

Other issues

- 7.1 During the course of the Review, a number of other issues were dealt with that do not fit into the broad subject areas the Committee resolved to examine during its consideration of the *Defence Annual Report 2011-2012*. These issues will be discussed in this Chapter.
- 7.2 These issues fall into three broad categories:
- Strengthening Defence oversight;
 - The Parliamentary Defence Engagement Program; and
 - The Joint Strike Fighter (JSF) Project.

Strengthening Defence oversight

- 7.3 In a submission to this Review, Mr James Brown argued that there were a number of issues which prevented effective oversight of the Defence organisation. These issues largely stem from the nature of Defence's annual reporting, and Mr Brown's evidence focused on both the perceived shortcomings of Defence's reporting, and recommended ways to improve it.

The *Defence Annual Report*

- 7.4 When it comes to departmental annual reporting, Mr Brown noted that, ideally:
- The *Defence Annual Report* should allow the Parliament to gauge how good the [Australian Defence Organisation (ADO)] is and how effective defence and strategic policy has been. At least it should provide clear indication of whether the ADO is improving performance or not. But in its current form the *Defence Annual*

*Report lags behind our allies in its commitment to transparency and detail.*¹

- 7.5 Mr Brown told the Committee that this was particularly concerning in the area of gauging preparedness:

The issue I have is that this report makes it very difficult for Defence to be accountable to Parliament. There is not a lot of information with which you can measure preparedness for defence, readiness issues or some of the deeper, more structural and institutional problems that might be happening within the ADO.²

- 7.6 As such, Mr Brown raised a number of concerns about the nature of *Defence's Annual Report*, noting particularly that it is 'less transparent and detailed than similar reporting in the UK, US, Canada and New Zealand.' Of particular concern to Mr Brown was:

...the methodology for reporting department performance. The ADO assesses its 20 departmental and administered programs using a system of one, two and three ticks.

The three tick system is an exceptionally crude performance measurement methodology for a government department with 105,000 employees and an annual budget of \$24.2 billion. It is not clear what the performance targets are, how they are devised, or how performance is assessed. Where targets are not achieved, it is not possible to discern by how much performance is deficient. Because of these limitations (and other data inconsistencies from year to year) it is very difficult to track defence performance over time in any meaningful way.³

- 7.7 Furthermore, Mr Brown characterised what reporting there is as 'overly optimistic', noting that it does not serve to highlight risks to performance. For example:

...in the *Defence Annual Report 2011-12*, Navy's amphibious fleet received a full three ticks for performance. This rating, however, does not make it clear that amphibious ships HMAS Manoora and Kanimbla had been decommissioned and HMAS Tobruk was being extensively risk-managed to the point where it is doubtful she could sustain an operational deployment of any seriousness.⁴

1 Mr James Brown, *Submission No. 1*, p. 3.

2 Mr Brown, *Transcript*, 16 May 2013, p. 1.

3 Mr James Brown, *Submission No. 1*, p. 3.

4 Mr James Brown, *Submission No. 1*, p. 4.

- 7.8 Mr Brown highlighted another example of what he calls optimistic reporting:

In the *Defence Annual Report 2010-2011*, the amphibious fleet recorded two ticks for performance – “targets mostly met and any issues are being managed”. Two of the three ships had actually been put on an operational pause for an extensive period after a fire on one ship left it drifting and in peril. During a large part of the 2010-11 reporting period Navy had no amphibious capability at all.⁵

- 7.9 Defence responded that it will ‘will continue to review its approach to performance reporting in considering the preparation’ of its next annual report, noting:

Defence is committed to performance reporting that reflects in a balanced way both the achievements of the Australian Defence Organisation and its current and future challenges.

It should be noted that in addition to the three-ticks performance reporting in the 2011- 2012 Defence Annual Report, the Report includes several types of statistical performance data that allow a more granular assessment of performance. These include flying hours for aircraft types across all three Services and readiness data for Navy fleet units. In these examples both the actual performance and the relevant performance targets are included.⁶

- 7.10 Mr Brown put forward his view that this ‘overly optimistic’ reporting has led to poor public perceptions of Defence as an organisation:

Despite being a highly professional organisation, the ADO often appears to lurch from crisis to scandal. This perception is often fostered by a defensive approach to the release of information and overly optimistic and positive reporting. The Sub-Committee should encourage the ADO to be more balanced in its engagement with the Parliament and public, and to be more self-critical and less risk-averse in the release of information and fostering of professional debate.⁷

