constraints being put more and more during these financially constrained times, and I understand the Civil Aviation Authority is losing about 120 posts imminently. So that relationship is becoming more and more difficult because the member state authorities are in fact effectively acting as a regional policeman, rather than setting up their own rules.

Funnily enough, I was in Brussels last week at the European Cockpit Association, and I will perhaps make this document available to you later. It is *Civil Aviation Legislation & Oversight: Can it guarantee safety?* It has just been published by the European Cockpit Association, and I think it will answer a whole lot of your themes and draw parallels with things like the Japanese nuclear regulation regime or the Gulf of Mexico disaster. So they are difficult areas, and it is something that I think we in the UK should ensure that our own national authority is properly resourced and properly funded, and the pressure from the Treasury to reduce its capacity even more should be resisted.

Q38 Miss Smith: Just one question for clarity on what you said there, just your point about member states acting as a regional policeman. Tell me what you mean by that.

Colin Milne: EASA will ultimately have the over-arching authority. For instance, the offshore public transport regime is done under JAR-OPS 3, the Joint Aviation Authority regulations for helicopter operations. The member state authority will then, for instance, look at the operations manuals of operators and ensure that they are JAR-OPS 3 compliant. In fact, that is exactly the point. We had one of the three main operators that were brought into the market about 10 years ago. Their ops manual was JAR-OPS 3 compliant, and yet it was not anywhere near the gold standard of those companies that had gone through the Cormorant Alpha disaster. It was only after the first accident in 2009 that we discovered that it was nowhere near the tight control, guidance and direction to crews. Yet after that accident it was suddenly, “Let us share our information and get us all up to singing off the same hymn sheet”. It should not take accidents and people dying for that to happen. The authority should be identifying and enforcing best practice right across the board. Yes, there is a lot of co-operation going on now, but that should have been regulated. We should not be learning the same harsh lessons again and again. That is what we want a strong regulator for.

Q39 Miss Smith: So it is good to be a regional policeman and they ought to do it better?

Colin Milne: Absolutely. We have the expertise. We and the Norwegians operate most of the aircraft and the most flights in the harshest regime.

Q40 Miss Smith: As you have also just mentioned a magic word, I want to get into a supplementary question on this. In your view, is it coincidence that Norway’s record appears to be much cleaner than the UK’s?

Colin Milne: Partly yes, partly no. It depends on the timescale you look at. Things that are banded around are over the last decade or so. Of course Norway had a fatal accident in 1997, a Super Puma crashed at that point. So if you take the statistics back a little bit longer and look back prior to that, Norway was inferior to the UK, so we seem to have crossed over, unfortunately. They have become better, we have become worse. After the 1997 accident, the Norwegians did a lot of soul-searching and have done a lot of improvements in their regulatory regime.

The other point about Norway is Norway has a state oil company, which is a predominant player in their oil and gas exploration and production market, and therefore the Norwegian Government has kind of two angles on it. They can—by the way the state oil company acts—set a standard that invites the international companies to live up to. So the Norwegian Government and people can push that lever as well as having a state regulator. In the UK, we no longer have a state oil company—we used to have one—so we are now totally reliant on the aviation regulator. That demands that, therefore, it must be a lot stronger than Norway’s because we do not have that other lever.

Q41 Miss Smith: Thank you very much. I would invite other members to comment on that.

Duncan Trapp: Can I just make one comment on the Norway side? For those companies—and there are at least two here—that operate both sides of the North Sea, the way that we operate and the procedures that we have, the ops manuals, the maintenance manuals, they are all aligned in terms of standardisation, so you will not see significant differences between the Norwegian operation of our company and the UK operation of our company. I would also comment on SINTEF 3, which was the third of a five-yearly report done by the authorities in Norway, that at the time of the last report in 2010 they said there was nothing to say that those accidents that had happened in the UK sector could not have happened in the Norwegian sector.

John Taylor: Of course the fact of the matter is that they did not happen in the Norwegian sector, they happened in the UK sector. We should not worry about the changes in the regulatory system

being in Europe, because we have heard today that there is no commercial pressure, there is no pressure put on pilots, there is no pressure put on anybody, we are all going to have gold standards. That is going to try to bring some convincing to the offshore workforce. The fact of the matter is the helicopters keep falling out of the sky and crashing in the UK sector. The fact of the matter is that the offshore workforce wants to find out why that is happening. If we accept what we have heard today, there is not a problem in the UK sector. There is a problem in the UK sector. We have only touched on part of it. There is a problem. Some of the concerns of the offshore workforce are about the safety equipment, are about getting out of helicopters. There are a number of issues that we need to discuss. This is not everything is rosy in the garden. This is a situation where we have a problem. We need to work together to resolve that problem. But if everybody is sitting around the table saying, "There is not a problem," then what has happened over the last 10 years? There is a problem. We need to stop trying to hide that and let's work together to try to resolve it.

Duncan Trapp: Madam Chair, just on Mr Taylor's comments. I think there is absolutely no disagreement we need to work collaboratively and collectively to further improve the standards of safety in the oil and gas UK sector, particularly in this instance in the United Kingdom. That is what we are doing. That is what we are doing through our involvement in HSSG. That is what we are doing through our support in the step change and safety initiative. That is what we are doing in support of many, many training courses that the helicopter operators are giving to offshore safety reps to let them better understand the maintenance schedules, the training for the pilots and the decision-making processes that we go through day in, day out, and all of the safety mechanisms that are there. So we are absolutely on the same page there.

In terms of the reasons for the aircraft accidents in the UK, AAIB investigations are ongoing. We should find out the 225 results very shortly. As operators we are confident that we understand the root cause of that particular accident. We have done a huge amount of work in communicating that to the offshore workforce. Are we there? Not yet. Have we stopped? No, we have not. We continue to work with the unions. We continue to work with the UK oil and gas companies to get that message out there to rebuild the confidence, which as Mr Taylor rightly says has been knocked very badly, but we are all on the same page and we are all around the same table.

Q42 Chair: We have had submissions from the operators and from BALPA saying that the different offshore customers have different requirements on the operators, both for procedures and for audit. Would anyone like to tell us a bit more about that? Mr Imlach?

