



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

JOINT COMMITTEE OF PUBLIC ACCOUNTS AND AUDIT

**Reference: Financial management and equipment acquisition at the Department of
Defence and Defence Materiel Organisation**

THURSDAY, 1 MARCH 2007

CANBERRA

BY AUTHORITY OF THE PARLIAMENT

INTERNET

The Proof and Official Hansard transcripts of Senate committee hearings, some House of Representatives committee hearings and some joint committee hearings are available on the Internet. Some House of Representatives committees and some joint committees make available only Official Hansard transcripts.

The Internet address is: **<http://www.aph.gov.au/hansard>**

To search the parliamentary database, go to:
<http://parlinfoweb.aph.gov.au>

**JOINT STATUTORY COMMITTEE OF
PUBLIC ACCOUNTS AND AUDIT**

Thursday, 1 March 2007

Members: Mr Barresi (*Chair*), Ms Grierson (*Deputy Chair*), Senators Mark Bishop, Hogg, Humphries, Murray, Nash and Watson and Mrs Bronwyn Bishop, Mr Broadbent, Dr Emerson, Dr Jensen, Miss Jackie Kelly, Ms King, Mr Laming and Mr Tanner

Members in attendance: Senators Mark Bishop, Hogg and Hurley and Mrs Bronwyn Bishop, Ms Grierson, Dr Jensen, Miss Jackie Kelly and Mr Tanner

Terms of reference for the inquiry:

To inquire into and report on:

Progress in implementing systematic reforms in the areas of financial reporting and equipment acquisition at the Department of Defence and the Defence Materiel Organisation (DMO), as identified in ANAO financial and performance audits, the Defence Procurement Review 2003 (the Kinnaird Review) and the Senate Foreign Affairs, Defence and Trade References Committee's 2003 Report on the Inquiry into Materiel Acquisition and Management in Defence, including the following:

- Progress in implementing Defence's financial remediation plans, relative to international best practice in these areas, and recommend any further measures that can be adopted;
- Progress in implementing the Kinnaird Reforms, relative to international best practice in these areas, and recommend any further measures that can be adopted;
- Review Australia's relative achievements in procurement and financial reform relative to international best practice in these areas of defence administration; and
- Assess progress in Defence's adoption of international business accounting standards relative to international best practice in this area of defence administration.

WITNESSES

ADAMS, Mr Mal, Director, FFG Systems Program Office, Defence Materiel Organisation, Department of Defence	1
DUDGEON, Brigadier Andrew, Director General, Army Aviation Systems, Defence Materiel Organisation, Department of Defence	1
FRASER, Major General Tony, Head, Helicopter Systems Division, Defence Materiel Organisation, Department of Defence	1
GILLIS, Mr Kim, Deputy Chief Executive Officer, Defence Materiel Organisation, Department of Defence	1
GUMLEY, Dr Steve, Chief Executive Officer, Defence Materiel Organisation, Department of Defence	1
McKINNIE, Commodore Drew, Director General, Major Surface Ships, Defence Materiel Organisation, Department of Defence	1
RUTING, Rear Admiral Trevor, Head, Maritime Systems Division, Defence Materiel Organisation, Department of Defence	1

Committee met at 11.19 am

ADAMS, Mr Mal, Director, FFG Systems Program Office, Defence Materiel Organisation, Department of Defence

DUDGEON, Brigadier Andrew, Director General, Army Aviation Systems, Defence Materiel Organisation, Department of Defence

FRASER, Major General Tony, Head, Helicopter Systems Division, Defence Materiel Organisation, Department of Defence

GILLIS, Mr Kim, Deputy Chief Executive Officer, Defence Materiel Organisation, Department of Defence

GUMLEY, Dr Steve, Chief Executive Officer, Defence Materiel Organisation, Department of Defence

McKINNIE, Commodore Drew, Director General, Major Surface Ships, Defence Materiel Organisation, Department of Defence

RUTING, Rear Admiral Trevor, Head, Maritime Systems Division, Defence Materiel Organisation, Department of Defence

CHAIR (Mr Barresi)—The committee welcomes members of the Department of Defence and the Defence Materiel Organisation. As part of the inquiry we will be examining two Defence projects in detail, the Fast Frigate Guided Upgrade project and the Tiger Armed Reconnaissance Helicopter Project Air 87. Today we will be taking evidence from the ADF personnel attached to the Tiger ARH Project Air 87, who due to time constraints we were unable to hear from on the last occasion. I would like to acknowledge their patience in this regard.

I advise witnesses that the hearings today are legal proceedings of parliament and warrant the same respect as proceedings of the House itself. The giving of false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. The evidence given today will be recorded by Hansard and will attract parliamentary privilege. I welcome representatives from the Department of Defence and Defence Materiel Organisation. Does anyone want to make an opening statement?

Dr Gumley—In the previous session we talked about upskilling in the DMO. I made a recommendation to the Minister for Defence to improve the management focus on helicopters by actually creating a two-star helicopter systems division. Major General Tony Fraser, who is one of the most experienced aviators and has a lot of commercial experience in helicopter projects, has been promoted into that position and I invite him to make an opening statement.

CHAIR—Congratulations, Major General.

Major Gen. Fraser—Thank you, Mr Chair, and Dr Gumley. The ARH Tiger project is a challenging one but it is an outstanding project for what it is going to deliver to Army. Six aircraft have been accepted to date and over 1,170 hours have been flown, with nine Australian

pilots gaining ARH pilot qualifications. Three of those pilots have also qualified as flying instructors and a further two will qualify in March.

The project is a lot more than just aircraft. It includes a suite of sophisticated training devices, advanced mission planning systems, logistics and maintenance management systems. All of these are cutting-edge digital technologies that will equip our soldiers for the demands of the land force battle space in the hardened and networked Army of the future.

We have achieved 70 per cent of the milestones—103 out of 148, including the submilestones. That is 70 per cent of the milestones for an expenditure of 60 per cent of the budget—\$1.171 billion out of \$1.962 billion. We fully expect the project to achieve the contracted capability; however, it is behind schedule. The major contributor to the delay is training, due to four main reasons.

Our initial instructors did not complete their training in France due to delays in the Franco-German program. There are low aircraft serviceability rates within Australia. The Commonwealth's detailed quality requirements for documentation are far more demanding than those for France or for Germany. An example of this is that, whilst our flight manual meets contractual requirements, we are improving it significantly so that our introduction of Tiger is conducted in a graduated and incremental fashion. Although we have more than we have ever had, we have at times insufficient Commonwealth test crews for the concurrent development testing as well as the acceptance flight testing. We have taken steps to address this shortage.

Australian Aerospace and their parent company, Eurocopter, are committed to the program and have invested additional resources to prevent further slippage, but at this stage we are 24 months behind schedule in training. The contractor and the Commonwealth have collaboratively instigated a number of initiatives to address schedule slippage, and our focus is on building and providing operational capability as soon as we can for Army. Based on the relationship with the contractor, we have made consultative and considered decisions to accept aircraft in December 2004 at the in-service date so that we could commence the training in Australia and commence testing of Australian unique equipment such as the secure radios.

The ANAO report includes a table of airworthiness issues for the aircraft that are under management. I ask the committee to consider these in context of the status of the program. Under the airworthiness framework for the ADF, the policies and procedures for the way we fly, operate, support and maintain the aircraft are in a continuum of documents such as the flight manual, flying regulations and technical manuals. The Tiger is not yet mature. We use airworthiness issue papers, which were documented in the ANAO report, as a means of managing the introduction of these until they reach the mature state and the full documentation. The tables in the ANAO report reflect the transitional arrangements of those issues.

A significant achievement worthy of note has been the successful integration and firing of the US Hellfire missile system. Eight missiles have been fired at the ranges, out to eight kilometres, including one at night. They all struck the target with extreme, lethal precision. When the final missile was fired in June last year, 120 hours had been flown. This is the highest rate of flying in the worldwide Tiger fleet thus far. The point I seek to make is that, whilst the ARH project is experiencing some challenges, Australian Aerospace and Defence are working together to try to meet them and have shown and proved the ability to achieve some excellent results. We fully

expect the Tiger to achieve the contracted capability but it is behind schedule. Important lessons learnt have been taken from the Tiger program, through our staff and the project, into the MRH90 program. We appreciate the opportunity to provide information to the committee. Thank you, Chair.

CHAIR—Thank you very much, Major General. Are there any further comments by anyone else? As there are none, we will proceed to questions. Major General, while there is a 24-month delay in the schedule in terms of training, what about in terms of operational capability?

