6

Air Combat Capability

Introduction

6.1 The Royal Australian Airforce (RAAF) is tasked with the provision of responsive air power options for the Government. These options include air control, precision strikes, air mobility, force protection, surveillance, intelligence and reconnaissance. During the 2012–13 financial year, the RAAF provided support to a range of regional and global operations. These included sovereign border protection, operations in the Middle East and support to the Bundaberg floods.[1]

6.2 In line with the continued modernisation of ADF capabilities, the *Defence Annual Report* notes that the RAAF had successfully met the operational tasking, preparedness, safety and airworthiness targets set for the 2012–13 financial year. The implementation of reforms, including change programs supporting the development of cost-conscious behaviours, also enabled the RAAF to operate within budget and deliver savings.[2]

F-35 Joint Strike Fighter

Background

6.3 The New Air Combat Capability (NACC) Project (AIR 6000) aims to ensure the RAAF acquires a modern air force capability suitable to the future air combat needs of Australia. The Government is planning to replace the RAAF's 4th generation F/A-18s with the Lockheed Martin F-35

1 *Defence Annual Report 2012–13*, p. 49.

2 *Defence Annual Report 2012–13*, p. 49.

Joint Strike Fighter (JSF). The JSF is a 5th generation aircraft with air-to-air and strike capabilities relevant to air combat needs of the RAAF.

6.4 Since its inception, the JSF project has encountered significant delays and cost overruns. The concurrent development and construction approach adopted by Lockheed Martin has resulted in project delays, mismanagement and increased construction costs. This has been exacerbated further by the technological complexity of the project. As a consequence, a revised scheduling timetable for the JSF project was announced in March 2012.[3]

JSF project overview

6.5 The *Defence Annual Report 2012–13* states that the production of Australia's first two JSF aircraft is on schedule for a 2014 delivery and 2015 commencement of training, despite delays in the contracting processes, of which Australia is a part, between the United States Government and Lockheed Martin.[4]

6.6 The *Defence Annual Report 2012–13* also notes that the JSF development and test program made slow and steady progress at a pace likely to support Australia's operating capability requirements for 2020.[5]

6.7 Defence acknowledged that the JSF project has suffered from development issues as a consequence of its technical complexity. This was not considered irregular, however, with Defence noting that complex aircraft projects have a tendency to encounter issues as they proceed through their development stage.[6]

6.8 When asked about the near-term future risks in relation to Australia's acquisition of the JSF, the Chief of Air Force stated:

> As far as I am concerned with the JSF, while there are still issues with the project, the big job for Air Force is to actually run down the F-18 capability while we ramp up the JSF capability. There is the whole training of not only air crew, pilots and maintainers; I would argue there is a whole lot of work to be done in the intelligence community as well, because this aeroplane requires more data than our previous generations of aircraft. Given a lot of the supporting elements the JSF requires, I would argue for some mindset changes as well, if we are to get the best capability out of

3 Davies, D. & White, H. *Taking Wing: Time to decide on the F-35 Joint Strike Fighter*, ASPI Strategic Insights, March 2014, p. 7.

4 *Defence Annual Report 2012–13*, p. 186.

5 *Defence Annual Report 2012–13*, p. 186.

6 Air Mshl Brown, Department of Defence, *Transcript*, 6 June 2014, p. 51.

> it. Certainly, bringing it into service is no simple matter—and it is not just with Air Force; it is with a lot of the supporting structure around it.[7]

Costing

6.9 Defence confirmed that the price for the first two JSF is $126.7 million per aircraft. They also projected the average cost for the remaining 70 JSF aircraft amounting to $90 million per aircraft over the 30 year production period.[8]

6.10 The Committee was informed that these progressive reductions in cost correspond to the projected figures anticipated by Defence.[9]

Ensuring consistency with Australia's capability needs

6.11 The Committee queried how Defence was able to ensure that the rationale, reasoning and development guiding the acquisition of the JSFs remain consistent with Australia's capability needs. In particular, the Committee questioned how these capability needs took precedence over other interests linked to JSF project, such as Australia's relationship with the United States Government and Lockheed Martin.