Mike Imlach: Madam Chair, it is true to say that there are different requirements by different operators. In Norway—as some of my colleagues have already mentioned—there is the Norwegian Civil Aviation Authority and also Statoil has a very strong presence. We find that the requirements in Norway are quite a lot more simplified than over here. We see that in the auditing process as well, where they do one audit to ensure that the requirements of that contract are adhered to. Whereas, in the UK here we get multiple audits, which are often not to a standard but to perhaps a personal preference by that operating oil and gas company. We would definitely like to see one base standard to a high standard and one auditing authority. Obviously the Civil Aviation Authority here has the oversight and the enforceability to be able to do that.

John Taylor: We raised this issue of step change in the sense of having the gold standard—one standard that is the best standard—and we were told that some oil companies have worldwide standards. Our standard as a union is quite simple. We have a gold standard. We should have a gold standard in the UK and, if you cannot abide by that standard, then you should not be allowed to operate in UK waters.

To understand, it is not just about the height that you approach a platform, it can be about the equipment that you carry on the helicopter, the type of survival equipment. It could be about the numbers that you put in the helicopter. All that is discussed through these non-pressurised commercial

contracts. That is the difference in the standard. We would hope that one standard applied, and that if you do not apply that gold standard, then do not operate in the UK. There is not more than one Health and Safety Act that applies offshore. There is one standard. Everybody who operates in the UK must abide by that standard. Why there should be something different for flying a helicopter is beyond me.

Q43 Chair: You think that there should be one standard and perhaps an operators' conference called together by the regulator to try to do that. Mr Farajallah?

Luke Farajallah: I think the term "standard" implies that some are safer than others and I think it is very important to make a distinction between the standards and differences that exist: differences in equipment, differences in performance and differences in operating manuals. There are differences that exist but they all sit at a very high standard. It would be a misrepresentation of the situation to suggest that there is a safer or a less safe standard. I agree with Mr Taylor completely, but the way I would articulate it would be that differences introduce complexity, complexity introduces risk. What I think we are asking for is for the regulator to take a strong position on simplification of the differences that exist, which would mean operating in a simpler environment, thereby reducing risk and thereby making it safer.

Q44 Chair: Are there any other views from the operators on that?

John Taylor: Just one point that I would like to come back on. He agrees with me but not for safety. If you ask the offshore workforce—not me—do they think it is safer to fly in a helicopter with 14 people or fly in a helicopter with 18 people? The vast majority of the offshore workforce will say it would be safer to fly in a helicopter with 14 people, because if it hits the water then it is far easier to get out. That is why the trade unions have asked that there should be a limit to the number of workers that can be carried in any one helicopter.

Q45 Chair: Are there any other views from the operators?

Duncan Trapp: There is the balance to be had in reducing numbers and, therefore, increasing the number of flights. So if the number of flights goes up, one could argue that the risk goes up with it. It is very important not to look at the last accident and jump to conclusions, and therefore base decisions on something that has not yet been identified. The AAIB will report in due course—in the near future hopefully—what happened in that particular tragic accident and what implications that the seating arrangements had, if indeed it had any. So I think the thing on that last accident is to wait for the AAIB investigation report to be made, and then we can make any changes based on the recommendations and the best practice that has been identified by the AAIB.

Q46 Chair: Captain Milne, in the evidence from BALPA you say that one oil company has issued its own height minima for approaches to its installations, and that this conflicts with the CAA's approved approach procedures. Who would you say is setting the standards, the regulator, the operator or the customer?

Colin Milne: In that particular example it would appear the customer. However, the specific detail is that, when one is doing an offshore airborne radar approach, we have a specific decision height, which is based on the height of the actual heli-deck, with a small safety margin of 50 feet above that, which determines our minimum descent height over the sea. This particular client decided that it would be safer than safe and would have a higher limit. The company I worked for did not normally operate and did not have that company as a client, but we got a short-term contract from them and suddenly people started saying, "Have you heard that they do not apply the normal criteria that apply to the other 130-odd platforms offshore?" So it is an welcome change from our procedures that are approved by the regulatory authority.

It should not be up to the client to set their own additional safety margin in our view. Either it is safe and approved by the regulator who is the expert or it is not, and we do not want to see customers being able to impose their additional requirements on us as the frontline operator. If they want to negotiate in a contractual way that is fine, but we have to have a simple, straightforward set of procedures so we know exactly where we are, because the last thing you need when you are a mile out is, “Oh are we at the right height?” and doubt being put in your mind.

Q47 Chair: Have any representations been made about that?

Colin Milne: Certainly within my own company, when we were doing that contract we inquired of our operational management, “What exactly is the story here? Why is this company out of line with all the others on the North Sea?” But then the 225 grounding happened. We were servicing that contract with a 225, so for us the problem went away. I do not know whether it is still there or not because I do not go there anymore, but that is one example. The other example, in a different way, alluded to the provision of wrist-watch style personal locator beacons to people, which was not a regulatory requirement for the crews. In the ETAP crash those actually invalidated and made the aircraft and the life raft locator beacons switch themselves off. Because they are smart beacons and because the passengers had set these personal beacons off that they had been supplied by the client, when the proper powerful beacons came on to say where the aircraft and the life rafts were they detected these small wrist watches and went, “Right, well, somebody else is already on the case. We’ll turn off then” and that caused the search and rescue aircraft significant difficulties because of the fog to actually find the survivors.

Those are the sort of back-street things that must not impinge on the regulation of aviation safety. That is where, yes, by all means, the CAA should be convening these conventions and then the CAA should say, “Right, now this is my authority and you will not impinge on my authority”. That is what we want is a strong regulator that takes a firm stance and makes sure that it is regulating the industry and not allowing back-seat driving.

Q48 Chair: Does anyone else want to comment on this regulatory issue?

Duncan Trapp: As Mr Farajallah mentioned, it is part of the standardisation and the commonality and taking the complexity out of the UK Oil and Gas sector. So we are all supportive of that. If the CAA are able to and have the ability to regulate for that then we would fully support that. On the operators’ side, we do work with the European Helicopter Operators Committee, which in itself links with the OGP, the Oil and Gas Producers organisation.