Major Gen. Fraser—That will have a commensurate impact on operational capability. As for both the company and ourselves, what we are seeking to do is to find ways to mitigate and offset the training through things like not just waiting to conduct the training on the aircraft but looking for lead-in skills and providing our crews with some lead-in skills so that we can reduce the time to develop operational capability. It might also assist in reducing the time required to physically transition on to the aircraft. By this I mean things like simulator work, some work on twin-glass cockpits and some other sort of flying in that way to try and constrain as best we possibly can the slippage.

CHAIR—What about the time? Will it be months or years?

Major Gen. Fraser—Given the current issues, it looks as if we should be able to produce a troop capability by December 2008, and the full squadron capability will be some time after that.

CHAIR—How far behind schedule is that?

Major Gen. Fraser—The contracted initial operational capability for ‘individually trained’ was to be in July this year and then it would take a period of eight to 10 months to train them collectively, so that Army would take them once they have been trained. So we would have expected that in March to April 2008 we would have a war-fighting operational capability.

Senator HOGG—Chair, may I ask a follow-on question?

CHAIR—Yes, Senator.

Senator HOGG—There is a direct question here. If the capability is being delayed, what is filling in the capability in the period of time? Otherwise, is there a capability that we are doing without?

Major Gen. Fraser—Senator, you are quite right. We cannot produce what the armed reconnaissance helicopter was going to provide in capability. What we have done is to extend the Kiowa fleet that was providing reconnaissance, and it is serving in East Timor at the moment. We had planned to withdraw the Kiowas as the Tigers were fielded to the operational units—to withdraw them from service from the operational side and provide the Tigers into service. Clearly, we have delayed that withdrawal from service. Therefore you then pose a question as to how we compensate as to the financial issues. The readiness for training has a liquidated damages bill of \$10.2 million attached to it, which the company acknowledges it will need to pay. We will execute that once we gain delivery of the Tiger flight simulator.

Dr JENSEN—I would like to take this right back to the beginning. The company won the contract on the basis of quite a few things. One was that the perceived risk at the time was not high because it was seen as off-the-shelf technology, so we would not be the lead customer as it was being used by other militaries. The first question that I have is: why was that risk inadequately addressed?

Major Gen. Fraser—The helicopter is not unique to this program. We discussed elsewhere how DMO and the militaries around the world effectively measure and come to a suitable contractual arrangement with the companies to deliver an operational capability. The aircraft were compared and measured against each other and rated, and the Tiger was selected as being the best value for money and the best to suit our requirements. When assessing this particular aircraft, only 14 of the 900 core requirements have been changed for the Australian aircraft. One of them is significant and that is the Hellfire missile system that I spoke of earlier. You would expect that it would have been very difficult to integrate a US system, with its security issues, into a European—French—helicopter, but that has been very successful.

How have we identified the risk and how have we quantified the risk in reviewing it and still ended up being two years late in training—which is what we have done and why France has done the same thing, and their program was to lead us by 18 months—is a valid question. We will continue to try and do that and we have taken those lessons for the MRH90. Looking at one of the other competitors, a Bell product in the US, it has been reported in the media, as you have seen, that it is also significantly later than the Tiger program. Collectively around the world we have a difficulty in the arrangement in coming to that genuine understanding between industry and ourselves as to what both can realistically achieve and go into contract for.

We have mitigated it as best we can and the contractor is genuinely committed to trying to work with us. The evidence from the work that Australian Aerospace and its parent company have done to try and correct some of these schedule slippages, such as sending out their most senior flying instructor in April last year and deploying their most senior German flying instructor to us, until just recently, is a genuine commitment from them. But we need to continue to find ways to introduce this capability into the Army.

Brig. Dudgeon—Dr Jensen, you intimated that perhaps we are now the lead customer, and you did that at the last sitting. France and Germany are well and truly still the lead customers of the Tiger. One of the major risk-mitigating factors early on was that we would leverage off this certification basis of the French product, the HAP Tiger, and we still do that. The French and the Germans are the ones carrying a great deal of the risk in developing the product.

Dr JENSEN—When are they going to see service introduction in France and Germany?

Brig. Dudgeon—They have received more Tigers than us now. They have flown marginally more—another 500 hours more than us. The French and the Germans have flown similar hours. They have trained more instructors and are now training pilots. You cannot put the thing into service without training pilots.

Dr JENSEN—I am aware that Defence has made the point that we were more advanced in our Tiger time line than either the French or the Germans.

Brig. Dudgeon—That is incorrect. We are not more advanced than France and Germany. We are trailing them and we are based on their certification basis, and that is one of the reasons that we are two years late. We could not train our people because they had not accepted their aeroplanes. So a lot of that risk has been borne by them. That transfers to Australia. In fact, we do not have this capability as talked about before. The contractor, Australian Aerospace, is taking that risk because they are paying damages while not delivering a product.

Dr JENSEN—Even if we are not the lead customer, we are certainly one of the lead customers, if you can put it that way. Is the amount of money that we have spent on T&E adequate, given how immature the project was?

Major Gen. Fraser—I will close both those together and add more to the comment that was just made. Much of the information clearly before the committee was based on the Australian National Audit Office report. I need to be very careful that we are not citing the information in that report as being inaccurate. The perception that Australia was the lead customer was based on the engineering work that is done by France on our behalf. What they would do is take an enduring issue for Tiger, process it and, in Australia's case, migrate that straight to us so that we could introduce it into our aircraft and work on our aircraft. In the case of France, they would batch them up and then give them to France in a batch. That was why we closed that 18-month gap. Yes, we did accept an aircraft before France did, but we are not actually ahead of them in total capability or in training issues. What was the thrust of the second part of your question?

Dr JENSEN—The test and evaluation.

Major Gen. Fraser—At the last committee I gave you an indication that we had spent a very small amount of \$3.1 million out of the amounts. We did embed in Eurocopter, at their expense and not at our expense, a flight test crew for three years. It was great development for the understanding of our aircraft and our aircraft systems. The majority of our concerns for the test evaluation will be the actual fielding in the Australian environment. That will be different to the European environment.

The pure aircraft issues are really theirs. We have invested funding in the Hellfire test and evaluation. We will spend more on the helmet mounted sight and display because we will take that beyond what the Europeans are going to use it for. We will conduct some developmental flight testing work on that. We have a fair amount from them and an understanding from them, without cost to us, and that is why it has not shown up perhaps as much as it would be. We would like to make sure that we do that operational test and evaluation as we field the aircraft into the operational units, to give us the war-fighting capability in the Australian context. This is where we consider it very important for the test evaluation funding.

Dr JENSEN—As part of the contract, one of the things that helped the helicopter over the line—we have gone through life support costs—was the commercial helicopter, the EC120 line that was supposed to be built where 30 to 50 helicopters per annum were to be made. My understanding is that we still do not have that. Eurocopter indicate otherwise but I understand that what they have actually set up is its final assembly. It is not a production line.

Major Gen. Fraser—It is an assembly but they have established all the tooling and all the training and have delivered 11 EC120s at this point. The Australian industry content package is

\$640 million over 10 years. We are nearly halfway through that industry content package timeframe. Where they have not been able to provide and where there has been an issue—for example, with one contract they wished to set up something; it was Australian industry content—Australian Aerospace have done a good job. They have gone out and, for example, announced they are going to establish a composites facility within Australia and invest the money into that, skill up Australian personnel and Australian industry people and develop that capability for us, which we have not previously had. They have shown that they are committed to it. They have got another five years to run on the EC120 and if they do not meet that they are contractually bound and they will need to find another way to ensure that the Australian industry content part is met.

Dr JENSEN—Joe Moharich’s submission was quite critical but one thing that I would like—and this is obviously on notice—is the table where key matters such as delivery performance et cetera specified in the request for tender were varied in the contract when subsequent amendments were made. If that could be listed it would be very useful.

Major Gen. Fraser—I can actually answer most of that for you here. In the process that we used, the audit report certainly made issue that we had accepted aircraft into service in December 2004, to start its testing and our training, with some deficiencies. They were agreed deficiencies with the company for most of the issues. Where they are not, we document each of those deficiencies, with the company undertaking to rectify them. There has been some discussion at Senate estimates, for example, on the deficiencies of one of the aircraft, ARH1. That has now undertaken its retrofit. It had a major service, it has completed the retrofit part and it is under testing for that retrofit work before it goes into full instrumentation. We use that as our instrumented aircraft. Where there have been variances, we have not lost capability in any aspect on Tiger at this point. It is our plan to deliver full capability to Army. As for the issue of the competitor making those claims—I am aware of the documentation—that particular program was due to provide us with aircraft in a similar timeframe to Tiger. We had two aircraft from December 2004 and we have now got six aircraft. The US Marine—

Dr JENSEN—I am not arguing for the competitor’s product. What I am wanting is a list of the variations that have been made subsequent to the initial contract having been signed. I am quite happy for you to take that on notice; if you could provide that to the committee I would appreciate it.