- 7.11 To remedy this situation, Mr Brown recommended that Australia move towards the style of defence reporting currently used in the UK:

In looking at other defence forces around the world and other defence organisations, it is quite clear that some of them use their reporting as an opportunity to flag critical issues and critical

5 Mr James Brown, *Submission No. 1*, p. 4.

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

7 Mr James Brown, *Submission No. 1*, p. 11.

shortages. The United Kingdom, for example, in their annual reporting take the opportunity to list where they are critically short of personnel. There are arguments for why you would and would not do that. But when I look through this report I see language that is not entirely useful and I think it is a cultural and institutional trait within Defence. I would hope that you would recommend them to take note of that and address it.⁸

7.12 Mr Brown compared this style of reporting to that adopted in similar countries:

However, these problems of defence reporting are not so apparent in the US, NZ, Canada, and the UK where there is a more encouraging commitment to defence transparency. Defence annual reporting in the UK, for example, highlights operational pinch points, critical personnel shortages, and shows where force elements are critically weak. In the annual report of the NZ Department of Defence and Defence Force there is a frank assessment of defence capabilities and granular reporting on the availability of major weapons platforms. The NZ Defence Report also uses a performance measurement methodology to report on the relative readiness levels of the NZDF without breaching operational security. Under the New Zealand model, it is very clear whether the New Zealand Defence Force is meeting readiness targets or not.⁹

7.13 Defence responded that its annual reporting conforms with the guidelines set out by the Department of Prime Minister and Cabinet:

Defence's public reporting conforms with the *Annual Report* performance reporting required by the Department of the Prime Minister and Cabinet and approved by the Joint Committee of Public Accounts and Audit under subsections 63(2) and 70(2) of the *Public Service Act 1999*. It should be noted that in addition to the three-ticks performance reporting in the *2011-2012 Defence Annual Report*, the Report includes several types of statistical performance data that allow a more granular assessment of performance. These include flying hours for aircraft types across all three Services, as well as readiness and availability performance data for Navy fleet units. In these examples both the

8 Mr Brown, *Transcript*, 16 May 2013, p. 2.

9 Mr James Brown, *Submission No. 1*, p. 4.

actual performance and the relevant performance targets are included.¹⁰

- 7.14 Mr Brown further noted that New Zealand's reporting methodology manages to provide this information without 'divulging any operational security information.' Mr Brown suggested that:

There could be some good work to be done there. I do not know whether it would be a public method of reporting – it might be an in camera method of reporting – but a more institutionalised and granular way of letting you know either or not Defence is hitting its targets.¹¹

- 7.15 Nonetheless, Defence noted that security classifications made it difficult to report publicly on force readiness:

With regard to routine reporting, Defence provides regular quarterly reports on readiness (also called preparedness) to the Minister for Defence. Because of the sensitive nature of assessments on Defence's ability to undertake tasks as directed by the Government, most preparedness and capability reporting is classified. Advice on capability issues arising outside the reporting cycle is also provided directly to the Minister by the responsible Service Chief.¹²

Publishing statistics

- 7.16 Another means of strengthening oversight of the ADO suggested by Mr Brown was through the routine publication of important Defence-related statistics. Mr Brown outlined his arguments in support of this to the Committee at a public hearing:

The second suggestion I have made is that this committee encourage the defence organisation to more routinely publish statistical information for a number of reasons. Firstly, so that my job as a researcher is easier. Secondly, so that both the public and Parliament can do their own assessment of where defence is at. Thirdly, so that defence personnel themselves can access this information. I believe that it is just as hard within the organisation to get your hands on statistical information. For example, it took me four months to work out how many Army officers have a tertiary degree. That is not very controversial information in itself. It does not give us a huge degree of insight into how good the

10 Department of Defence, *Submission No. 6*, p. 2.

11 Mr Brown, *Transcript*, 16 May 2013, p. 2.

12 Department of Defence, *Submission No. 6*, p. 2.

Army is, but it is an indicator of how professional our Army Officer Corps is. Four months later I have been given that data by Defence. It turns out that, from their records, 20 per cent of Army officers have a degree – a surprisingly low number. It is a number, I believe, cannot be correct given the number that go through the Australian Defence Force Academy, and Command and Staff College at the Australian National University. An initiative to convince Defence to publish more of this type of statistical information would be entirely useful. There is a good model for this. The United Kingdom Ministry of Defence has an analytical statistical agency, which basically has economists, statisticians and researchers who work to put together this kind of information and publish it for public, parliament and defence usage.¹³