We do influence them in some way to try to get that standardisation and commonality. I would just stress that the oil and gas customer in question made that decision informed by the aviation adviser, so it was not a back-seat driver, per se, as in they had no understanding of the offshore world, it was their aviation advisers that decreed that they thought that that added a layer of safety and because it was above the minimum they were entitled to add that conditional layer of complexity, which I would agree was not always convenient.

Q49 Chair: The Terrain Awareness and Warning System—TAWS—which we understand is designed to stop collisions with water or land, is compulsory for aeroplanes but not for offshore helicopters. Can anybody give me any explanation about that and tell me what is happening in that area?

Colin Milne: Yes, TAWS is fitted to the more recent modern helicopters in the North Sea. The reason it is perhaps not so important in comparison with the fixed-wing world is that it warns of obstructions, particularly terrain, as well as flight regimes of aircraft, sync rates, deviation from instrument landing approach and so on. The obstruction regime over the water is basically that our

destination is the obstruction. You get the occasional mobile massive cranes with jibs 500 to 600 feet high, but in general the platforms that we are going to are the obstructions. The Terrain Warning System warns of the water approaching as you are descending, and occasionally you get a warning of “caution terrain” or “warning terrain” when it is actually your destination that is coming up.

We do occasionally fly over land. For instance, we may fly from Aberdeen to the west of the Outer Hebrides or over to Ireland. Then the terrain warning will come into its own because it will give you warning of terrain ahead that you might crash into, and it will give you an increasing order of warning up to, “Pull up”, which means you are imminently going to hit it. Fixed-wing aircraft are constantly flying over terrain and constantly making approaches, where there is terrain all around them and it is far more relevant to them.

Having said that, I have just renewed my qualification on the Eurocopter 225. In our own simulator we had refresher training on the function of TAWS and, indeed, on reaction to TAWS warnings. So, yes, it is a useful addition. It is vital in terms of our warning of proximity to the sea, and that is all introduced ultimately because of the Scilly Isles crash, which you may remember, where you needed to have warning that you were about to impact the sea. But, in terms of the terrain side of it, it is relatively irrelevant to us and, therefore, I suspect that is why it is not mandated and I am personally quite comfortable with that.

Luke Farajallah: I think what is very important to know, Chair, is that all of the operators—certainly at this table—carry the equipment that we are discussing, and we all train those procedures; mandatory or not, we are carrying that equipment and training our pilots to use that more effectively.

Chair: Thank you very much for coming and answering our questions.

Examination of Witnesses:

Witnesses: **Robert Paterson**, Health, Safety and Employment Issues Director, Oil and Gas UK, **David Eherts**, Vice President Environmental, Health and Safety and Chief Safety Officer, Sikorsky Aircraft Corporation, **Alex Sharp**, Sales Director, Europe, Sikorsky Aircraft Corporation, and **Gilles Bruniaux**, Vice President, Fleet Safety, Airbus Helicopters, gave evidence

Q50 Chair: Good afternoon and welcome to the Transport Select Committee hearing in Aberdeen. Could you please give us your name, your position and the organisation you are representing? We will start at the end, please.

Gilles Bruniaux: Gilles Bruniaux, Vice President of Airbus Helicopters, formerly Eurocopter.

Robert Paterson: I am Robert Paterson, Health and Safety Director with Oil and Gas UK, the trade association for the oil and gas industry.

David Eherts: I am David Eherts; I am Vice President and Chief of Safety for Sikorsky Aircraft.

Alex Sharp: I am Alex Sharp, and I am Sales Director for Europe and Scandinavia for Sikorsky Aircraft.

Q51 Chair: Thank you very much. Around the time of the Sumburgh crash last August there were reports in the national press that oil workers had been told to put on big-boy pants or quit if they were worried about helicopter safety. What is the oil industry doing to reassure workers that they are indeed safe? Mr Paterson, what are you doing to reassure them and to make sure they are indeed safe?

Robert Paterson: I am proud to say that in our industry we have a very high level of engagement with the workforce, a high level engagement with all the stakeholders indeed, lots of co-operation and collaboration. We have a Health and Safety Steering Group on which the trade unions and workforce representatives sit, along with the CAA and operators. There is a Helicopter Task Group as well, where the trade unions are involved. So there is a considerable amount of collaboration, co-operation and communications with the workforce. In addition, we have put out a number of frequently asked questions. A lot of information is there to ensure the workforce is fully engaged. We recognise that following incidents of that sort it is bound to cause a pause for thought among the workforce, so confidence does need rebuilding and communication is fundamental.

Q52 Chair: We heard about the results of the Unite survey that showed that around 40%—I think it was higher than 40%—of the workers felt very concerned. Isn't that something that makes you think you have to do things differently?

Robert Paterson: Of course, we have to continue that work. When you get a shock to the system like that—and this hit the industry very hard, and no accident is ever going to be acceptable as far as we are concerned—it does take time to rebuild confidence. We have been through a process of engaging with the workforce through a variety of forums we have had. I know that the helicopter operators have had open days at their premises where wives and families can come along to these events.

We continue to run helicopter awareness courses, or the helicopter operators do, where safety representatives and other offshore workers can go along. Step Change in Safety ran a number of information sessions at the Aberdeen Conference and Exhibition Centre, where families and offshore workers could come along and be told about the reintroduction of the EC225 helicopter that had been suspended from service for a long period of time. Then, of course, there are the management briefings and pilot briefings—both onshore and offshore—all aimed at trying to rebuild workforce confidence in helicopters.

Q53 Chair: Mr Bruniaux, there have been five major helicopter crashes in four years and they have all involved Super Puma helicopters, isn't that something that concerns you?

Gilles Bruniaux: First of all, I think each accident is a tragedy for workers, for Eurocopter as well, and for me personally. I am a pilot. I am a flight test engineer, so I cannot accept accidents as my firm also, I guess, cannot accept accidents. If you have a look at the fleet in the UK, the vast majority are Super Puma helicopters. In fact, the Super Puma helicopter is a family. It is not only one type of helicopter. We have the first generation, which is the Mark I, we have the second generation, which is the Mark II and now we have the brand new one, 10 years ago, the EC225. These helicopters are different, even if they have the same name.