Major Gen. Fraser—I shall do. I can put a boundary around that for you, if you like. I gave an answer to Dr Gumley’s question previously that we made a 1.18 per cent variation in contract change proposal of cost to the Commonwealth. I checked the figures: it was actually a 1.2 per cent difference. One of those eight contract change proposals was for \$10.8 million to remedy the simulator. The remainder was a very small amount so the other million or so makes up this very small amount of \$3 million or so. So the actual cost issues of our contract changes have been very small. The number of contract change proposals is mostly tied to administrative changes or documentation type issues but with no cost issue to the Commonwealth.

CHAIR—Dr Gumley, I was reading through the Auditor’s report. It states that the acquisition contract would allow the DMO to withhold part of the payment if the aircraft did not meet contractual specifications. The DMO chose not to do that. Why was that the case?

Dr Gumley—I will refer that to Major General Fraser.

Major Gen. Fraser—I can assist you there. The first numbers of aircraft were paid. That is quite right and ANAO pointed that out to the Commonwealth. What was withheld was 50 per cent of the type certification payment because there were certification issues. There was concern about the certification of each of those parts of the aircraft. What we have done since—and it is a new team—is make only a partial payment for the delivery of ARH6 and withheld payment for that particular aircraft, unique to that aircraft issue, because the type certificate milestone has been paid. We have set in process and are withholding payments particular to the aircraft.

Brig. Dudgeon—That is in the order of 20 per cent for each aircraft. For ARH6 we are withholding 20 per cent of the payment. It was also delivered substantially late so the Commonwealth was paid over a million dollars in liquidated damages for that. ARH7 is late, ARH8 is late and I understand that there are liquidated damages attached to that and, if they are not delivered at the contractual capability, they will be paid 80 per cent of the payment as well.

Ms GRIERSON—That did not happen for the first three. Why did that not happen?

Brig. Dudgeon—As the general explained, for the first two helicopters it did, on delivery of the payment attached to the certification basis, once we achieved an Australian military type certificate.

Ms GRIERSON—But you accepted them without it, didn't you?

Major Gen. Fraser—The first aircraft were accepted on a special flight permit before the type certification so that milestone had not even been paid and not been partially paid. They had not achieved the milestone for it. You are quite right in that in retrospect there was a better way of doing it rather than the way we did with the future milestone—it was a different team—but perhaps there was a better way to have done that. We have learnt that lesson and that is why we have applied it to ARH6.

CHAIR—Thank you. That is good.

Senator MARK BISHOP—Dr Gumley, I want to tidy up four or five issues from last time. We had evidence last time—it was in the ANAO report but I cannot recall which report—that the tendering process had been fast-tracked from the usual six months to six weeks. Why was it fast-tracked? What was the reasoning at the time? Did it contribute to the issue of that lengthy discussion we had last time on through live costs?

Dr Gumley—The tender evaluation was six weeks and by then the company would have put in its through-life cost numbers so I do not think it has contributed to the company underbidding. The company was taking a corporate decision to set up in Australia. They needed an anchor contract and they bought the contract.

Senator MARK BISHOP—That answers that. Why was the tendering process reduced from six months to six weeks?

Dr Gumley—A lot of people in industry and in government were concerned that Defence was taking too long with making decisions. The team put an enormous amount of resources into a concentrated period rather than let it just dribble on for months and months. I cannot fault that decision. A huge amount of effort went into a six-week period to get a result.

Senator MARK BISHOP—When you say that you cannot fault the decision, can you assure us that you would have gained the same outcome if it had been done over a lengthier period but at a more diligent pace?

Dr Gumley—I think we would have got exactly the same result.

Senator MARK BISHOP—My understanding is—and correct me if I am wrong—that the Tigers are supposed to provide all-weather reconnaissance and fire support for people capability for the ADF.

Major Gen. Fraser—That is correct.

Senator MARK BISHOP—I understand that there are problems with the craft's exit system. Is that correct and has that been remedied as yet?

Major Gen. Fraser—As was provided, I think by Mr Saporito, at this committee previously, the aircraft will fly over water. There is not a problem with Tiger. It will fly over water. It is not an issue of concern about the aircraft itself. In Australia we have a very robust, operational airworthiness system and apply to our troops standards in our risk mitigation system that are as high as those of anyone in the world.

The issue of escaping from a tandem-seat helicopter in the event that it does ditch into the water is a very high-profile issue around the world. Other nations have a similar issue with it. The UK in particular have some restrictions on their aircraft. The way in which we are approaching it is that we want to establish a better system of egress out of the aircraft so that you can jettison the windows from either the front or the back of the aircraft and, in the event that—because it is a combat aircraft—one of the crew is incapacitated, the other one can conduct that jettison, as well as having a manual system. It has a ballistic system at the moment and, once you are under water, it is not wise to fire that system because of the repercussions for the individuals inside the cockpit. So we are developing a mechanism to break out of the aircraft manually.

The issue for Tiger is that, because it is such a digital system and everything is tuned to the weapons system electronically within the cockpit—including wherever you turn your head; the cannon is slave to wherever you turn your head and slave to the helmet—we need to ensure that every piece of metal is mapped and digitally tracked so that we can provide an accurate system for the weapons system and the queuing devices.

Senator MARK BISHOP—That is a major aspect of the work. Is that still a work in progress?

Major Gen. Fraser—That is still a work in progress. Work has been conducted on the manual part. There is initial scoping but there is still work to be done on the electronic part. I offer to you that, if we needed to deploy the aircraft when we had it operationally ready and this was the

only issue, we would probably be prepared to accept that risk, depending on what the operation was at the time. We would put it into some priority. But it is incumbent upon us to set up as best we can the safest system to let our crews escape.

Senator MARK BISHOP—Is having the dual exit system front and back and having the digital and the manual systems—that matrix of alternatives for the crew to be able to exit over water, under water and presumably over land—a direct consequence of us having higher safety demands in this country for military personnel as opposed to the demands in the European countries?

Major Gen. Fraser—That is true to an extent. But a separate part to that is that we are going to operate this aircraft slightly differently to the Europeans. We operate more in the literal environment. So when the Europeans conduct their risk management plan as to what risk they are prepared to accept, they will expect to fly over water less often than Australian crews would expect to, so the exposure is higher. Therefore it is incumbent on us, we think, to reduce that risk by having this better escape mechanism.

Senator MARK BISHOP—Why do you say we are going to be flying significantly more over water when it is an Army reconnaissance helicopter and presumably most of its use would be in land reconnaissance and land engagement?

Major Gen. Fraser—True, but a lot of our work is conducted currently from *Manoora* and *Kanimbla*, where we conduct amphibious assaults and work in the literal areas. The Tigers will work as part of that combat team—the combined arms team—working with our air mobile capability, bringing our troops to shore.

Senator MARK BISHOP—In terms of the complex matrix for the exit, what sort of time frame are your people working to?

Major Gen. Fraser—One of those issue papers that I mentioned earlier is the means by which we will monitor this. This is not our highest priority issue at this point, so work is continuing as we have sufficient engineering advice and sufficient engineers available. I have to indicate to you that one of the stress points for both the contractor and for us is the availability of sufficient aeronautical engineers in this country to be able to effect this. So we have prioritised a work schedule. We expect the majority of that testing to be done this year.

Senator MARK BISHOP—So, when we take the final operational acceptance of the dozen Tigers, albeit two years late, this problem might still be a work in progress because it is not one of the absolute priorities to be attended to before acceptance for operations.

Major Gen. Fraser—We would expect it to be finished. Our expectation is that that would still be completed for the initial operational capability.

Senator MARK BISHOP—That is your current expectation?

Major Gen. Fraser—That is our current expectation.

Senator MARK BISHOP—We also had some evidence—in fact, it might have been press reporting—that there were further difficulties with Tigers flying over long distances, especially in desert and dusty conditions, which is probably a little alien to most of Europe. Has that been identified as an issue and, if so, has a solution been found to it yet?

Major Gen. Fraser—There is no issue there. In June last year, we deployed four aircraft from Oakey to Woomera, where there is as much dust and hostile environment as you can get. They operated for 30 days in Woomera, during which they achieved 120 flight hours. Perhaps you are considering a dust- or sand-filter system for the Tiger, which we are yet to fit to the aircraft; but we will be doing that. That work is planned to be done so that we can operate out in the field, in the dust, more harshly than we have been operating at Woomera.

Brig. Dudgeon—A piece of role equipment is being certified by the Europeans and we have elected to buy full sets of the sand filter for Australia, given our dusty and sandy environment, and they will be fitted.

Senator MARK BISHOP—Would you anticipate the Tigers to work in dustier desert conditions than the conditions experienced when you did your extensive trialling up at Woomera?

