

Department of Defence - Joint Strike Fighter F35

Background

3.1 In the 2000 Defence White Paper, the Australian Government reaffirmed that the primary priority for the ADF is to maintain the capability to defend Australian territory from any credible attack, without relying on help from the combat forces of any other country [and] the key to defending Australia is to control the air and sea approaches to our continent, so as to deny them to hostile ships and aircraft, and provide maximum freedom of action for our forces.¹ Similar views were contained in earlier Defence White Papers.

3.2 The 2000 Defence White Paper further states:

Air combat is the most important single capability for the defence of Australia, because control of the air over our territory and maritime approaches is critical to all other types of operation in the defence of Australia. The Government believes that Australia must have the ability to protect itself from air attack, and control our air approaches to ensure that we can operate effectively against any hostile forces approaching Australia. The Government's aim is to maintain the air combat

¹ Defence 2000: Our Future Defence Force, pp. 46 – 47.

capability at a level at least comparable qualitatively to any in the region, and with a sufficient margin of superiority to provide an acceptable likelihood of success in combat. These forces should be large enough to provide a high level of confidence that we could defeat any credible air attack on Australia or in our approaches.²

- 3.3 The F-35 Joint Strike Fighter (JSF) is an aircraft being considered for acquisition by Defence as part of the AIR6000 Leading Edge Air Combat Capability project. The Australian Government is yet to make a decision on how best to address its future New Air Combat Capability (NACC) requirement to replace the air combat capability provided by the current fleet of F/A 18 Hornet aircraft and F-111 aircraft. The final decision will be considered in the context of the new Australian Defence White Paper which is currently being developed.³
- 3.4 While the Australian Government's acquisition decision will not be made until some time in 2009, Australia remains an enthusiastic development partner in the JSF Program. The JSF Program is of immense importance to Australia as the JSF is the leading contender to replace Australia's current ageing fleet of fighter jets.⁴
- 3.5 The AIR6000 project is currently working towards second pass approval (now expected in mid-2009). This current phase funds Australia's contribution to the nine-nation System Development and Demonstration stage of the JSF program. Other approved funding comprised initial funding for the Production Sustainment and follow-on Development (PSFD) stage of the program and project officer funding to achieve the second pass outcome.⁵

2 Defence 2000: Our Future Defence Force, pp. 84 – 85.

3 <http://www.defence.gov.au/dmo/lsp/JSF>

4 <http://www.defence.gov.au/dmo/lsp/JSF>

5 Defence Annual Report 2006-2007, Volume 2, p. 52.

Cost of the JSF program

- 3.6 At the public hearing on 10 July 2008, Defence provided estimates on acquisition costs for the JSF aircraft and additional components needed to make it operational. Defence stated:

I would be surprised if we paid more than about \$75 million a copy for the aircraft, measured in 2008 dollars and assuming we buy at least 75, or three squadrons.⁶

- 3.7 The costing provided by Defence at that public hearing was well below costs that many in aerospace and defence industry circles had estimated.

- 3.8 At the public hearing held on 29 August 2008, the Committee questioned the basis upon which that earlier evidence on costing was provided. Defence then clarified the basis of their earlier advice, confirming that the \$75 million per aircraft related to the Unit Flyaway Cost, which is the cost of the platform only, and not inclusive of the other necessary components to provide an operational capability.⁷

- 3.9 Ensuring Parliamentary Committees are provided with complete and accurate information, especially by public servants who appear before them is important. Evidence that is misleading is equally unacceptable. Had the evidence provided on 10 July 2008 about the costing of the F35 been allowed to stand, it would present a very different and misleading picture. As the chair commented:

I do not think anyone was seeking to find out the cost of a platform that we could not do anything with. [We were trying to] find out the cost to get a plane that could be used, not something on a factory line that had no manuals, no resources and nothing else that was going to help us fly it.⁸

- 3.10 Defence provided further information on pricing, and referred to estimates for the Acquisition Cost (which includes the aircraft, ancillary equipment, support and training equipment and initial spares):

The published figure in the latest public defence capability plan, if you add up all the phases in the banding, is between \$11.5 billion and \$15.5 billion. The middle of the band is \$13.5

6 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 23.