Everybody knows the Golf car. You had the Golf car 30 years ago. Now you have the modern Golf car. All Golf cars are safe but you have a different modernity in the car. It is the same thing we are talking about here. A different helicopter but we have a lot of them, of the whole Super family, here in the UK. In addition to that, each accident is different. Sometimes you can have similarities but each accident is different. The root causes are different. The contributing factors that can come from something in air traffic control, human factors, or it can be a pilot issue. You can have a lot of different issues. After having understood all these kinds of complexity, we can react and put in place corrective measures.

Q54 Chair: Would you say that the problem with gear boxes has been solved?

Gilles Bruniaux: The problem with the gear box, I have to apologise for that. We had a problem that led to two controlled ditchings. But you have to understand that it was a controlled ditching. In

poor light the pilot landed on the water. It was not a controlled flight into water. It was really a ditching, and hopefully everybody escaped safely from the helicopter. Technically speaking, the problem has been completely fixed. So we have in place some monitoring tools and we have a second stage that is ready and will be available, as of the second semester of 2014, with a new shaft.

Q55 Chair: After a helicopter crashes the next critical time is survival in the sea at the point of that crash. What is being done in relation to Sikorsky—if I could ask the representatives first—to make things safer for passengers and workers?

David Eherts: Yes. Egress is critically important, so it starts with training and proper equipment for the passengers but it is also based on the design of the aircraft. The S-92 has five floats so it can stay afloat in sea state 6. They have an emergency egress window for each row. We have four type 3 exits from the aircraft, even though only type 4 are required. One last point about the 92 is that the height of the cabin is very high, so most people can stand erect and, therefore, move more quickly around the cabin and get out safely. We think because it is a newer design we were able to build those things in and make it easier to egress and that is very important.

Chair: Airbus?

Gilles Bruniaux: I would have said almost the same as David. We have the same type of things that are better on one helicopter or on the other one. For a long period we have had big windows for escape, but it is almost the same for the competition.

Q56 Miss Smith: As it happens, I am a Golf driver and I would not aspire to the level of skill that I am absolutely confident that pilots in this industry have. One of your employees who showed us some of your products earlier this morning almost led us to believe that if you obey the safety features you are safe, frankly, there is little that would need to be done on top of it. I am not sure that that is a true reflection and certainly as a driver I would not take that approach. How much can modern safety features contribute to this situation?

Gilles Bruniaux: You speak about safety features; you speak about safety equipment, tools, and this kind of thing. It is very difficult. As I said, each accident is very different and there are a lot of contributing factors. Of course, some safety equipment, like tools, can avoid some of the contributing factors of an accident. So it can contribute to improved safety but it is very difficult to quantify. You cannot quantify this kind of thing. It is only judgment or feeling.

David Eherts: Can I comment there? I think it is very important for the manufacturers to work closely with the operators and the pilots, for instance, to reduce pilot workload. We know it is a critical time when approaching a rig. So the S-92 just came out with an automated rig approach, so it is coupled to the GPS. It brings the aircraft just off to the right side of the rig at a certain height and speed, so the pilots can look over and make sure that the heli-deck is clear, those cranes are not moving, there are no personnel in the way. It frees them up to keep a good eye on their environment. Working closely with the operators and getting feedback from them on what they think is most important then allows the manufacturers to build these things into the aircraft and make the whole industry safer.

Gilles Bruniaux: I fully share the point, and of course we have some interaction with operators. We are working very closely with the operators and taking their advice into account. We have discussions training pilots and the operator. Taking that into account we designed the new helicopter. For example, on the 225 you have a safety feature with the autopilot. If at one 150 feet you continue to descend the helicopter will automatically level off, which will avoid a controlled flight into the water. Of course, these kinds of new systems are very useful.

David Eherts: Can I just add one other comment. I think that also understanding human factors is critically important because, even when the real cause is pilot error, the action the pilot took made sense to him or her at that time. So I think it is very, very important, instead of just saying it was pilot error for all the parties involved to understand what the pilot was thinking and how we can change their thought process in the future. This study of human factors is critically important to the future of the industry.

Q57 Miss Smith: Thank you very much and, Mr Eherts, you also get a bonus prize for being the first person to include the possibility of there being a female anywhere involved in the whole industry, from everything we have heard today, so thank you for that.

But can I just say that you have the opportunity of a Parliamentary Select Committee that wants to know all about what is going on in this industry. If we now have super safe mechanics doing some of the load for us, and we have good quality training and we have a safety culture throughout the industry that the previous panel certainly expanded on at length, what else ought to be done?

Gilles Bruniaux: As I said, we have been working very closely with the oil and gas industry for the past decades, but what we try to do is reinforce the partnership with the operators. That is exactly what we have done with the operator in Aberdeen by trying to lead the joint operator review, which was spoken about during the last session. We have been working co-operatively to propose some safety measures that we could do in the future.

David Eherts: I have a little different perspective on this. I am a 35-year safety professional. I am not a pilot and I am not an engineer. I have been doing safety organisation, processes and culture for quite a long time now and what strikes me is the need for work around culture. The other comments about the offshore passengers being concerned, I think that is critically important. Those concerns need to be elevated through organisations efficiently. They need to find out exactly what the concerns are and I think they need to be addressed. We call that at Sikorsky “soft signals”.

We encourage complaints and we encourage disgruntled employees be heard. We encourage our suppliers and our customers and they are pleased to tell us what they think. We want to set up the system so there are no stupid questions, so nobody is embarrassed by their questions. We set it up anonymously if they are worried about whistleblower retaliation. But we need all that data. It is very critical to us. Then when we get that data—I think it is the same at Eurocopter—what we do is we funnel that to product safety model teams. Then they go through and investigate it and do quantitative risk assessment on that and, hopefully, what we are going to find is an accident long before it happens. There is quite a bit more work that can be done around human factors and the culture of safety in the industry.

Q58 Miss Smith: May I just briefly come back to Mr Eherts before I go to Mr Paterson. It does seem that we are starting to get conflicting evidence this afternoon. Clearly, a number of accidents have happened recently and they were not caught before they did, although I personally agree with what you say about culture being quite so important, it does, after all, eat strategy for breakfast. But, for example, in the last panel, Mr Taylor from Unite has a contrary story, which says that people do not feel free to do that, does that occur in Sikorsky?