Major Gen. Fraser—Our contractual requirement is to operate in the harshest of environmental conditions. Our area is such that we will require the aircraft to work effectively in a high-dust environment. We have deployed our aircraft and, as you can see, we have aircraft deployed overseas at the moment where there are significant variances in environments and we need to be able to match them to those environments and to support them.

Senator MARK BISHOP—So some of the conditions in places like Iraq and Afghanistan are physically worse—in terms of dust, dirt, desert and wind—than our central areas.

Major Gen. Fraser—Even in the northern part of Australia, there is an extreme amount of dust. What is different in some other parts is sand. The first time that we deployed Chinook across to the Middle East, we found that sand erodes the compressors and engine parts more significantly than dust does. However, the sand filtration systems should filter out most of that; that is what we are protecting them from.

Senator MARK BISHOP—You told us last time that six of the Tigers had been delivered, 1,170 hours had been flown to date and nine pilots had been qualified. Half a dozen Tigers are still to be delivered. Will they be ready for delivery and acceptance by Flight later this year, or is that also delayed?

Major Gen. Fraser—There are 22 Tigers under this program. As you say, we have accepted six aircraft. We expect to take delivery of at least another five this year. The final delivery will be in mid-2009, which is one year after originally planned and scheduled for.

Senator MARK BISHOP—So in mid-2009 there will be final delivery of the last of the 22 for Flight, but thereafter it will be another 12 months before there is full operational capability.

Major Gen. Fraser—Our plan is that we would have operational capability—certainly at squadron level—well before that time. It is one of the compression issues towards the back end of the program, where we are not as dependent on aircraft delivery for the full operational capability. A little bit before that time, we will have full operational capability.

Senator MARK BISHOP—I want to get this right, so just run with me. At this stage, we have a 24-month delay in operational capability.

Major Gen. Fraser—It is 24 four months in training, so it is for the training of the crews. We did not expect to have an operational capability until March 2008; on the schedule, that was the earliest we had planned. There is clear delay to that. Is it the full two years? It is likely that it will be the full two years, but we are trying to find and identify ways at the moment not to have it slide out to that full two years. We have not realised that delay yet because we are not anywhere near that point.

CHAIR—The operational capability of 2008, give or take some delays, will still only be for the first six that you have received.

Major Gen. Fraser—For the first squadron—and I will just ask my partner here—the full operational capability for the regiment, for the two squadrons of the aircraft, is 2,012. That is for the total 22 aircraft to be fully delivered for the two fighting squadron units. A troop is made up of two aircraft, a squadron is made of up six aircraft and the regiment is made up of the 12 aircraft.

CHAIR—What is the life of the helicopter?

Major Gen. Fraser—It is at least 25 years.

CHAIR—From which date?

Major Gen. Fraser—From delivery of the first aircraft, 2004.

Brig. Dudgeon—So that is out to 2029.

CHAIR—Does that clarify it for you, Senator Bishop?

Senator MARK BISHOP—No, that has made it worse.

Senator HOGG—That has confused him even more.

Senator MARK BISHOP—Are we talking about squadron level or regiment level?

Major Gen. Fraser—Most of the time we have been talking about ‘squadron’, because the initial operational capability is for a squadron requirement.

Senator MARK BISHOP—And that is for six.

Major Gen. Fraser—That is for six aircraft; that is correct.

Senator MARK BISHOP—We already have a squadron and we anticipate another squadron towards the end of next year; is that correct?

Major Gen. Fraser—To complicate it slightly more—I am sorry—it is not just about the operational part. In order to have the operational unit filled, we clearly have to have a training organisation. So our numbers or our requirement is higher than just the six aircraft; for an initial operational capability to be delivered, we need 11 aircraft and personnel to conduct the training. The initial operational capability though for squadron—that is what is important to Army: ‘When will we have our first war fighting capability at squadron level?’—was contracted for ‘individually trained’ mid this year and ‘collectively trained’ March 2008. We expect delay to that. At this point, if we roll straight through the training, it will be two years beyond that. But we are attempting to compress it.

Ms GRIERSON—Will they have complete capability, as in your original specifications, or have there been compromises?

Major Gen. Fraser—No, there will be full capability. That is the program that we have established. We expect to have full capability of the aircraft by March 2009.

CHAIR—So the very last squadron that you receive will not be until when? If the current one will be operational in March 2008 and your final delivery is in 2009, when will the capability of the 2009 one be?

Major Gen. Fraser—It will be 2012. That is when the complete project is finished, everything is fielded and full war fighting capability—

CHAIR—So we will only have 17 years out of the helicopter from that time on.

Major Gen. Fraser—When we set minimum life, for example, the Iroquois was to be a very short time frame; it should be a throwaway aircraft under the US concept. Here we are flying it some 42 years later and about to take it out of service. When we plan and contract, we set up a plan that is for a reasonable time frame. During the conduct of our flying operations, we look to see whether we need to conduct a mid-life upgrade or how we would extend the life of that program beyond its initial 25-year contracted period.

Brig. Dudgeon—I think it is also important to note that the capability is not just the helicopter; it is an incremental delivery of that capability. We have a capability now; we are training people at Oakey and we have flown over 1,100 hours. We will increase that incrementally, as the capability of the helicopter increases, as the certification basis comes from Europe. The contractor is putting every effort into reducing that schedule slippage. For example, the executive vice president and the senior training personnel from Europe are coming out here next week with the head of the European certification agency, DGA, to look at the program here and at ways they could reduce that schedule—for example, sending instructors to Europe to train, which they are looking very closely at now; deploying their instructors here to assist; and looking at potentially introducing a day weapon capability earlier than we might have anticipated while we work on the other work.

Brig. Dudgeon—Perhaps I might add that the equivalent of Dr Gumley's organisation, DMO, in France has been an outstanding support to us. At no cost to the Commonwealth, it has provided us with all of the engineering to this point. It is appropriate that I recognise that, because we have been critical of the French system being late. They have done an outstanding job to assist us. They are coming out next week because we have raised concerns about the program's schedule. We need to find ways to reduce that schedule slippage and introduce an operational capability. So their No. 2 officer is coming out next week with Eurocopter to try to assist us. In addition, the equivalent of the DMO's Dr Gumley will be out for Avalon and we will have similar discussions at that level. It is a challenge. We are not trying to create an issue here that the project is fine. We are facing some significant challenges. We are working closely with the French army and the German army to address these issues and introduce them.

I go back to my earlier point about this being a challenge for all of us across the world at the moment. With tandem seat, the introduction of new aircraft types is a significant challenge for not only us but also every other country and those who have trialled it have suffered just as many difficulties as we have.

Dr JENSEN—What have they done with it in the past? Tandem seat aircraft are hardly new. You had Cobras back in the sixties, so why is it only now that it has become an issue?

Major Gen. Fraser—The aircraft and the weapons system that we have are more complex than anything done with the Iroquois. In addition, perhaps they were done under a different regime in a different environment, where we were prepared to accept higher levels of risk and sometimes suffer the consequences. Certainly the Cobra was developed in the Vietnam time frame and in the Vietnam environment. Are we are prepared to take that level of risk at the moment? No, because we are not confronted with—

Dr JENSEN—But the Apache was obviously developed post that period.

Major Gen. Fraser—The Apache has been developed, but the UK system was also three years late in training. They suffered a very similar issue in training.

Dr JENSEN—Yes, but I suppose here I am trying to get my head around the fact that you had the Apache, which was postwar; therefore, in operational terms, you have had to look at a peacetime scenario. However, it only seems to be now that it has been recognised there is a problem with flying these things over water in terms of crew egress. Why has it taken so long for that to become an issue?

Major Gen. Fraser—It has been an issue for quite some time. It was an issue in the US; when they flew the Cobra seven years ago, I recall very similar angst in discussions when they were flying and operating aircraft in the environment over Hawaii. So it is not just a new issue for us. But how do you address it? As we continue, more and more we are expected to take a measured risk only. However, looking at the UK environment and the risk they took in Iraq the other day when their soldiers on pontoons on the Apache went and recovered one of their lost soldiers, you would have to say that is a fair risk acceptance.

Dr JENSEN—Absolutely.

Major Gen. Fraser—Our job in DMO is to develop a war-fighting capability for Army in terms of aircraft and support systems and to work closely with Army, where both the brigadier and I have served previously as operational commanders, to develop a true war-fighting capability that will serve this nation and, importantly, will serve our soldiers on operations.

CHAIR—You made a comment earlier that France's equivalent of the DMO's Dr Gumley has been excellent. That begs the question: should the DMO be benchmarking themselves against your French counterparts?