7 Dr Stephen Gumley, *Transcript 29 August 2008*, pp. 11-12.

8 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 12.

billion, so the average for 100 would be 135 million [per aircraft].⁹

- 3.11 Additionally, Defence advised that the through-life cost will then be two times the acquisition cost.¹⁰ In total:

If we were sitting here 35 to 40 years from now and we were able to look backwards at what the JSF cost, probably in today's dollars it would be of the order of \$40 billion whole-of-life. That would include midlife upgrades and all sorts of things we are not aware of yet. But certainly our experience of running aircraft is that they are the sorts of numbers you look at.¹¹

- 3.12 Another factor affecting costs is:

... unlike civilian aircraft programs where normally the companies have a commercial incentive to get you to buy early to get their production line going and therefore will give early buyers a discount, in military aircraft ... the early aircraft cost you a lot more. Typically, early aircraft can be two or three times the price of aircraft two, three or four years later ... as they build up production, knowledge and capacity. The implication of that is that there is actually a commercial incentive for all 11 existing proposed customers of the JSF to rush to the back of the queue. That quickly leads to destabilisation of the program, because if everybody wants to delay purchasing so they do not buy the expensive early aircraft, the production line never really gets going at the rate that gives you the volume effect that is going to drive down the cost of the JSF.¹²

- 3.13 Stabilisation of the cost of the program will occur by:

... [trying to get] everybody to make their commitments and [therefore] everybody pays the same price for the aircraft for, say, the first five years of production. As soon as you can get people to make that commercial decision, you then actually reduce the costs for everybody. We are ... working with the US authorities to get what is called consortium buy or level pricing, but whatever we want to call it, it is about getting the

9 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 12.

10 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 26.

11 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 27.

12 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 22.

same price for each of the first five or six years of production of the aircraft.¹³

3.14 Defence advised that there were four broad groups responsible for JSF cost estimates:

The manufacturer, Lockheed Martin, tend to report the lowest costs; they are quite optimistic. The Joint Program Office tend to add contingency for risk, and they are a bit higher. The CAIG [Cost Analysis Improvement Group] ...is next, and then the Government Accountability Office tends to have the most pessimistic view. When we do our estimating in Australia, what we have tended to do is to take a price somewhere in the middle of all that. In the arc of optimism to pessimism we take a middle position in most of the work we do.¹⁴

3.15 Committee determination: The Committee commends DMO for their approach in seeking greater certainty and stabilisation of the program's costs through level pricing or consortium buy options, should Australia decide to buy the JSF capability.

Progress of the JSF program

3.16 The Committee raised with Defence various concerns which came out of reports by the US Government Accountability Office (GAO) to the US Armed Services Committee. The US GAO concerns included:

- reducing test resources to pay for development cost overruns;
- that midway through its 12 year development cycle the JSF is over cost and behind schedule.
- the JSF plan is too risky because it increases the risk of not finding and fixing design and performance problems until late into production, when it is more expensive and disruptive to do so; and
- the official JSF cost estimate is unreliable, and is not comprehensive or well-documented.¹⁵

13 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 22.

14 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 26.

