

Chapter 6

Committee view and recommendations

6.1 During this inquiry the committee has considered the planned acquisition of the F-35A Lightning II Joint Strike Fighter and its ability to fulfil Australia's future air defence needs. The committee received evidence criticising the F-35A and raising concerns regarding the aircraft's performance in testing and subsequent delays to the acquisition timeline. Many submitters called for the aircraft's procurement to be cancelled.

6.2 Notwithstanding the criticisms, the committee is satisfied that the F-35A is the only aircraft able to meet Australia's strategic needs for the foreseeable future, and that sufficient progress is being made in the test and evaluation program to address performance issues of concern. The committee is not convinced that any of the available alternative aircraft raised in evidence are capable of meeting Australia's air defence needs. The committee accepts that the F-35A will provide the air combat capability outlined by the Defence White Paper, and will be able to defeat airborne threats, prosecute attacks against both land and sea surface targets and support Australia's land and maritime forces. The committee notes the F-35A's role in Plan Jericho, and believes that it is the best available aircraft to provide Australia with an integrated and networked force as well as providing compatibility of systems with allies.

6.3 Nonetheless, in light of the serious problems that led to a re-baselining of the F-35 program in 2012, and the ongoing issues identified by the United States Director of Operational Test and Evaluation (DOT&E), the committee retains a healthy scepticism towards assurances by Defence regarding cost, schedule and capability outcomes of the F-35A.

Performance of aircraft in testing

6.4 A number of submitters and witnesses raised concerns regarding the F-35's manoeuvrability and flight capabilities; stealth capabilities; mission systems; mission data loads and Autonomic Logistics Information System (ALIS); and escape system. As noted in chapter 3, it is difficult to accurately understand and critique the capabilities of the F-35A without access to detailed classified performance data. As such, the committee cannot draw definitive conclusions regarding the details of the F-35A's performance in testing. Nonetheless, it has confidence in the assessments made by Defence regarding both the air combat capabilities required by Australia and the F-35A's ability to meet these requirements.

6.5 The committee acknowledges the concerns of submitters regarding the F-35A's manoeuvrability and flight performance, but is satisfied that the F-35A's capabilities are appropriate for its purpose as a multi-role aircraft. Furthermore, the committee is satisfied that the F-35 offers better stealth and electronic warfare capabilities than any other available aircraft. The committee is, however, concerned by ongoing issues regarding the stability of mission systems software and the schedule risk that this engenders.

6.6 Defence noted that software development is 'effectively complete' and is now the 'main focus of the ongoing test and evaluation program'. It advised that, as at January 2016, the final software build had completed 50 per cent of baseline test points, but that 'significant test points are yet to be undertaken and issues found will need to be rectified'. However, Defence noted that there is schedule risk associated with the completion of the test and evaluation program and incorporation of fixes to meet the scheduled completion of the System and Development and Demonstration phase by the end of 2017.¹ Furthermore, the United States Director of Operational Test and Evaluation (DOT&E) 2015 annual report found that 'full block 3F mission systems development and testing cannot be completed by May 2017, the date reflected in the most recent Program Office schedule', estimating that the program is not likely to finish Block 3F development and flight testing prior to January 2018.² United States Lieutenant General Christopher Bogdan assured the committee that the issues are being identified and resolved.³ However, the committee is concerned that any further delays to the acquisition timeline may risk the creation of a capability gap.

Acquisition schedule and capability gap

6.7 The re-baselining of the F-35 Program deferred the procurement of the Australian F-35A by two years, resulting in initial operational capacity moving from 2018 to 2020.⁴ Australia now plans to ferry the first two F-35 aircraft to Australia in late 2018, with initial operational capability planned for 2020 with the establishment of 3 Squadron (3SQN) to be followed by 2 Operational Conversion Unit (2OCU) and supporting systems and infrastructure at RAAF Base Williamtown. Final operational capability is planned for 2023 with the establishment of 77SQN at RAAF Base Williamtown and 75SQN at RAAF Base Tindal.⁵

6.8 Defence advised that the F-35 Program schedule has 'stabilised' since the re-baselining in 2012, with 'any movements being managed through schedule margins built into the Program'. Defence assured the committee that it is 'closely monitoring test point achievement and software maturity' and has 'built in additional schedule margin to manage this risk' to ensure that Australian initial operating capacity is met in 2020.⁶ The Chief of the Air Force, Air Marshal Leo Davies, assured the committee that he is confident that delays in the development of the F-35 would not result in a capability gap.⁷ However, the committee is not convinced that a suitable mitigation strategy has been prepared to address this risk.

1 Department of Defence, *Submission 55*, p. 13.

2 United States Director of Operational Test and Evaluation, *F-35 Joint Strike Fighter*, 2015, p. 35–36.

3 Lieutenant General Christopher Bogdan, *Submission 56*, p. 10.

4 Department of Defence, *Submission 55*, p. 13.

5 Department of Defence, *Submission 55*, p. 6.

6 Department of Defence, *Submission 55*, p. 13.

7 *Committee Hansard*, 22 March 2016, p. 66.

6.9 Life extension work on the classic Hornet fleet has extended its retirement date from 2015 to 2022 and beyond; however, evidence received from the Sir Richard Williams Foundation and the Australian Strategic Policy Institute (ASPI) indicated that the scope for further extension beyond this date is limited, costly, and will result in a decrease of capability.⁸ Considering the history of significant changes to the acquisition schedule over the life of the F-35 Program, including the recent re-baselining, together with the limited scope and considerable cost to further extend the life of the classic Hornet fleet, the committee considers it prudent for Defence to develop a hedging strategy to mitigate the risk of a capability gap resulting from further delays.