Dr Gumley—We regularly benchmark ourselves against a number of countries. Earlier on in the in-camera session, we talked about some of the underlying risks that go on, but one of the things that work for us is the government-to-government cooperation. For example, there were the C17s, which was because of excellent cooperation between the Australian government and the US government. We are cooperating closely with the French government on this, we are working with the British and we are talking to the Canadians. It is one of the areas of the whole acquisition environment that does not get a lot of attention but, in fact, it is a key driver of success; it is also a key driver of areas where we can all improve. The benchmarking is continuous. I put charts up at my business plan review each month in DMO to see how we compare against the British and the Americans. I have already given evidence in Senate estimates that we actually compare quite favourably with the other acquisition environments.

Miss JACKIE KELLY—I want to take you back to answers you gave to a few questions on notice regarding contract change proposals—probably about the FFG and the Air 87 project. I am referring to question W15. Your response to a question about the total number of contract change proposals raised—this goes back to something that Mr Fraser said—was that 28 related to through-life support, of which three were initiated by the Commonwealth. Is that right?

Brig. Dudgeon—Three were, yes.

Miss JACKIE KELLY—How many of those had a cost implication?

Brig. Dudgeon—Eighteen per cent of the total CCP—so that is both the contract change proposal for through-life support as well as for the acquisition side—had cost implications that totalled \$14 million, which is the 1.21 per cent of our budget.

Miss JACKIE KELLY—So, of the contract change proposals raised, not all were approved, obviously?

Major Gen. Fraser—No, a rate of about 50 per cent gets approved.

Miss JACKIE KELLY—Can you take me through that?

Major Gen. Fraser—I will help you with the sums there: 168 in total were raised; 52 of those were initiated by the Commonwealth, which is 31 per cent; and 49 per cent of the contract change proposals were approved.

Miss JACKIE KELLY—Can you break that down on a cost basis?

Major Gen. Fraser—The total cost was \$14 million of approved CCPs. Only 18 per cent of the approved contract change proposals had cost implications. That came to the \$14 million.

Miss JACKIE KELLY—How do we get to the stage where the ANAO finds that the contractor—and this is this through-life support—has subsequently come back to you with a \$625 million bid, which you have asked them to go away and review? That is going to be more than \$14 million.

Dr Gumley—I gave evidence last time that, when we specified the extent of work in the through-life contract, we did not get it all right. In fact, we actually expanded the scope of work. So part of what the company is asking for is what we have asked for—we have actually asked them to do more work.

Miss JACKIE KELLY—So that was part of the three through-life support ones initiated by the Commonwealth. Although it is only 11 per cent of the actual CCPs, it a huge. If you take the ANAO's figures, it is nearly another 50 per cent of the total cost of the project.

Major Gen. Fraser—We will not accept that we should be paying additional through-life support costs on this aircraft until we review it after a five-year period. That is certainly the ambit claim by the contractor to start with. Mr Saporito gave evidence, I think, to this committee last time that he is required to abide by the contract. This will test the contract and this will test us. There is no doubt about that. But it is our intention not to pay them for additional work. They wrote a contract. They agreed to a contract to provide us with a service. They now have additional business. They have an MRH90 program. We would need to look at them holistically as an organisation, not just in their open-book way—and they are prepared to do that—and not just in an isolated ARH contract.

Miss JACKIE KELLY—So you are saying that they can offset some of the losses on the ARH with the MRH?

Major Gen. Fraser—No, I will not say that. It is a business issue for them and an issue of their survivability within this country. My understanding is that we would get to this point. If they come along and say, 'If you don't help us out here, we're going to go under on the Tiger', that is how you would expect it would probably play out.

Miss JACKIE KELLY—You would, on what was originally put to government on a \$1.2 billion project with a \$625 million overrun. You cannot make money on that.

Major Gen. Fraser—That is right, over a 15-year through-life contract period. Clearly that claim is what we would regard as a very high claim. We have agreed to review the project after five years on the through-life costs. It was in the contract anyway that we would review the through-life support costs at an appropriate time. We will look at what those costs are and, in an open-book way, compare them to see what is reasonable. If it is a reasonable case then we will consider it. But it is not just going to be done in isolation on the Tiger program. If we cross-reference it, now we have the MRH90, if you take the electronic warfare system and the support to the software, we have set up a combined software cell that will support both Tiger and the MRH90. It is not just going to be unique to the Tiger because there is a lot of commonality

between Tiger and the MRH90. I think that is another reason why we cannot just consider it in isolation.

Dr Gumley—As a general DMO issue, I would not want anyone to think that we just accept any ambit claims that a company puts to us. There is a contract and a group of supplies. We pay for those supplies. If we want a few more supplies, we pay for them too. But we just do not sit back and accept people putting in a low bid to win a contract and then expecting us to pay. It is not fair on the taxpayer.

Ms GRIERSON—But you can understand why we would be concerned about the fact that a way for them to recover losses is through life-support because the relationship becomes critical to the operation of the aircraft.

Dr Gumley—Yes, and you are back into a sole source environment again, which is a fundamental issue with contracting, in my view.

Ms GRIERSON—Major General Fraser, you said you were not part of the original project team. What happened to them? We talked in our in camera session about what happened to people. Where are they now?

Major Gen. Fraser—I might answer that. I think there was some discussion in camera about project management other than military. But if I can explain the military, if we take Brigadier Dudgeon, for example, he was part of capability development at the time for developing the requirement for the aircraft. He then became the team leader in France for three years of the project then served in the operational unit for the airworthiness side—an introduction of the aircraft for 18 months—and he has now recently come back into the organisation as the project authority and as the director-general. So we have kept continuity of military people through that way.

Ms GRIERSON—What was his name?

Major Gen. Fraser—Brigadier Dudgeon.

Ms GRIERSON—He's the brigadier here. He is our survivor! What about the others?

Miss JACKIE KELLY—If you go to your answer to question W3, which position are you referring to? You have a list of seven different positions but all have different—

Brig. Dudgeon—They just change in name, basically. The first one is Director-General Army Reconnaissance Helicopter; now he is Director-General Army Aviation Systems, which is responsible for Tiger and MRH90. The reason for that is obvious. It is because it is a common contractor. Australian Aerospace is structured the same way and has put a vice-president in charge of both.

Miss JACKIE KELLY—Then, going down to No. 5, you have an ARH project director.

Brig. Dudgeon—That person works to me. I have an ARH and another director who work to me. At the time I was running the team to deliver the Tiger at in-service date, and we did that

successfully. My chief engineer is now in that similar position to deliver the MRH90. The software engineer at that time is now also the software engineer for MRH90. So we are bringing people who delivered successfully last time back into the capability to make sure that we get project ARH back on track.

Miss JACKIE KELLY—So you appear twice in this one.

Brig. Dudgeon—I do not. I am there as Andrew Dudgeon. The only name there twice is Gary Michajlow, who was the project director, and he was there only for a short time. As you can see, when General Fraser was promoted to his current position and before I came in October, Gary Michajlow stood in as the acting director-general for a short period. Then I came in October and I have been here for the last five months. I am directly responsible for both projects, to bring them together.

Major Gen. Fraser—Miss Kelly, the point that I made earlier was that the brigadier then, as a lieutenant colonel, was in France as the team leader working with the contractor to get the first four aircraft assembled and the first two aircraft for delivery before returning back to Australia.

Miss JACKIE KELLY—But he had no authority to sign off, to pay an instalment. When you look at when instalments are being paid—

Major Gen. Fraser—That is correct.

Miss JACKIE KELLY—These names that you have provided us with are the people who were authorised to make an instalment, a milestone, an earned value payment.

Major Gen. Fraser—That is correct. They had authority to make payments to the contractor on behalf of the Commonwealth. If I go to the deputy chair's point—I would hate to be misinterpreted or perhaps I did not state this clearly—yes, we are a new team. But the team before us did a great job under fairly difficult circumstances, and I do not want to create that—

Miss JACKIE KELLY—What were the difficult circumstances, from your point of view?

Major Gen. Fraser—It is a time compression. Like anything that we are trying to do, you try and introduce a capability and do it as quickly as you possibly can and as professionally as you can.

Miss JACKIE KELLY—Was the contract deficient, which made it difficult?

Major Gen. Fraser—If you look at the program, you see it is not just an Australian program. They found ways, particularly with the engineering, to reduce the slippage of the Franco-German program to compress it as much as possible and work with DGA, the French organisation, so that we could take delivery of our aircraft and conduct some flying and learn about the aircraft.

Ms GRIERSON—Does that imply that milestone payments were not withheld as a conscious decision in order to keep the project flowing and to keep the cash flowing to the provider?

Brig. Dudgeon—They were withheld.

Ms GRIERSON—When?