David Eherts: We have set up four or five different ways for employees to get information to management, so we have a raise-your-hand programme. When employees work electronically they can send notes to their supervisor saying, “This doesn’t look right to me” or, “We’re doing this a little different than the op sheet says”. Then, if their supervisor knows the answer, the supervisor can answer it or they can elevate it to the manager or the director, all the way up to the Vice President level, very quickly.

But it is done without bells and whistles and flashing lights, and so the employee does not have to hit a button and bring all the attention upon him or herself to make the point. We have various programmes, including e-dialogue programmes, that are all anonymous. We feel it is very, very important for employees to bring this information to us. If you are a learning culture and continuously improving, the information I heard around the table this afternoon is critically important to these companies; before an accident occurs.

Q59 Miss Smith: What more will you do to bridge the gap between that aspiration and what Mr Taylor was laying out?

David Eherts: The final thing that needs to be done is to have—in fact, we have just published one—a very strong policy prohibiting retaliation. You can have all those policies and you can talk a great game but the first time an employee perceives retaliation—perhaps they did not get to go a business trip, perhaps they did not get a promotion they felt was deserved—the whole thing goes to heck. The last thing we needed to do at Sikorsky was put a very strong anti-retaliation programme in place, and we have just published that. At that point we have closed the loop and have a very good programme.

Robert Paterson: I would just like to say, what we believe is that there needs to be a multifaceted approach to this whole thing. From the offshore industry perspective we need to continue to invest in a modern helicopter fleet and increasing the modern fleet. We also need to work at the interfaces where the helicopter lands. A few years ago we put in better perimeter lighting around the heli-decks, so that there was a contrasting lighting pattern around there and it was not confused particularly during night landings, because there is an awful lot of light sign installation, so having contrasting green lights did help.

We are also in the last stage of the process of producing some new lighting to light up the centre of the heli-deck, the circle and the 'H' on the heli-deck, which gives pilots much better visual cueing when they want to come in to land. We have that role as well, to try to improve things from our side of the interface as well. A few years ago we produced a virtual radar system, which covers the whole of the North Sea. Traditional radar goes about 80 miles off the coast but now air traffic controllers can follow flights all the way out to the installations in the middle of the North Sea. This was a world first. The technology had never been applied in that scale before anywhere. We are very proud that we have taken the time and trouble to do that. We are also very proud of the fact that we have a high level of workforce engagement, because we do need to be listening to the workforce. It is only those guys, from John Taylor, the trade unions; they sit on all of our committees. We have non-trade union workforce representatives as part of our committees. They provide us with invaluable insights into their concerns and that way we can make sure we address that.

Q60 Miss Smith: Thank you very much, Mr Paterson. I know that OGUK has probably the advantage in this situation of spanning the whole supply chain, and that supply chain is very impressive too. Who among it is going to pay for some of these improvements?

Robert Paterson: The oil and gas companies pay for those improvements at the end of the day. The companies paid for the radar system. They will pay for the improvements in lighting. They will pay for the technology that we believe is appropriate in the modern helicopters. So, yes, it will be the oil and gas companies who will pay and are prepared to pay.

Q61 Miss Smith: Have you ever had to help them broker those solutions?

Robert Paterson: Yes. One of the recommendations that came out from an AAIB report was a need for an improved weather data network across the North Sea. I worked to develop that network in

conjunction with our companies. We established this weather data network so that pilots can get their pre-flight weather data in a regular and consistent fashion, and it gives them a lot of confidence that they know the weather all the way out to the installation. So yes.

Q62 Miss Smith: Thank you, Mr Paterson. One more if I may, on a related topic. We briefly heard—almost in passing this morning—about the challenges posed by the closure of heli-ports at some points along the continental shelf. Sumburgh itself was mentioned in a different context. Who benefits from such closures, and who is benefiting commercially from doing so, while presumably it is clear that it causes other stresses and strains on the rest of the chain to respond?

Robert Paterson: I am not familiar with what is being closed, to be perfectly honest. If you can provide me with some more information I will come back to you, but I am not familiar with those closures that you mention.

Q63 Miss Smith: It was a passing comment, so I am sure the Committee can look into what was being referred to. Could you not even generalise the point? Are you aware of cases where the logistics chain contains very many decisions as to what is a viable stopping point and what is not, and how those are dealt with in the industry?

Robert Paterson: I think those will largely be dealt with in the discussions with the helicopter operators and the practicalities of using a particular location. For example, if you want to approach a particular operator and they say, “You want to fly an S-92 out of this base but we have no maintenance facilities there. We would have to take crew. There is another company that may already have S-92 facilities there”. Then they will say, “We can do it more easily”. There are these commercial issues and it is not just about pilots; it is about ground crew. Ground crew is probably just as important as the pilots in this whole process to make sure that aircraft can be effectively maintained at the base from which they are flying.

Q64 Karen Lumley: Most of what I wanted to ask has been asked, but this morning there has been some confusion about some of the things we have been told during the various visits we have made. One of the things that has massively confused me is this: when a new helicopter comes on stream, whose responsibility is it to make sure that everybody knows what that helicopter can do?

Alex Sharp: I guess I will take that as a start. Each manufacturer has its own training system. You heard earlier that some go to Marignane for training. Sikorsky has elected to have a long-term training partner, Flight Safety International, and all of our pilots go through Flight Safety International training, whether that is simulators in West Palm Beach or Farnborough or in Stavanger Norway. We publish a rotor-craft flight manual that gives you limitations and performance and exceedences and basically gives you the envelope that you can fly the helicopter in. The actual training we sub out to Flight Safety whose focus is on training pilots and has been for a long period of time. Our focus is on the actual manufacture of the helicopter.

Gilles Bruniaux: Perhaps just to complement a little bit, as was said, the flight manual is key because for the pilot it is a reference that says how the helicopter can perform. Also the maintenance manual is key, because it describes what the operator has to do in terms of maintenance. It is very rigorous and very stringent. We also have a list of spare parts that are authorised for use on the helicopter. You cannot buy spare parts wherever you want; you have to buy the correct spare part. So it is the spare parts, the flight manual and the maintenance manual. That is why we developed a training centre on a full flight simulator worldwide, so that operators are trained on the helicopter.