15 Hon Arch Bevis MP, *Transcript 10 July 2008*, pp. 24-25.

3.17 At the public hearing on 10 July 2008, Defence replied that:

The cost they are referring to relates more to the development costs of the aircraft, and they have gone up. It is likely that each of the customers will be asked to pay a small part of that extra cost. At the moment we are expecting Australia's contribution, if we are asked to pay, will be less than \$1 million per aircraft ... not a huge amount.¹⁶

The GAO's comments have been contested by the program, the contractor and others. It becomes a balance as to how pessimistic or optimistic you are on that ... if you reduce the number of tests, you increase the risk ... therefore the tests they were going to do will have to be done on the other [test] aircraft.¹⁷

... we do acknowledge there have been schedule slips ... and are trying to come to grips with the magnitude of them.¹⁸

3.18 Defence subsequently provided additional written advice:

Any concern regarding the quality of JSF cost estimates is of concern to Defence. And as the Minister for Defence has stressed, the Government will not make an acquisition decision on the JSF until it is confident about costs and schedule. Prior to the GAO's recommendation for an independent cost estimate, the JSF Project Executive Officer had initiated an independent review of cost estimates in January 2008 in preparation for the US President's FY2010 budget. Defence welcomes the independent review which requires reconciliation of the JSF Program Office (JPO) estimate with estimates generated by US Government stakeholders by around October this year. This is to be a joint exercise involving the JPO, the CAIG (Cost Analysis Improvement Group - an independent review body in OSD) and the costing agencies from both the US Navy and US Air Force. The results of this review will inform the NACC Second Pass consideration in 2009.¹⁹

During 2007 the US JPO implemented a Mid Course Risk Reduction Plan to replenish management reserves.

16 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 24.

17 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 25.

18 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 31.

19 Department of Defence, Submission No. 6, p. 2.

Replenishment was achieved through the removal of two developmental test aircraft, thereby reducing the developmental test assets from 21 to 19. This action was flagged as a concern by the GAO. The JPO continually reviews the JSF test program to ensure all necessary testing is done in the most cost effective way. This process has resulted in the elimination of several test flights from those planned in the initial flight test program and the transfer of some flights to the 737-based Cooperative Avionics Test Bed (CATB). The JPO believes that the combination of the 19 JSF test aircraft, the CATB and extensive integration laboratories provides the most cost effective means to complete flight test with acceptable risk. In comparison with earlier test programs the JSF is still very well resourced. For example, the 1990's F-22 Program had only nine test aircraft. Significant challenges still remain, however. In early 2008, the JPO recognised the reworked flight test program would require additional time. Accordingly, a one year flight test extension has been incorporated into the program resulting in Block 3 Initial Operational Test and Evaluation (IOT&E) now planned for completion in 2014.²⁰

- 3.19 The Committee enquired about the cost blow-outs on the JSF program. These included an increase of US\$23 billion in 12 months, and a \$55 billion increase since the program's restructure in 2004.²¹ In subsequent written advice, Defence explained:

The US\$23 billion increase referred to in the 2008 US Government Accountability Office Report is the difference between the estimates for the total US acquisition cost in the December 2006 Selected Acquisition Report (SAR) and the December 2005 SAR. A critical point to note in any examination of these Reports is that they are based on Then Year (TY) or 'out-turn' estimates; that is, they take into account projected inflation across the period being examined. TY costs are therefore considerably higher than costs against a Base Year (BY) estimate which is referenced to a specific year and indicates "real" cost changes.

...Discounting inflation shows that the "real" cost increase incurred during this period was much more limited at US\$7.7 billion in 2002 BY prices or approximately 3.7 per cent.

20 Department of Defence, Submission No. 6, p. 4.

21 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 30.

This "real" increase was anticipated by Defence and therefore allowed for in the cost estimates presented at New Air Combat Capability (NACC) First Pass consideration in November 2006. As a result, there was almost no adjustment needed to NACC First Pass estimates once the December 2006 SAR was formally released.²²

Normally a substantial increase in a TY estimate is the result of a substantial increase in the BY estimate. The major TY increase between the December 2006 and December 2005 SAR, however, did not result in a major increase in the BY estimate. This is because much of the cost increase was associated with a significant extension to the period over which the US plans to buy its aircraft. This effect is not associated with an increase to forecasts of future inflation rates; rather, because aircraft are acquired over a longer period, inflation compounds over a longer period.²³

- 3.20 The Committee asked whether any issues have been raised by the Government's two-part review of the JSF; specifically if there were issues regarding accuracy of costs. Defence replied that:

Mr Orme [the chief reviewer for Minister Fitzgibbon's Air Combat Capability Review program] had a look at the GAO reports as part of his review. As you will recall, [the] second part of [his] report is still with government for consideration.²⁴

- 3.21 The Committee enquired about the schedule for delivery and operational readiness of the JSF.²⁵ Defence replied that the first aircraft had been flying for eight months.