Major Gen. Fraser—The type certificate payments were withheld. The payment was made for the ARH135 but there was payment withheld that is on a milestone for the type certification. So the whole principle is: how do we maintain commercial leverage over this contractor to deliver us a capability? It is done in two ways. There is another part for a certification milestone that is yet to be paid, and at the end of the program we have a \$52 million payment for services. They have clearly not been paid yet. The additional type certification yet to be paid for is in—

Miss JACKIE KELLY—But so far \$1.2 billion and \$1.9 billion has been paid?

Major Gen. Fraser—That is true. We have expended 60 per cent of the project. Ninety-three per cent of that has gone to Australian Aerospace, and we have achieved 70 per cent of our milestones.

Ms GRIERSON—Dr Gumley, you would have reviewed the work of the first project team. What sort of satisfaction rating would you give that?

Dr Gumley—I think the project team has done pretty well. It appears that there was one error on our way through, which was defining a milestone. That was for ARH5. I think you would have to say that, perhaps in hindsight, we accepted No. 5 a bit early. But that was just a matter of fact: here is the amount of work that we think has been done and does that meet the milestone? As I think I said last time, it has not cost the Commonwealth any money; it is just that we hit the milestone a month or two early and, in hindsight, we would have paid the bill two months after that.

Miss JACKIE KELLY—Was the person responsible for ticking off that milestone Brigadier Dudgeon when he was in France?

Brig. Dudgeon—I was responsible for delivering the first two targets to in-service date, which was in accordance with government direction. That was the expectation that was set out in the white paper.

Miss JACKIE KELLY—So you were there with the aircraft in France and you said, ‘Yes, the milestone has been hit; send the signal’?

Brig. Dudgeon—And deliver the helicopters at a grand ceremony here.

Dr Gumley—And those milestones were hit one and two. They were okay. I am talking about helicopter No. 5. In hindsight, we probably guessed wrongly. Guessed is a bad word; we probably made a judgement wrongly and we paid the money two months early.

CHAIR—So you said it was in accordance with the white paper specifications?

Brig. Dudgeon—The white paper specifications were that the armed reconnaissance helicopter in-service date was 15 December 2004.

CHAIR—Was the specification in the white paper incorrect then?

Brig. Dudgeon—No. It just stated that the armed reconnaissance helicopter in-service date was for delivery in December 2004. I spent the three years preceding that making sure delivery on that date occurred, and it did. We had to set a clear guideline of what was expected on that date—that is, two helicopters, trained crews, a logistics support network to support it, facilities at Oakey. We have also built a \$90 million facility in Darwin where the first aviation regiment will go. That is complete. The training centre has also gone through a massive turnaround to be ready to commence training, which it is doing now. Ground training devices are about to be accepted. An enormous amount of work has gone on and things are being delivered on time.

Miss JACKIE KELLY—Was the director-general of the ARH project authority paid any progress or bonus payments regarding that milestone payment for No. 5 between 2001 and 2006?

Brig. Dudgeon—No.

Major Gen. Fraser—No. Military officers do not get bonuses. Let us have a look at the deal they struck when we compare it to another nation at the moment. We have 22 helicopters and support systems. Spain is buying two more—24 helicopters—for a project that is going to cost nearly double what it is costing us. If we look at the Marine Corps at the moment, we see the concerns that they have with the Cobra program are on the public record. It is somewhere near three to four years late. It was one of the competitors for us. They have some real difficulties with that program and the cost has increased significantly. We have held the contractor, up to the moment, to cost. It is well within the budget and the project approval.

CHAIR—Just so I can tie this off in terms of these performances, as military personnel you do not get performance bonuses. Are there any other forms of reward or incentive, however, that would be applicable to you in uniform as a result of this?

Dr Gumley—Yes. If they do really, really well, they get promoted.

Ms GRIERSON—And you often lose them.

CHAIR—I just want to tie it off: so if a crew like this did really well, they would get promoted and that would be it.

Major Gen. Fraser—What drives a military officer at the moment is an important issue which is much broader than the context of this committee. There is a lot being made of that issue of recruiting and retention. We are not doing it for the money.

CHAIR—Okay.

Major Gen. Fraser—It is appropriate that we get that on record.

Miss JACKIE KELLY—You are not bringing project management skills with you. You get them on the job. It is not as though you can go out and hire from industry. You are relying on uniformed people. You are relying on people who have consistently stayed in the DMO and

developed corporate knowledge with the project to be good project managers. If you look at the chopping and changing of personnel, not particularly on this project, but certainly on the FFG, you start to see a pattern where you are losing corporate knowledge.

Brig. Dudgeon—The Tiger project has stayed fairly solid. To answer your question about training, the military also trains us in project management. I have a Master's in technology and project management from Cranfield University in the United Kingdom, I am a master project director and I had experience as a project manager as well as being in the war fighting capability. Therefore, we are delivering the right capability, because I make sure that a Tiger ends up in Afghanistan, or wherever we might be in the near future, to support our soldiers. That is our focus—to deliver capability—and we are doing everything we can to do it.

CHAIR—Thank you.

Rear Adm. Ruting—I want to clarify one point. If you look at the FFG information, there have only been two project directors since just before the contract was signed. There are only two project directors in nine years on the FFG upgrade program.

Miss JACKIE KELLY—You are saying No. 1 and No. 2 are two different people.

Rear Adm. Ruting—No. 6 and No. 7 are the same person, No. 5 is a different person from No. 6. The contract was signed on 1 June 1999, so from April 1998, 15 months before the contract was signed, through to the present we have only had two project directors.

Miss JACKIE KELLY—The table you have provided shows seven since the contract was signed—seven in 10 years.

Rear Adm. Ruting—Quite a number of those were pre first pass. As I said, from April 1998 through to now, there were only two project directors involved in this project.

Miss JACKIE KELLY—And they are dealing with a contract they did not create.

Rear Adm. Ruting—No, the first one was involved when the contract was signed in June 1999. He had been there for 15 months before the contract was signed.

CHAIR—I need to leave soon, so I will hand over to the acting chair to complete the public meeting. There was a rhetorical question posed by you, Major General Fraser; I will pose a question for Dr Gumley to answer: how do you maintain commercial leverage?

Dr Gumley—Quite often with great difficulty. Once you get into a sole source contract situation, whether it be for an initial capability or through-life period, I mentioned earlier that quite often the leverage is more with the contractor than it is with the Commonwealth. At the moment we are developing some best practice sole source techniques. We are working with the Americans on that too because they have a similar issue with their contractors. I had a long discussion about that exact question with Mr Ken Kreig, who is my equivalent in the US, and they have a similar issue. The British use a form of regulation. They have a book about 200 pages thick about how you regulate the profitability of sole source contracts. It is a bit like how we regulate the electricity industry in Australia where you have the big electricity generators.

Once you get into the sole source area, you are in an area not of competition but of regulation. Then it becomes a very interesting and political point as to how much regulation you want in the economy. It becomes an economists' issue.

Ms GRIERSON—With the Tiger contract we have seen a problem with price being reliable and being the best indicator of a successful outcome. What is DMO doing to look at the capacity to deliver and the capability of an industry player or a tender against price?

Dr Gumley—At the time of the tender evaluation the companies put in their skill plan and their capability plan. We spent a lot of time looking at what they are doing. You have seen with Australian Aerospace and the Tiger project that they made a series of representations to government that they would do certain things. For the most part, they have done those. Where they have been caught—and I think we have already given evidence on this—and where we have been caught is that there are just not enough aeronautical engineers in this country, either on the government side of the fence or on the contractors side of the fence, to do everything that has been required. The company have put in their plans and we assess them against those.

Ms GRIERSON—I think this is probably something that we should track over time because you get to a stage where you have to just recover projects, redirect them and get them back on focus. Industry may have some work to do in terms of their capacity, and perhaps we should explore that further. In an answer given to a question on notice, DMO stated that a database of lessons learnt has been completed and compiled for all major activities and projects. If I asked you to submit to this committee a list of that database of lessons learnt from the two projects we are talking about today, would you be able to provide that?

Rear Adm. Ruting—The FFG lessons learnt document, which is I think is some five pages or so long, has been submitted to our minister for approval for release to the committee.

Ms GRIERSON—So once you have submitted it to him you cannot submit it to us until you get some sort of clearance; is that right?

Rear Adm. Ruting—Correct, the minister has to approve it.

Ms GRIERSON—That is a good cover. What is the situation with the other one? I hope the one that has been submitted to the minister has the right date on it.

Major Gen. Fraser—There have been a series of workshops conducted on the lessons learnt from projects. That is how the information is passed on in the immediate environment—plus there have been documented reports, such as the ANAO report and our responses to it. We take that and use it for lessons learnt. We have been able to migrate those across.