Q65 Karen Lumley: We saw your simulator at lunch time and we were of the opinion that—from what was told to us—if some pilots had used different equipment then two crashes in the last two years would not have occurred. When I asked that question earlier, that is not quite correct because they did not have those parts on them, did they?

Gilles Bruniaux: If you are speaking about the accidents in September, they are still under investigation so we do not have the conclusions of the AAIB, so it is speculation to say the accidents would have been avoided with such equipment. Are you speaking about the September accident?

Karen Lumley: We were told that in simulator and explained that if the automatic override had come on then the aircraft would not have crashed into the sea as it did. That is not quite correct, as far as I understand the situation from the previous session.

Gilles Bruniaux: It was a personal view of a pilot, a very professional pilot, a very passionate pilot. He has his own view and he explained his own view. Of course what I said is that some safety features can improve safety, but I will not speculate that it would have avoided such an accident or things like that.

Q66 Karen Lumley: One last question. That simulator would be available for all pilots to come and use? I am guessing that you have the same sort of principle that they would be able to come and train with your people if they want to do that? Is that something that operators pay for, or do they take advantage of it?

Gilles Bruniaux: The training is an agreement between the manufacturer and the operator for the training because, as was said during the previous session, when we provide a new helicopter we provide training for free. At the beginning we are the only ones who know how the new helicopter operates. But later on the training can be provided by the operator, as Luke Farajallah said a few minutes ago. Afterwards the refresher training, the mission training is the operator's responsibility. It is the responsibility of the operator either to come with his instructor or to ask for an instructor from Airbus Helicopters. You can have different ways of working.

Alex Sharp: As the S-92 has rolled out in the last couple of years, we have seen a lot of demand for it both on the Norwegian shelf and here. What we found was that we had increased demand from operators who saw the simulator as a great way to increase training and proficiency for pilots, while at the same time not putting as much stress on the airframe. If I am going to go out and train in the airplane and it is a non-revenue flight, I am straining and putting strain on the parts, whereas I could go to the simulator and get all of that training and get yourself in a training position in the simulator that you would not want to get yourself into in a real airplane, and really have to test yourself. What we have done in Norway was we saw such great demand there that we put a second simulator there in addition to the one at Farnborough. Originally we were going to just move the one from Farnborough, but there was enough demand. Already we have seen folks wanting to do recurrent training every six months. There is strong, strong demand for that. We think that is good safety-wise. The more that you can train in the simulator the more you can work out anything that you need worked out before getting in the airplane.

Q67 Martin Vickers: Mr Paterson and others have mentioned the level of engagement with all the various parties involved. Now returning to the safety perceptions among you or the workers, are you particularly concerned at the level of dissatisfaction there are with many aspects mentioned, particularly the design of the aircraft. We are dealing with a hardened workforce in a dangerous industry that recognise that there are dangers involved, and yet we have 80% or 90% figures showing that they are dissatisfied—we have a whole range of headings here—with the safety aspects. Would you comment on that?

Robert Paterson: I think it was a nasty shock to the industry. I am talking about the whole industry and all the people in it when these things happen. We recognise that a considerable amount of work needs to take place to rebuild that confidence. We are going through that process, a full engagement with the workforce and the trade unions in the various meetings that I talked about: the Helicopter Safety Steering Group, the Helicopter Task Group looking specifically at the issues arising from the Shetland crash to rebuild that confidence, but it is going to take time. We do need to work with the helicopter operators and they in turn need to work with the original equipment manufacturers to make sure we do get the safest possible helicopter operations that we can reasonably have.

Gilles Bruniaux: Yes. It is key that we have to rebuild the confidence of the workers, and we are working closely together. As a manufacturer we have participated in various helicopter group meetings. We have provided a knowledge centre on the website and we have contributed to family days, organised by the operators, so that they understand that our products are safe. So it is huge effort in terms of communication that we have to perform together to rebuild the confidence of the workforce.

David Eherts: If I can just comment also on the financial side of things. We have done an awful lot of work about this in my company, and it was based on a book that Stephen Covey wrote *Business at the Speed of Trust*. He quoted Best Buy in saying that for every 0.1% improvement in engagement in their sales force they earn \$70,000 more per employee. So we have taken that at Sikorsky and we understand that if we can build engagement around safety the workers are more productive and more loyal. The quality goes up. Everything gets better. I think perhaps the industry waited too long to engage the workforce in this case if it got that bad. But I think that everything we do to bring them back is going to pay off very handsomely for the companies.

The second point I want to make is that I have done an awful lot of work in my career on return on investment for safety investments. To be honest, I have not found one yet that does not pay back. When you talk about lighting on the rigs—and you asked Mr Paterson who was going to pay for it—I think the oil companies will pay for it and I think that they will recoup their investments handsomely, because they will have smoother operations, less interruptions, better flow. I think it is all good for business.

Q68 Chair: Mr Paterson, do the oil and gas companies ever try to undermine operators and, therefore, risk safety standards by giving financial support to potential new entrants?

Robert Paterson: We rely heavily on helicopters for getting our workers offshore. There is no alternative means of transport. It is very important that we have good relationships with all our helicopter operators, whoever they are. Indeed—

Chair: You have not answered the question, Mr Paterson.

Robert Paterson: No, I was trying to put things into a bit of context there. Because smooth operation and reliability of the service is very important. It is a competitive market for helicopter services out there. All of the helicopter operators have to comply with the legal requirements placed upon them by the Civil Aviation Authority or under the European Aviation Rules, whether they come from abroad or whether they come from the UK. Now it may happen that if you have a helicopter company come from Denmark that the enforcement of any requirements has to go from the UK CAA to the Danish Civil Aviation Authority to enforce the rules.

Q69 Chair: You have not answered the question of do the companies ever give financial support to potential new entrants, with the consequence of undermining existing operators and possibly the safety of the—

Robert Paterson: Certainly not, nobody is undermining anything.

Q70 Chair: Has the industry ever given financial support to new entrants?

Robert Paterson: No.

Chair: You can say that categorically?