The US marines are the first service to declare operational capability and they are planning 2012 for IOC (initial operational capability), and the USAF I believe is at 2013 ... [and] that by 2013 a [US] JSF would have been in some combat operation.²⁶

... there is planned to be nine aircraft [built] in 2011; 13 in 2012; 28 in 2013, of which [the ADF] might get four, but those

22 Department of Defence, Submission No. 8, p. 3.

23 Department of Defence, Submission No. 6, pp. 2-3.

24 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 26.

25 Mr Stuart Robert MP, *Transcript 10 July 2008*, p. 28.

26 Group Captain Don Thornton, *Transcript 10 July 2008*, pp. 28-29.

four will probably be rolled out a little bit later; and in 2014 there are 68.²⁷

2015 is when [ADF] are planning initial operational capability and that would be with the first squadron operational in Australia and then it will build up from there.²⁸

- 3.22 In response to the Committee's concern about risk mitigation for the JSF, given that testing has lapsed, and the time it takes for Australia to receive and have combat ready JSFs,²⁹ Defence responded that:

... the government's [decision] to go ahead with the Super Hornets is [the] master risk mitigator. Australia is getting a squadron of Super Hornets to cover a capability gap that does not exist now but could exist if something unexpected or disastrous happened with an alternative program.³⁰

- 3.23 The Committee enquired about the alternative engine program for the JSF, and whether GAO was justified in criticising the decision to end this program³¹:

There are conflicting arguments. One is running two development programs, and two development engines, means that there are double the fixed costs and double the engineering costs. The alternative is that it provides competition in the marketplace for years to come and will keep both the engine manufacturers competitively focused. I can see merit in both arguments.³²

- 3.24 Defence also clarified for the Committee that the increase identified in the GAO report did not include an additional US\$6.8 billion for alternative engines:

The Project Office have said they do not believe the second engine represents good value for money. The US DOD have agreed with that, but congress over the last couple of years have come back and directed them to put the funding in for it.³³

27 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 28.

28 Group Captain Don Thornton, *Transcript 10 July 2008*, p. 30.

29 Mr Stuart Robert MP, *Transcript 10 July 2008*, pp. 28-29.

30 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 29.

31 Hon Arch Bevis MP, *Transcript 10 July 2008*, p. 31.

32 Dr Stephen Gumley, *Transcript 10 July 2008*, p. 31.

33 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 25.

- 3.25 The Committee questioned Defence on the merit of considering the Netherlands' approach in acquiring aircraft for testing purposes. Defence advised the Committee³⁴:

We have been involved in this Joint Strike Fighter SDD – system development and demonstration – phase for a long time, since 2002. We know an awful lot about the platform. We are very confident that it will emerge as a top class capability. But the Netherlands is a European country, a member of NATO and has a lot of strategic depth and my understanding is that they have decided that they will take a close look at the Joint Strike Fighter; not so much to do a comparative analysis with other aircraft, but to better understand how it will fit into their system and, indeed, the NATO system. So it is a completely different set of circumstances.³⁵

- 3.26 The Committee questioned whether or not the Netherlands were effectively purchasing two JSF aircraft to compare them against the Gripen and the Typhoon prior to committing to the JSF capability.³⁶ Defence replied:

The Netherlands certainly are buying two test aircraft. We work closely with them and they are not doing it as fly-off. They see that as their best way to assess the capability before buying. We have looked at that as well. Those two aircraft upfront are very expensive. We decided in our business case that our involvement in the US test program was the best way to do it. [The Dutch] are just taking a different approach.³⁷

Air Superiority

- 3.27 The Committee sought comment regarding Australia's ability to maintain air superiority within our region:

... the current planning seems to be predicated on a view that one platform is the desired solution for us as a nation for both air superiority and air-to-ground capabilities. In the past, at

34 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 44.