Ms GRIERSON—Dr Gumley, can you give me something that shows me that there is some record kept of lessons learnt and that someone then takes that and puts it into a policy or a practice which you might employ in projects?

Mr Gillis—One of the initiatives we are taking on in the project management world is that rather than just documenting it internally we are moving to publishing a lessons learnt document. For HMAS *Sirius*, one of our most recent projects, we are actually publishing—and we will be

publishing this by the middle of this year—a lessons learnt document. This is going to be available in the National Library. We are going to be producing a number of copies to send to our equivalent organisations around the world. I want to move the organisation from just having internal lessons learnt documents because they do get lost. You write a document, you put it in a file and it gets archived. Sometimes, for example, in the case of an auxiliary oiler, we may only purchase one of those every 20 years. So the best way to ensure that the message is never lost is to publish.

Ms GRIERSON—If it is not accompanied by how you modify process and practice, it is worthless.

Mr Gillis—Again, it is a process whereby once you have done that you then also identify in the lessons learnt what activities you are going to undertake to remedy any of the problems you have. So it is a discipline that we would have to undertake. Once you publish something, you are far more accountable.

Ms GRIERSON—Yes, you are held to it. That is true. You would have something to be held accountable to. Major General Fraser, you said that you had flown the Tiger. Brigadier Dudgeon, you obviously have.

Brig. Dudgeon—Yes, I have flown the Tiger.

Ms GRIERSON—How easy is it to fly?

Brig. Dudgeon—I have gone for a fly with an instructor and a test pilot, because to undertake a full conversion for old fellows like us is a waste of taxpayers' money.

Ms GRIERSON—It must have been fun.

Brig. Dudgeon—It was. It is magnificent. The new test pilot who came, one of the most experienced in Australia, says it is the best aeroplane he has ever flown. I have every confidence that the Tiger will produce a great capability for Australia.

Ms GRIERSON—Does it require very complex training? Are there any similarities?

Major Gen. Fraser—The design philosophy is to make the flying part as easy as you possibly can, because the focus is on fighting in a war environment. So all the aids, the autopilot systems and the queuing devices are to make it easier to fly.

Ms GRIERSON—I do not have any more questions on this project.

Senator HOGG—This is not on this subject specifically but in general: in the PBS we normally get a diatribe about DMO projects each year which means absolutely nothing, where they have come from. It has just been a straight cut-and-paste from previous years. Can DMO put some effort into making a plain English explanation on each project and the variations that occur in the spending programs so that we do not have to go through all of this?

Ms GRIERSON—I will follow up with a general question but if anyone has any specific questions on these two projects, I am happy to defer.

Senator MARK BISHOP—I want to go to the FSGs.

Major Gen. Fraser—Chair, before you go on to that, I need to correct a statement about the contract change proposals: I said that the total was for \$14 million; actually the top seven is \$14 million. I will need to give you the figure as to what the others are—a very small amount on top of that for the remainder of it.

Miss JACKIE KELLY—And break it down dollar-wise as to what is our request for change and what was their request for change.

Major Gen. Fraser—Shall do; understood, Miss Kelly.

Senator MARK BISHOP—Rear Admiral Ruting, I want to go back to the issue with the *Melbourne* and the *Sydney*. Could you do it relatively briefly for me? *Sydney* is the first ship. It has had sea trials. We had that question on notice where you said there were three particular problems identified with sonar, radar, and weapons and systems integration. It has come out of those sea trials and gone into routine maintenance dry dock in Sydney. It will be back in the water in April where you will do the sea trials to make sure your theoretical fix on those three problems works in practice. Meanwhile, you are doing platform sea trials with the *Melbourne* starting in March. Are the next round of sea trials on the *Sydney* addressing those three or four software issues? Are they now fixed with the conceptual work you have done or are the sea trials critical to making those new systems effectively operational capable?

Rear Adm. Ruting—I will pass over to Mr Adams to answer the detail on HMAS *Sydney*, in particular related to the type of trials that will be conducted over the next month or two.

Mr Adams—When we put ships into scheduled maintenance, part of the refit package is the test and trials component. The ship has been in at docking maintenance availability. It is in post-production now. It will proceed to sea in March, and we will take it west to do what we call qualification trials. Part of those qualification trials will focus on the underwater systems, the electronic support and the ADACS, which is the software.

The trials will be Navy trials and they will focus on a format that is used on pre-upgraded ships but using the more advanced specifications for the capabilities. We envisage that there will be improvements demonstrated in the underwater system because we have seen that in the lab with the software, and they are trialling and regression testing the software that will be put on the ship under concession for those trials.

With the electronic support, we are still awaiting Rafael to finalise their integration testing and they will be out here this month to do that. *Sydney* will have sailed. We will actually do that, once again, under concession on *Melbourne* to see the reaction and see things that they could not see in the lab. So we will have a feel for where the software fits, but it will not be ready to be trialled during the system qualification trials on *Sydney*.

The ADACS is the glue that marries it all together and the software that integrates your combat system. We have seen in the lab the latest drop of software, and it substantially reduces the number of problem reports but we will not get full benefit of that until they roll out baseline build 2 with the software. The reason for that is the integration testing and the rigour you require in your test program, so if you trial that software you have to go through doing these additional trials and it is a cost and impost on schedule. Navy will assess the ship with the software they have with an anticipation of what is coming with what has been shown in the lab.

Senator MARK BISHOP—The net of that is that you are going to do the sea trials on three areas. There is still significant work to be done on the final point, the integration of the three systems. You are going to trial it in both ships *Sydney* and *Melbourne* during this year and I conclude that you will not be able to give us an indicator of total acceptance at least until the end of this year.

Mr Adams—Total acceptance—

Senator MARK BISHOP—Of those systems and problems that Rear Admiral Ruting has identified and you are now retrialling at sea.

Mr Adams—The contractor has until final acceptance to resolve all the problems or bring them down to a manageable number under the contract. For *Sydney* that is not until the end of 2008 anyway. What we in DMO intend to do is to present *Sydney* for initial operational release. That is a gate for Navy to then take the ship and trial it in an operational environment to see whether they got what they anticipated they were going to get under that capability. We intend to present *Sydney* for operational release in April. What we are doing is utilising the lessons and the results out of the trials that will happen in Western Australia in April.

Senator MARK BISHOP—You say you are going to present *Sydney* for operational release in April but we are still going to be doing some of the trialling from the problems that were previously identified in the *Sydney* post-April in the *Melbourne*.

Mr Adams—That could go on for some time anyway. You have a list of problems. They go into what they call a TI338. The contractor has contractual responsibility to rectify those across time from provisional acceptance to final acceptance. Navy has access to that platform for operational use within those limitations. It is no different from a ship coming out of refit and having defects which we call RDFs and you rectify those as and when available or as priorities dictate. It is no different.

Senator MARK BISHOP—You will remember, Mr Adams, that the genesis of this discussion goes back to when we will have the full level of capability in the upgraded ships that we contracted for.

Mr Adams—You will have that in December 2009 which is the final delivery time under the contract. The contractor has to deliver four ships upgraded with three baselines and the capability we contracted for.

Senator MARK BISHOP—Baseline 3 on the fourth ship is December 2009.

Mr Adams—Yes.

Senator MARK BISHOP—I would have assumed that if final operational capability and delivery is scheduled for baseline 3 in December 2009 on the fourth and final ship, the development and the trialling is going to be done on ships 1 and 2, the *Melbourne* and *Sydney*, before it is inserted into ships 3 and 4. It would have been by and large trialled and the problems would have been identified, solved and given off so that ships 3 and 4, I presumed, were really going to be end of the line stuff where all of the problems had been identified in the previous two. What I am hearing you say now is that it may well go through until December 2009.

Mr Adams—That is not directly what I have said. You roll three baselines out. The contractor has the option of where and when he rolls those out and I guess it meets the efficiency and effectiveness of his program. We have *Sydney* at baseline build 1 and there is a possibility that we will put baseline build 2 into *Sydney* as a trial ship but the contractor might come to the table and say that is not the most efficient or cost-effective way for him to do that and it might happen in ship 2. Similarly, you might get baseline build 3 on the third ship in and then when you have trialled it on the third ship you would retrofit it in the other two as and when they are available. You would work the issues through in the ship you are delivering it in before you retrofit the other ships.

Miss JACKIE KELLY—I want to stay on the FFGs and the scheduled payments on the milestones. You were there, Mr Adams, from 15 January 2002, so you were within the DMO SPO on the FFG when the decision was made to drop the two ships?

Mr Adams—Government made that decision. I just implemented its direction.

Miss JACKIE KELLY—Like government can make a decision like that—

Mr Adams—We consciously made a decision that we would delay implementing that until it was appropriate. We did that with the deputy CEO in the contract negotiations and came up with a global settlement last year.