6.12 In response, Defence explained that the decision to acquire the JSF arose following a professional assessment of Australia's future capability need. Defence noted that other interests lie at the periphery of the decision making process:

> The decision with respect to the JSF related to capability need and related to a professional assessment of how we go forward. I am not aware that our relationship with the US was central at all to the question of whether we order further JSFs. It is relevant; you would need to take it into account, but I would not see that as being a central point in decision making at all.[10]

6.13 Regarding the Defence Materiel Organisation's (DMO) relationship with Lockheed Martin, Defence made it clear that the extent of its relationship with Lockheed Martin was through the US Department of Defense Joint Program Office:

> The only relationship that we have with Lockheed Martin, in the sense of a direct relationship, is the industry program where we—that is DMO—have signed a heads of agreement with Lockheed

7 Air Mshl Brown, Department of Defence, *Transcript*, 6 June 2014, p. 51.

8 Air Cdre Roberts, Department of Defence, *Transcript*, 6 June 2014, 52.

9 Mr King, Department of Defence, *Transcript*, 6 June 2014, p. 51.

10 Mr Richardson, Department of Defence, *Transcript*, 6 June 2014, p. 51.

> Martin about developing options for Australian industry to participate in the program. To be clear, there is no relationship in the sense of a commercial relationship. Obviously, we work with Lockheed Martin and so on, but the business relationship is with the Joint Program Office.[11]

Independent and transparent reporting on the JSF project

6.14 The *Defence Annual Report 2012–13* mentions that an independent review of the JSF development and test program was performed. The review confirmed that the acquisition of the JSF F-35A and corresponding weapons and support systems is likely to meet Australia's planned 2020 initial operational capability requirements.[12]

6.15 DMO Chief Executive Officer Mr Warren King stated that:

> There is a chance in projects of this scale, scope and long duration that the project office can get trapped, not in the commercial sense, but in the sense of getting caught in the view that the project is going fine and may miss issues that might be substantial because you are so focused on delivering the project. So I asked then Air Vice Marshal Col Thorne, supported by a group of people including representatives from DSTO and a representative from a company that specialised in test and evaluation, to do an independent review of where the program was at, what the risks were, were we adequately assessing those risks and, in particular, would we be ready to meet the IOC criteria—what was the risk rating of that. That work was done in March and April, I believe, 2013. They made a whole lot of recommendations, reports, observations and so on.[13]

6.16 The Committee's views on JSF transparency reflected concerns regarding the level of independent scrutiny processes within Defence more broadly. As stated in Chapter 5, representatives from QinetiQ Australia spoke of the need for independent scrutiny processes within Defence that clearly outlines the risks, costs and schedule overruns for major capability projects.[14]

6.17 These views were further supported by the Australian Strategic Policy Institute (ASPI), which identified two problems with Defence's approach to reporting:

---

11 Mr King, Department of Defence, *Transcript*, 6 June 2014, p. 53.

12 *Defence Annual Report 2012–13*, p. 186.

13 Mr King, Department of Defence, *Transcript*, 6 June 2014, p. 53.

14 Mr Woolford, QinetiQ Australia, *Transcript*, 6 June 2014, p. 9

> One is that there are issues of security, which sometimes quite legitimately limits what can be disclosed. Sometimes, though, I think that is used as a veil to otherwise avoid external scrutiny. The second thing is that all of Defence's assessment is self-assessment. I am not going to impugn the honesty of anyone in Defence, but there is a conflict of interest if you are the person assessing your own performance.[15]

6.18 While acknowledging the need for greater transparency, ASPI believed that there were opportunities for broader reporting processes with Defence that circumvent the problems of self-assessment.[16]

6.19 Defence responded to these concern by explaining its limitations in publically disseminating information on the JSF program given that most of the data comes from the United States:

> … one of the important aspects of course is the relationship between Australia and the US, and our ability for the US to be able to share with us because of our ability to be able to limit the exposure of that information, so it is not released beyond any area they do not want it released to. One of the reasons that we could stand this team up and be given clear and open information is because of that relationship, and is because of the way we treat the information we get out of that.[17]

6.20 The Committee responded by highlighting that the American public have access to unclassified reviews that extensively discuss issues of risk. The Committee questioned why the Australian Parliament does not have access to the same level of detail regarding identified risk within the JSF project.

6.21 Given that the independent review undertaken on the JSF project has not been publicly released, Defence sought to reassure the Committee that the review was undertaken to confirm that projected targets were likely to be met in the future. Mr King stated that:

> To be honest, it [the independent review] was a little bit contentious internally, because I have got a dedicated project team and I basically said by my actions, 'I'm not confident that I'm getting objective evidence that isn't tainted by a conspiracy of optimism.' ... But I just want to make the point: it is not that I did not release it because it was cloak and dagger; I just did it for myself. You have asked me: can I release it? I will go and look at

15 Dr Thomson, Australian Strategic Policy Institute, *Transcript*, 6 June 2014, p. 3.

16 Dr Thomson, Australian Strategic Policy Institute, *Transcript*, 6 June 2014, p. 4.

17 Mr King, Department of Defence, *Transcript*, 6 June 2014, p. 54.

> that for you. But I never intended it for release. It was just a piece of work I had commissioned for my benefit.[18]

6.22 Defence later informed the Committee that while the final report is classified and cannot be tabled as a public document, they are in the process of seeking agreement from the US Joint Project Office to release the findings of the review.[19]

Fifth-Generation air combat capability

6.23 The production of the JSF is being carried out simultaneously with ground and flight testing. Given this concurrent model of production, the Committee asked Defence whether their initial standards for the JSF had needed to be adjusted or lowered as the development of the aircraft had progressed.