35 Air Chief Marshal Angus Houston, *Transcript 29 August 2008*, p. 44.

36 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 44.

37 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 44.

least, that has always involved a trade-off of capabilities, notwithstanding advances in technology. Aren't we still in the same dilemma?³⁸

3.28 Defence replied:

I suppose you are suggesting that our future is probably in the area of the JSF. Should the government decide to go the JSF route, that would come out as a consequence of the white paper and the second pass review of air combat capability. We really had a good look at all of the candidates. There are not a lot of options out there. One of the things that was decided by the previous government back in 2000 – and it is in the 2000 White Paper – was that if possible, to cut down on the cost of maintaining these incredibly expensive capabilities, the best way to proceed would probably be to have a hundred aircraft that could perform both roles: the role of control of the air – air superiority, if you like – and the role of strike, interdiction, close air support and so on. That is where the JSF stands out. I am confident that [JSF] will develop into a front-line capability that will serve Australia's needs very well in the future.³⁹

I have had a close association over the years with air combat capability. I have been a fighter pilot myself. I have had a chance to look at the development of JSF, where we are going at the moment, and not only do I look at it as probably the best multi-role platform coming down the track, but I take a system view as well. Based on what I have seen working closely with the team and in my past experience in operating aircraft like this in a multi-role environment, I consider the ...JSF ... to be probably the best multi-role air combat aircraft available to us. It will be equipped with the best sensors; it will be supported by the best tanker available; and it will be manned and supported by the best men and women available around the world today. I do not think it is going to get any better than that as a package for this country.⁴⁰

3.29 To the question of "Is there a danger with a multi-role aircraft that we lose our capacity for air dominance,"⁴¹ Defence replied:

38 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 38.

39 Air Chief Marshal Angus Houston, *Transcript 29 August 2008*, pp. 38-39.

40 Air Marshal Mark Binskin, *Transcript 29 August 2008*, p. 39.

41 Hon Arch Bevis MP, *Transcript 29 August 2008*, p. 39.

No, I do not believe so. I think the important thing here is to think in terms of systems: system against system, not platform against platform. If you are seduced into the platform versus platform debate, inevitably people have visions of the Battle of Britain in World War II, with one aircraft on another. In the information age, the age of low-visibility platforms, stealth platforms, those sorts of preconceptions are no longer applicable. What we are talking about is a system whereby the fighter pilot is better informed, through his sensors and his connection to a variety of sensors, than he has ever been before. His situational awareness is just unbelievable. He is in a platform that is largely invisible to radar, so his situational awareness is likely to be better than the other guy's and, using the system that is available to him – the whole system and the systems that are resident in the aircraft – he is able to see first, shoot first and kill first. I think that that is what this system that we are developing is all about.

The other side of it is that this platform is also very capable in the strike role, in the interdiction role and in the close air support role. As it matures it will be able to do anything that we need it to do. What we need is the ultimate insurance policy in air combat capability to look after Australia's interests. This is absolutely the sort of platform that we need to fit into the system.⁴²

- 3.30 Notwithstanding the substantial capabilities planned for the JSF, the F22 remains a capable air to air combat platform and is expected to continue in that role in the US following the introduction of the JSF.

Industry involvement

- 3.31 Australia's current participation with the JSF program has enabled some Australian-based companies to become involved in the program:

To date, GKN in Melbourne has employed 200 engineers who are doing over one million hours of work on the Joint Strike Fighter project. So the focus changes as we go between

42 Air Chief Marshal Angus Houston, *Transcript 29 August 2008*, p. 39.

platforms, but the focus now, certainly on that platform, is to be part of the global system rather than just have a local system.