Dr Gumley—This comes back to leverage and Ms Grierson's previous question. We intentionally chose when we were to do the renegotiation and we chose it at a place where we had a reasonable chance of getting an outcome.

Miss JACKIE KELLY—The original life on *Adelaide* and *Canberra* was 2008. What happened? The upgrade life is supposed to be 2013 and presumably they are not in service.

Rear Adm. Ruting—HMAS *Adelaide* is still in service until either late this year or very early next year. Being the oldest in the class, she will be one of the two that are not continued with. HMAS *Canberra* was the other one; she is already paid off. The four upgraded ships start with HMAS *Sydney* and she was the first one to go through upgrade.

Miss JACKIE KELLY—In the middle of 2002, when your cumulative financial year payments under this contract were \$684 million, you must at that point have been facing the fact that you cannot do two more ships.

Mr Adams—That is not directly true. In actual fact, we will deliver this program within the budget. Because you accrue a large percentage of your costs up-front, it is very smart business. If you want to get economies of scale on buying equipment, you buy it early. You are buying it in early-year dollars, so there are savings there as well. We were committed to a six-ship program activity. As well as that, there were shore infrastructure and shore facilities to put in place. It is quite smart to buy all of the equipment up-front, have it delivered and have it in sheds ready to go so that the Commonwealth does not suffer schedule delay when the contractor is ready to install it.

CHAIR—I have to leave. I have duty in the chamber as the speaker, which is perhaps a little bit more routine than in this room. I thank you very much for coming. I will hand over to the deputy chair for the remainder of the public meeting. I put on record my congratulations to you guys for what you are doing with the Tiger in bringing it back on schedule and the work there. I will make other comments about FFG later on.

Miss JACKIE KELLY—The contract price has increased by nearly \$100 million according to the ANAO's report.

Mr Adams—The contract price has not increased. What you have is price and exchange variation.

Miss JACKIE KELLY—No, that was \$328 million.

Rear Adm. Ruting—That is correct. The contract price has increased by about \$87 million as a consequence of a number of changes. They were identified in the written question on notice related to those contract amendments. Some of those included taking up contract options. When the contract was signed in 1999, there were a whole range of options listed at that time. The Commonwealth did not want to commit as to whether we would or would not spend the money on those items at that time. We have subsequently taken up a number of those options, so they come in as contract amendments.

Dr Gumley—More capability for more dollars.

Miss JACKIE KELLY—But we are two ships down.

Dr Gumley—Yes, but each ship is doing more.

Miss JACKIE KELLY—We are two ships down and \$100 million over budget. You are saying that you have more capability.

Rear Adm. Ruting—May I correct that: it is not \$100 million over budget. The fact that the contract signed for \$899.573 million dollars on 1 June 1999 has increased by that amount has been because we made some conscious decisions to have some options that I have mentioned. That is about \$76 million worth out of that total.

ACTING CHAIR (Ms Grierson)—And you assess the contractor as being able to deliver that?

Rear Adm. Ruting—At the time that those options were exercised, yes. Also, as part of this particular upgrade contract, it is slightly different from other acquisitions in that we are doing maintenance work on the ships at the same time. That maintenance work is inducted into the activity via the contract as a contract amendment but is actually funded from our operational sustainment moneys.

Miss JACKIE KELLY—So you are saying that the time that these ships were in dry dock was time they would have been in dry dock anyway?

Rear Adm. Ruting—In some cases, yes.

Miss JACKIE KELLY—You have not actually lost any at-sea time?

Rear Adm. Ruting—We have merged those two activities together so that the upgrade was being done when the ships would have been due to have had a docking maintenance period or a similar maintenance period anyway. So, yes, we were economising there as much as we could.

Miss JACKIE KELLY—And you have not lost any at-sea time in dry dock due to slippages?

Rear Adm. Ruting—In the case of HMAS *Sydney* we certainly have lost operational time because her elapsed period of upgrade is longer than it was contracted for.

Miss JACKIE KELLY—So you can see how, when you look at the extended life on *Sydney*, the lost extended life on the *Canberra* and *Adelaide*—

Rear Adm. Ruting—The *Canberra* and the *Adelaide* are irrelevant in this circumstance. The government made a decision for quite different reasons to decommission those two ships earlier than was previously planned. It was not related to the upgrade—it was related to the operating cost of keeping two FFGs running until the likes of the 2012-13 period of time compared to using the crew that would have been required for that and the operating costs in other parts of the Navy capability.

Miss JACKIE KELLY—That brings us back to when you present a case to government for a billion-dollar expenditure in defence for a capability that is not correctly stated in the first place.

Rear Adm. Ruting—I do not follow your line of argument there in terms of not being correctly stated in the first place.

Miss JACKIE KELLY—I am just looking at trying to drill down to who strategically does your capability and your gaps in capability. We are currently looking at a \$4 billion spend and a gap in capability—

ACTING CHAIR—A variation.

Miss JACKIE KELLY—between when the F111 is retired and the Joint Strike Fighter comes in. Clearly here, the government was presented with a proposal for \$1 billion to obtain a certain amount of capability for ships. Firstly, *Sydney* has been longer in dry dock than was considered.

If in June 1999 government had that price tag for three ships, would they have made that decision? The answer is clearly no.

Rear Adm. Ruting—They might have.

Miss JACKIE KELLY—They would not have bought that capability for that price.

Rear Adm. Ruting—Four ships, if I may clarify, are still being upgraded.

Miss JACKIE KELLY—But *Sydney* is in dry dock. So why by the time you get to the 2001-02 financial year do you continue? Where is the mechanism for government to pull out of these things and say, ‘Look, this is just good money after bad’?

Dr Gumley—Government has that option at any time. You are aware that the minister is currently considering my favourite project, the Seasprite.

Miss JACKIE KELLY—Yes. Where are the mechanisms so that you have some architecture in place in terms of these things so that government can have some transparency to say, ‘Hey’—

Dr Gumley—Government gets the transparency every month when we produce the AOR book to government.

Miss JACKIE KELLY—If you look at the British system of reporting—

ACTING CHAIR—We are going to have to bring that to a halt.

Rear Adm. Ruting—We do not get it.

Senator MARK BISHOP—It is a classified document.

ACTING CHAIR—Dr Gumley, you mentioned that you benchmark yourself against other DMOs. You will know that our committee have recommended, and the Prime Minister has agreed, that the Audit Office will monitor the top 30 projects as is done in the UK. We are now looking at them having an interim budget, we hope, to start that in the 2007-08 round and be prepared rather than delay that further. I think that, in this inquiry, to do this inquiry properly, we need to be starting that process ourselves as a committee. I have favourite projects too. If I were to submit to you a list of favourite projects—you will not give me the red light, I know; I do not want the red light information—can you tell me the delay by months on projects and any categorising you have of the reasons for the delay?

Dr Gumley—It would depend on how the question was framed as to the information we can release.

ACTING CHAIR—Next time we meet, we are looking at financial management. This is not financial management, it is just to show me that these projects are or are not delayed.

Dr Gumley—With respect to where we are heading with the Auditor-General on the top 30, I had a meeting for an hour with Ian McPhee yesterday where we mapped out a way forward.

DMO is entirely supportive of this initiative. We started a mapping process yesterday on how we get there. I have just spent some time in the UK talking to the British National Audit Office about how they are doing it. It took them about three years to refine their processes. We are going to pick up that learning so that it does not take us three years to refine the processes. We would aim for a high level of transparency to be given to your committee as soon as we can.

ACTING CHAIR—Could you give me a proportion of projects that are on time and not on time? It is speculated in the media that it is about a third that are behind.

Dr Gumley—I gave evidence to the Audit Office that about 40 per cent of our projects were on time. There were a group in the yellow of about another 25 per cent and about a third are late. That is evidence I have already given to the committee and the Audit Office.

ACTING CHAIR—I will revisit that evidence. We may have discussions with ANAO and DMO about moving the projects forward.

Dr Gumley—Where we are heading to with the Audit Office with this top 30 is that your committee and the public will get full visibility of where each of the projects are. We are now setting up the frameworks to make that happen.

ACTING CHAIR—I will be patient. It is not one of my favourite traits!

Dr Gumley—I assure you we want to be accountable and transparent and we will be. That is why we have agreed that this is a good thing to do with the Audit Office.

ACTING CHAIR—On behalf of the committee I thank all of the witnesses for the evidence. It has been an interesting session today and one that I think has been quite beneficial. I note the chair's positive comments but I also remind you that at our next public hearing we are moving on to financial management. I am sure Senator Bishop and Miss Kelly, who have had such a long involvement with Defence projects, would say that we are moving forward.

Resolved (on motion by **Senator Bishop**):

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

Committee adjourned at 12.52 pm