6.24 Defence stated that the most significant factor distinguishing the JSF from fourth-generation aircraft was the level of situational awareness it provides through its multispectral capability. Air Marshal Geoff Brown put this in context:

> I would always argue that situational awareness was the biggest factor in success in air combat. I have struggled to actually articulate what situational awareness is. If I were to give a layman's analogy of it, I would use the example of driving a motor car at night time. If you are in a fourth-generation fighter, you are effectively driving this manual motor car on low beam, talking on the mobile phone and adjusting a GPS at the same time. With JSF and F22 type technologies, you are not driving on low beam. You probably have four times what you can see out there, and you are driving an automatic. All the information is laid out in front of you, plus you actually have a 360-degree view of what is going on in the motor car. That is probably the simplest explanation that I can give as to the differences between fourth-generation, 4½- and fifth-generation.[20]

6.25 Referring to comments made by United States General Michael Hostage on the role of F-22s in securing air superiority for F-35 JSF, the Committee asked Defence whether the absence of an F-22 fleet undermines the capabilities of the JSF. Defence sought to contextualise this statement by providing the Committee with an additional set of comments made by General Hostage clarifying what he meant:

---

18 Mr King, Department of Defence, *Transcript*, 6 June 2014, p. 55.

19 Department of Defence, *Submission No. 4,* p. 15.

20 Air Mshl Brown, Department of Defence, *Transcript*, 6 June 2014, p. 52.

> I was asked why I needed to upgrade the F-22 if I had the F-35. I said, in that context, a reduced USAF fleet of 1763 F-35s (we had just finished a conversation about how I needed 1 763 F-35s, and not a single aircraft less) would not provide the air combat capability necessary without the additional 180+ F-22s. The question answered was about the F-22, not the F-35. Of note, I used the reference to the F-35 to emphasize the importance of the F-22, and not to denigrate the F-35. And it was in the context of independent US major combat operations with a near-peer competitor.[21]

6.26 Defence highlighted the importance of single-role strike platforms being reinforced by dedicated air and escort support. Within the Australian context, Defence was optimistic that the JSF would be in a position to perform air and escort support without relying upon additional capability:

> This escort role … may be equally performed by an F35 or F22 aircraft. In Australia's context, we will intelligently stack our packages as a direct result of the threat that we fight on any given day. Dedicated strike assets require dedicated air support. The F35 will do both.[22]

Runways

6.27 The runway at the RAAF Base Williamtown is being lengthened to 10,000-feet. Defence provided two reasons for this:

> It is to do with the performance of the F-35 versus the F-18. And the other one is noise—it will allow us to take off without using the afterburner in the F-35 and, again, when you look at the noise footprint around Williamtown, we have done a lot of work to make sure that we can keep the ANEFs [Australian Noise Exposure Forecasts] within certain boundaries.[23]

6.28 Questioned further about the take-off/landing capability of the JSF, Defence stated that the JSF can operate off an 8,000 foot runway. They reaffirmed that the primary reason for the Williamtown extension was due to noise. Furthermore, the RAAF Base Williamtown is planned to be the main training base for the RAAF.[24]

---

21 *Exhibit 1*, p.1.

22 Air Mshl Brown, Department of Defence, *Transcript*, 6 June 2014, p. 56.

23 Air Mshl Brown, Department of Defence, *Transcript*, 6 June 2014, p. 59.

24 Air Mshl Brown, Department of Defence, *Transcript*, 6 June 2014, p. 59.

Committee comment

6.29 The Committee understands the significant cost, planning and risks associated with the development of the JSF.

6.30 The Committee is of the view that the *Defence Annual Report 2012–13* does not provide sufficient detail on the JSF program. Whilst welcoming the independent review conducted by DMO, the Committee is concerned at the lack of transparency and reporting available to the Australian Parliament in regards to the JSF program, particularly in relation to risk mitigation. The Committee is also concerned with the lack of information within the *Defence Annual Report 2012–13* on the NACC program given its significance and value.

6.31 Given the delays in production and the public disclosure by the US Government relating to schedule and technical risk, the Committee remains concerned as to whether Australia's planned acquisition of the JSF remain on schedule and within the funding parameters set by Defence. The absence of any substantiated reporting to support the one line summary presented in the *Defence Annual Report 2012–13* is of concern. The Committee also notes that it has still not received a confidential copy of the "independent review" conducted by DMO as at the date of the adoption of this report, five months after the hearing at which it was requested.