...the structural design of the JSF is extremely high level, and we have 25 Australian companies as part of the global support chain at this stage, with about US\$150 million worth of work won to date.⁴³

3.32 Regarding future opportunities for Australian industry, Defence observed:

Australian industry has shown it can win work...⁴⁴

Once we go into production, Lockheed have identified opportunities – I want to be very clear on that word ‘opportunities’ – for \$7 billion to \$8 billion worth of work. Each of those opportunities is contested and therefore you have to apply a win rate – what probability Australia has of winning each of those tenders. If Australian industry is truly competitive, we are expecting perhaps \$1 billion to \$2 billion worth of work coming out of it...⁴⁵

We are now stepping into the production phase, so what we are starting to see is those companies that won work in the development phase for the 19 test aircraft now starting to get the contracts for the initial production. So we are getting into the big contracting. Lockheed Martin put a figure of some billions of dollars out there in opportunities, but we are still in competition for those. We can expect to see some of those contracts start flowing through in the near term⁴⁶

Submissions to the Inquiry

3.33 The Committee received several submissions for this Review of the Defence Annual Report 2006-2007. The submissions have been provided by individuals and interested groups consisting of experienced ex-RAAF officers and people with extensive aerospace industry experience. For some years, these individuals and groups

43 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 16.

44 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, p. 44.

45 Dr Stephen Gumley, *Transcript 29 August 2008*, p. 43.

46 Air Vice Marshal John Harvey, *Transcript 29 August 2008*, pp. 43-44.

have provided similar submissions to a number of different Parliamentary Committees.

- 3.34 The Defence Sub-Committee is not in a position to fully address all of the concerns raised in the submissions, as the necessary resources and expertise are not resident in the Committee structure. Additionally, a number of the issues that are raised in the submissions go to highly sensitive and classified matters that the Committee does not normally have access to, nor would be considered appropriate to address in open-source commentary. They are none the less important matters. The Committee thanks those in our community who maintain a healthy interest in the defence and security of our Nation. Their contribution to the public debate provides alternative sources of information and assessments on key issues.
- 3.35 The Committee has sought responses from Defence on a number of the issues raised in these submissions, both in public hearings and subsequent written requests. While some of the issues have been partially answered in previous paragraphs within this Chapter, the following paragraphs are based on answers Defence has provided in response to some of the specific concerns raised in the submissions to the Committee, within the limitations noted above.
- 3.36 With regard to the JSF, at the Senate Estimates Hearing on 20 February 2008, CDF advised that the JSF was one platform in a "system". If this "system" fails, then the individual platforms will fight against our adversaries' individual platforms.⁴⁷ Shouldn't the ADF be seeking superior system components that together create a superior "system"? Defence replied:

The planned air combat capability "system" includes the combination of:

- the advanced Super Hornet and Joint Strike Fighter,
- advanced weapons,
- key force multipliers of the Airborne Early Warning and Control and Multi-Role Tanker Transport aircraft,
- advanced intelligence, surveillance and reconnaissance systems such as the Jindalee Operational Radar Network,
- broad command and control capabilities such as Vigilante, and
- highly trained people and advanced tactics and doctrine.

47 Exhibit No.1, p. 12.

The total “system” will provide Australia with the edge; however, even at a platform versus platform level, future ADF platforms offer significant benefits over likely threat systems. For example, when considering the capability of an air combat aircraft the entire ‘kill-chain’ (detect, track, shoot, guide, hit, survive) must be considered rather than simple characteristics such as aerodynamics. The JSF’s combination of stealth, advanced sensors, data fusion, data links, situation awareness, weapons and countermeasures, coupled with superior training, currency and professional development of our crews, give it a major advantage over any likely threat systems.⁴⁸