Robert Paterson: I am not aware of any company giving financial support of any sort to bring in a helicopter operator.

Q71 Chair: Can you tell me something about the commercial pressures faced by the companies? We have heard a lot in the first session about concerns that commercial pressures from the companies have an impact on the operators and might undermine safety. Can you tell us something about what those commercial pressures might be?

Robert Paterson: We live in a business competitive environment. Competition is a good thing, but safety is never part of the competition. We have reputational issues and we want smooth operations. We do not want interruption of service. So nobody is consciously jeopardising safety through negotiation of contracts.

Q72 Chair: What is the nature of the commercial pressures the industry faces?

Robert Paterson: To get value for money while also being safe.

Q73 Chair: Do you think it is ever possible that in pursuit of value for money corners could be cut?

Robert Paterson: No, I do not believe those corners are cut. I think it sometimes might affect the margins, but it is not cutting safety.

Q74 Chair: You do not think that is possible? If there is a real pressure to cut corners and to introduce competition—

Robert Paterson: I do not believe that is happening in this industry at this time.

Q75 Chair: You do not think it has every happened?

Robert Paterson: I cannot go that far back into history. But since I have been working in this industry for the last 20 years, I do not believe it has happened.

Q76 Chair: Has the industry considered funding a study to look at helicopter safety in the same way that the Norwegian sector has?

Robert Paterson: No, we have not. We carry out an annual review; our statistical report appears in our annual report on safety. I think that was referred to in the submission that we made to you, but

we have not undertaken a study in the same way that the Norwegians have. However, I have looked through the SINTEF report and the initiatives that they describe in there as having made significant improvements to safety are all initiatives that either we have a similar or a slight variation on adopting in the UK. So I think we are in a very similar place in terms of adopting initiatives as they are in Norway, and I think we are ahead of them in some areas.

Q77 Chair: However, our recent accident rate is far worse than that of Norway, is it not?

Robert Paterson: The recent numbers of accidents have given us pause for thought. But if you look at the SINTEF report, certainly—and that was written in 2010 after the crash at Peterhead in 2009—it said that, in essence, all of those accidents could have happened in Norway and that the low rate in Norway could just be a random result, and that was shown by sensitivity analysis to be the case. Since then we have had three further accidents. Two of those accidents involved technical issues, failures of a shaft in the two EC225 incidents. Clearly those are the sort of incidents that could have happened elsewhere. The accident on 23 August is still under investigation and we are waiting to find out what the root causes of that are.

Q78 Chair: You are saying that the recent records have given you pause for thought, has it given you any thought for action?

Robert Paterson: We are taking action through the Helicopter Safety Steering Group, which is steering that action. It has set up this helicopter task group to look very specifically at that incident and respond to workforce concerns. We spent a considerable amount of time working with Eurocopter or Airbus on the EC225, and in fact there has been a huge amount of workforce engagement, trips down to Marignane to see what Eurocopter were doing to improve safety with that. So, yes, there has been a huge amount of effort into rebuilding that confidence in the workforce again.

Q79 Chair: Are there any other views of the panel on whether the accidents that have occurred could have indeed have happened in Norway? Or whether it is something to do with our industry?

David Eherts: My graduate work was around epidemiology and statistics, and I look at this from a statistician's point of view and I think the sample size is too small, with just those many accidents with that many flight hours. I think more importantly, though, each one of them is a tragedy in its own right and each one needs to be investigated, whether it is a cluster or not. I think they have done a very good job of getting to the root cause. I would argue that we all learn when that is done well.

If I could make one other comment, back on the commercial pressures. I have spent some time with the operators and I think what the gentleman from Bond talked about this afternoon with his chief pilot. The pilot in charge briefed the passengers directly while the co-pilot readied the aircraft. I think that is a best practice. In fact I spent some time at Bristow where they did some of the same things. I feel from a human factors point of view that balance is important. The pressure the pilots may feel to fly when there is marginal weather because they know that the customer wants the aircraft back and forth. They have to change crews; they have to bring equipment out. So there is pressure to take a flight. But if you go down and talk to the passengers and understand their families concerns, that counterbalances that pressure. I think that is the best practice.

Q80 Chair: What about the work of EASA in relation to the CAA? Are there any views on whether that is likely to change regulation in a favourable way or not?

Robert Paterson: I think one of things that we fear is that it will lead to a dilution. I think somebody earlier on referred to an averaging down of standards. There are a considerable number of helicopter operators across Europe that have one or two helicopters. We have two or three companies around the North Sea that have large numbers, and we have a CAA that is very focused on helicopter safety in a hazardous environment offshore. We do not see the EASA centralising that work as having a focus and expertise that the CAA brings to regulating this industry. What we do want to see at the end of the day, as with any regulator, is that there is a strong competent regulator that stands up and is counted. But one that also looks at big picture issues as well as just safety from the cockpit.

Q81 Chair: Is this a specific concern or a general one about how EASA might change things?

Robert Paterson: I think it is a general concern. We favour that local regulation where you have the real expertise rather than general regulations that have been averaged down from the centre of Europe.

Q82 Chair: Can I ask the operators their views? Mr Bruniaux, what is your view about EASA?

Gilles Bruniaux: For the manufacturer we are more in front with EASA because EASA is regulator for the airworthiness, so the certification of the helicopter. So EASA is clearly a strong regulator for that, no problem. My perception is also that UK CAA is a strong organisation. I know that there is some transfer responsibility between UK CAA and EASA in progress. But for me it is too early to have some conclusion about that.

David Eherts: I was going to come in on the certification basis of the aircraft. As a manufacturer we like to drive that hard. As we come out with new safety devices we would like them to be considered as part of certification for all models. So we think EASA has an important role there.

Alex Sharp: Madam Chair, if I could just say what I was thinking hard about what my colleagues said just a minute ago and if I could just expand on that for one second. One of the things we want to look at, in terms of best practice, we all acknowledge that every accident is a tragedy. I think everybody here at the table agrees that, whether it is our helicopter, their helicopter, we all hold our heads when something bad happens. But, after 29 years in the US Navy I hate to navigate by looking at my wake. I would rather look at stars and move forward. So along that line I think we really need to use technology today and really focus on how that helps us to prepare to prevent an accident. What I am talking about is HUMS and the way it is then used, where we take helicopter usage monitoring systems and how we tend to look at what happened in the flight.