6.10 The committee notes ASPI's advice that the 'most sensible hedge' would be to order another tranche of F/A-18F Super Hornets. ASPI explained that this would be the best option as no other fifth-generation aircraft is available on the world market; most, if not all, of the fixed costs of acquiring the Super Hornet have already been borne; and any other type of aircraft would bring with it new supply chains and flight and ground crew training requirements, putting strain on the RAAF's capacity to absorb the several other new types of aircraft in the pipeline. ASPI noted that, taking into consideration a three or more year lead time for the delivery of a new-build Super Hornet, a decision would need to be made by 2019 at the latest.

Recommendation 1

6.11 The committee recommends that the Department of Defence develop a hedging strategy to address the risk of a capability gap resulting from further delays to the acquisition of the F-35A. The strategy should be completed by 2018 and capable of implementation by 2019 at the latest.

Potential alternatives

6.12 The committee received evidence against the procurement of the F-35A which asserted that Australia should instead acquire the F-22 Raptor. Air Power Australia (APA), in particular, was highly critical of the F-35A, which it described as 'structurally obsolete'.⁹ APA asserted that the F-35A is not capable of meeting Australia's air combat capability needs, warning that 'advances in both Russian and Chinese aircraft, air-to-air missiles, cruise missiles, and smart bombs now challenge the primacy of Western air power, believed unbeatable since the Cold War'.¹⁰ APA adamantly asserted that the F-22 Raptor is the 'only alternative' and called for the United States to abandon the F-35 program in favour of restarting production of the F-22.

6.13 The committee is sceptical of the accuracy of analysis and conclusions calling into question the suitability of the F-35A, noting that the information necessary to

8 Australian Strategic Policy Institute, *Submission 47*, p. 4; Sir Richard Williams Foundation, *Submission 17*, pp 4–5.

9 Air Power Australia, *Supplementary Submission 9.2*, p. 3.

10 Air Power Australia, *Submission 9*, p. 2.

accurately assess the capability of the aircraft is classified, as is information regarding current generation Russian and Chinese developmental aircraft. Furthermore, after seeking comment from a range of other witnesses regarding analysis such as APA's Zero-One Comparative Technique (ZOCT) Table, the committee finds its conclusions to be unpersuasive. However, even if the data and conclusions were beyond doubt, the F-22 is not in production and is unlikely to ever be reinstated to production. Even if it were, despite rumours to the contrary, the sale of the F-22 'to any foreign government' remains prohibited by the United States Congress. As such, the committee is unconvinced that the F-22 is a realistic alternative to the F-35A.

6.14 The committee received some evidence from submitters and witnesses regarding the JAS-39E Gripen, Eurofighter Typhoon and Dassault Rafale, in addition to suggestions regarding unmanned aircraft. However, the evidence was not able to demonstrate that these aircraft would be better able to meet all of Australia's requirements. The committee therefore concludes that the F-35A remains the only currently viable aircraft that is capable of meeting Australia's near term strategic needs and as such, should be a key element of Australia's air combat capability.

Benefits to Australian industry

6.15 The evidence received indicated that the impact of the F-35 Program on local Australian industry, and subsequently the Australian economy, has been positive. As a result of being able to compete for business on global F-35 Program supply chains, and with the support of government programs, Australian companies have won a number of significant contracts and secured over US\$554 million worth of design and production work.¹¹ This is a figure which is expected to increase significantly over the life of the program as it matures, resulting in rising production volumes and future sustainment opportunities.¹²

6.16 Australian industry submitters and witnesses told the committee that they have received a range of benefits from their involvement in the F-35 Program, including: capability and network development; job creation; long-term investment; increased skills and experience; and opportunities for future work. The committee was pleased to hear that the F-35 Program has delivered considerable employment opportunities to Australian industry as well as helping to offset declining employment rates in the automotive manufacturing industry by engaging a large number of people out of its engineering and manufacturing workforce.

Sovereign industrial capabilities

6.17 The committee is concerned that the potential for other nations to be prioritised over Australia for the provision of repair parts and for the development of software (e.g. mission data files, electronic warfare) may negatively impact Australian capability. The committee notes that the support solution for sustainment is still under development; however it is concerned that the F-35's reliance on mission data loads

11 Lockheed Martin, *Submission 46*, p. 13.

12 Quickstep Holdings Ltd, *Submission 26*, p. 1.

produced by the US Reprogramming Laboratory, together with the Autonomic Logistics Information System (ALIS) and global support model could impact Australia's sovereign ability to make decisions around how, when, and where we deploy capability.

6.18 A balance must be found between the benefits of the global support solution and maintaining an acceptable level of sovereignty regarding the maintenance of Australian capability. As such, the committee strongly supports Defence's efforts to develop mission data reprogramming capabilities in Australia. Furthermore, the committee encourages efforts to establish Australia as the F-35 Asia-Pacific maintenance and sustainment hub. This would have the dual benefit of increasing Australian industry participation in the F-35 global support solution as well as developing in-country maintenance and support capabilities.

Recommendation 2

6.19 The committee recommends that the Department of Defence develop a sovereign industrial capability strategy for the F-35A to ensure that Australian aircraft can be maintained and supported without undue reliance on other nations.

Recommendation 3

6.20 The committee recommends that the government endeavour to establish Australia as the Asia-Pacific maintenance and sustainment hub for the F-35.

**Senator Alex Gallacher
Chair**

**Senator Chris Back
Deputy Chair**