- 3.37 In response to the concern that Australia disregarded USAF analysis that dictates the acquisition of an air dominance fighter is necessary to ensure air superiority,⁴⁹ Defence replied:

Maintaining air superiority in likely threat scenarios is a fundamental role of the RAAF. Ongoing Defence analysis shows that the JSF, when integrated into the networked ADF, can achieve that in a way we can afford to acquire and sustain throughout its life. The USAF has a broader range of strategic requirements and has decided it needs a dedicated air dominance fighter, the F-22. It is useful to note that, among the JSF partner nations/services, the USN, USMC, Royal Navy, the Netherlands, Turkey, Canada, Denmark and Norway are looking to the JSF to provide their sole or primary air combat capability.⁵⁰

- 3.38 In response to the concern that capabilities will be fielded in our region that will be superior to both the Super Hornet and the JSF,⁵¹ Defence replied:

Capabilities must be considered in the context of the overall system and environment rather than specific platform elements. That said, air combat aircraft capabilities are a critical element of overall system capabilities. While there is no doubt that there will be an increased air combat capability within our region in the coming years, ongoing analysis by

48 Department of Defence, Submission No. 10, p. 6.

49 Exhibit No.1, p. 14.

50 Department of Defence, Submission No. 10, p. 6.

51 Exhibit No.1, pp. 19-21.

Defence shows that the Super Hornet and subsequently the JSF will provide the capability the ADF needs. It should be noted that the Super Hornet will provide the front-line capability for the USN out to around 2015 at which time it will be progressively replaced by the JSF, which will then become the USN's front-line fighter.⁵²

- 3.39 Much discussion during the two public hearings into the Defence Annual Report has centred on the "cost" of the JSF. It has been argued that Defence should be looking at the "cost of mission/capability", rather than the "cost of an aircraft".⁵³ Defence replied:

Defence fully agrees. The ADF's future air combat aircraft must be affordable to acquire, operate, sustain and upgrade throughout its life. Ongoing analysis by Defence, including DSTO, shows that the JSF offers the most cost effective capability for the ADF's needs.⁵⁴

- 3.40 Air Power Australia note the acquisition of advanced fighter aircraft across the region is being paralleled by the acquisition of a wide range of capabilities intended to multiply or enhance the combat effect of these fighters. Defence was asked to comment on the impact of these capabilities in our region and their impact on Australia's ability to maintain air superiority into the future.⁵⁵ Defence replied:

The introduction of air-to-air refuelling and airborne early warning and control platforms, and improvement of air launched weapons within the region is expected. Defence analysis takes into account likely developments in regional systems and planned acquisitions, and recognition of the need for ongoing upgrades to ADF systems, are factored in [during] Defence capability planning.⁵⁶

52 Department of Defence, Submission No. 10, p. 7.

53 Exhibit No.1, p. 22.

54 Department of Defence, Submission No. 10, p. 7.

55 Exhibit No.2, pp. 19-22.

56 Department of Defence, Submission No. 10, p. 8.

Conclusion

- 3.41 This review has not been a full scale consideration of Australia's air combat needs or options. However, given the importance of this matter to national security, and the focus of a number of submissions received, some focus has been given to key aspects of the matter in this report.
- 3.42 While the decision to acquire the Joint Strike Fighter will not be made until some time in 2009, the Defence Sub-Committee will remain keenly interested in the acquisition program and the release of the details in 2009 of Australia's Air Combat Capability in the White Paper and the Orme Review.

Of greatest interest to the Committee will be the analysis of the ability of a multi-role aircraft to achieve air dominance in Australia's region in all aspects of air combat capability.

Recommendation 2

That consideration of Australia's future combat aircraft needs, including the critical air to air combat role, be determined by the paramount strategic importance of this capability, as recognised in the 2000 White Paper. That the decision on future air combat capability be determined by the analysis of available platform capabilities against Australia's strategic requirements and not be constrained by a predetermined requirement for a single platform.