We are able now with our fleet management operations centre, where all of our operators—Bristow, CHC, PHI, etc.—download it and send it every night. So we look at a vast quantity of helicopters, over 200 helicopters every night, and we see them by operator and we send that data back to them. We can see small incidents, where something could start to trend and we can talk to them about what is happening in the data. That some sort of hangar bearing is starting to show undue vibration ahead of time and we can pre-position a part. It helps us; it helps them, so there is not an AOG waiting, there is a part already getting there. But rather than looking back and trying to figure out what went wrong, I think the idea of using the technology to be predicative of something that might be starting to go a little bit wrong helps us all. If we can take that as a best practice, and then share it across all operators and all manufacturers, I think we all benefit.

Q83 Chair: Do you really think these are alternatives? Surely we need to know what went wrong, as well as looking to the future.

Alex Sharp: Certainly we need to find a root cause. I am not suggesting that we would not look for the root cause. I am just saying that we need to also embrace the new technology that is available and use that to our betterment and the betterment of all the operators and the safety of the people that use the helicopter.

Q84 Miss Smith: I would like to come back to the workforce involved, and I am looking at the suggestions that were brought forth from Unite's campaign, which we briefly spoke about in the previous session. Forgive me if you are not familiar with it I can give you a couple of stats from it. The top on the wish-list was that there would be a larger fleet. Could you give us your views on whether that is a means to improve safety? This is 95% of workers nominating that they would like that as their number one improvement.

Robert Paterson: Certainly. It is an area that we are looking at, at the present time, because we recognise that if we have a particular type of helicopter unavailable that creates problems, risks for the people who are continuing to work offshore. They want to finish their tour offshore; they want to get home. We are looking at all sorts of possibilities. Fundamentally, helicopter transport is the only practical way of getting people to and from installations, particularly in the winter months. We are able to use some boat transfer arrangements in the more benign parts of the year. They are still relatively limited in terms of ability to transfer people, and in fact there are risks in terms of transferring people from boats to installations, which you do not have in the same way.

It is an area that we are examining carefully at the moment. We are having some discussions with the helicopter operators, you have heard the sort of views that Luke Farajallah expressed earlier on about spare capacity. There may be some mileage in a modest amount of additional helicopter variation in the fleet and so on, but I think there are limits to how far you can realistically take that. It is about getting the right balance.

David Eherts: As a manufacturer we think it is a great idea.

Q85 Miss Smith: Indeed. If you are familiar with the survey can I ask the panel's views on some of the other popular items? For example, changes to the design, including the internal seat configuration or improved floatation devices, just to pick two from the top of the list. Who wants to give a view on that?

David Eherts: I think it is more a question for Gilles because I think our configuration right now is a bit more modern. I think it is more of a question for Gilles.

Gilles Bruniaux: All configurations are certified, okay, 19 seats, certified by the authority and by us, with some tests, some very rigorous tests. Now, for comfort reasons, for the perception of people feeling comfortable in the helicopter we are working on a new arrangement of seats, on new seats, but it is not for safety improvement it is more for comfort and the perception of passengers.

Robert Paterson: I will just add something. Since the beginning of last year we have had a representative on an EASA Group looking at ditching survivability. That group is intending to complete its work later this year; I think their next meeting is in March. It is looking at floating stability of helicopters and survivability in the event of a survivable crash and how that may be best enhanced.

Q86 Miss Smith: If I may, one final question on a slightly different topic? Where do you see this industry in 50 year's time? I can think of several trends that will happen in the broader oil and gas

industry within that time, and indeed with other associated energy sources and equipment. Where do you think we would be in 50 year's time?

Robert Paterson: Now 50 years is an awfully long time. It is amazing how much new technology is coming along, which is enabling us to get much more out of reservoirs that we used to think would be depleted several years ago. It is quite clear from our member companies that some installations, which were probably only originally ever envisaged an operational life of say 25 years will end up with operational lives in terms of 60, 70 or perhaps 80 years. I can imagine that technology will continue to move on and enable us to get much more out of the existing reservoirs as we apply that technology. Although as an industry we are only predicting another sort of 30 to 40 years at the moment, I think as technology moves forward that boundary will move further back. That also depends on the price of oil and other technologies and many other factors come into that.

David Eherts: Can I just comment on the area that Sikorsky is focusing on—autonomous flight? In fact we have done it very recently; we put a skid into an old aircraft and it is flown autonomously. I think that as workers accept that—and I know that is going to be quite a hurdle to get over—we can get the error rate very, very low. In fact maybe much lower than a pilot, much better than a pilot and to the point that we may be doing without pilots 50 years from now.

Gilles Bruniaux: I do not know exactly how but in terms of safety, the safety vision that we have for 50 years is zero accidents. That is all.

Q87 Chair: Do you support calls for a public inquiry into helicopter offshore safety?

Robert Paterson: There are quite a number of investigations taking place at the moment, quite a number of reviews, and I think it will be appropriate to wait and see the outcome of those and then focus on what needs to be done in a public inquiry, in the light of new information that comes out of those inquiries and investigations. The CAA review is due to be published sometime in February and AAIB reports will follow on later in the year. That will give us an opportunity to look carefully at what we may need to focus a public inquiry on.

Q88 Chair: Any other views?

Gilles Bruniaux: I fully share the view. After a period of time when we get the AAIB reports, if the Government thinks that we have to have a full inquiry then Airbus Helicopters would be more than happy to contribute actively.

Alex Sharp: I think if we were called to contribute we certainly would. For our part we would let the on-going investigations go on and we would continue to focus on those aviation groups, the OGP Aviation Sub-Committee, IHST, where we are all actively involved looking for continuous improvement and best practices that my colleague talked about earlier.

Q89 Chair: Do you think that confidence can be restored without a public inquiry?

Robert Paterson: Yes, I do. It will take some time, and it has taken some time but I have already seen confidence growing in the workforce. The representatives of the workforce that I see at various fora are already talking more confidently about helicopter safety.

Chair: Thank you very much to everyone for coming and answering our questions. Thank you.