7.17 As a result, Mr Brown noted that:

The ADO has been slow to embrace the age of open government and Australia often lags behind our allies when it comes to defence transparency. The Sub-Committee should encourage, and if necessary seek to legislate, for the ADO to routinely publish more statistical data and defence information. Additionally, the ADO should be encouraged to publish more of its reports and surveys rather than waiting for the public to request them through the freedom of information process, or for members to request information through questions on notice.¹⁴

7.18 Defence noted that it was already publishing statistics, and was seeking to publish more information:

The *Defence Annual Report* (DAR) is Defence's primary vehicle for the release of statistical information pertaining to the Defence portfolio. The DAR contains many statistics comparable to those accessible via the United Kingdom Ministry of Defence's statistical agency (Defence Analytical Services and Advice), including statistics on Defence staffing and finance. Defence also releases statistical information comparable to the United Kingdom Ministry of Defence's statistical agency on its website. For example, the operations section of this website includes statistics on Australian Defence Force casualties.

Defence is also seeking to place more information, including information sought regularly by Parliamentary Committees through Questions on Notice, on its Information Publication

13 Mr Brown, *Transcript*, 16 May 2013, p. 2.

14 Mr James Brown, *Submission No. 1*, p. 10.

Scheme website. Responses to Questions on Notice, available from the Australian Parliamentary website, also contain considerable statistical data for researchers and the general public.¹⁵

Reviews of major operations

7.19 Another means of fostering greater Parliamentary oversight and thus public understanding of Defence and its activities that was raised during this Review was through the conduct of post-campaign assessments.

7.20 Mr Brown made the following comment on efforts at reviewing operations:

Concurrently, the ADO is transitioning from a high tempo decade of operations in Afghanistan, Iraq, East Timor and Solomon Islands. These operations need to be reviews and the ADO does not have a good record in reviewing its own operations. The Australian National Audit Office (ANAO) concluded in 2011 that Defence's ability to learn from operations was "patchy and fragmented", the Australian Defence Force (ADF) had no central repository for operational evaluations, and that until 2009 Defence had reviewed only 5 of its 17 operations. The ANAO concluded then that this "limited the ADF's capacity to assess its performance against the objectives set by the Government when it committed the ADF to action".¹⁶

7.21 Mr Brown thus argued that:

...it is particularly important that we review how successful [recent operations have] been on a number of levels: the military strategy, the operational effectiveness and the tactical lessons that we have learned as well.¹⁷

7.22 Defence noted that it currently has a campaign assessment process in place:

Headquarters Joint Operations Command (HQJOC) employs a campaign approach to managing large scale, enduring ADF operations. As part of the campaign approach to operations, HQJOC conducts campaign assessments for designated operations. The campaign assessment assesses progress against set operational objectives, highlights risk and informs Chief of Joint Operations' decision making.

15 Department of Defence, *Submission No. 6*, p. 3.

16 Mr James Brown, *Submission No. 1*, p. 6.

17 Mr Brown, *Transcript*, 16 May 2013, pp. 2-3.

For example, the ADF's operations in Afghanistan, under Operation SLIPPER, are assessed quarterly. In line with the HQJOC campaign plan, the Afghanistan campaign assessment is primarily focused on Uruzgan Province. The Operation SLIPPER campaign assessment draws upon a wide base of reporting that includes inputs from Combined Team - Uruzgan, the International Security Assistance Force (ISAF) chain of command, and other wider sources. This reporting is used to provide both contextual background and the assessment of specific measures of effectiveness used to assess progress.¹⁸

7.23 Furthermore, Mr Brown suggested that these reviews pay particular attention to implementing the lessons learned from these operations, and that the reviews contain some sort of public component.¹⁹

7.24 In response, Defence informed the Committee that it:

...believes that the current reporting, post activity evaluation and lessons learned processes of the ADF provides suitable opportunity for the Government to evaluate operations and for Defence to develop new or revised strategies and doctrine and update tactics, techniques and procedures. Public reviews such as those recommended would carry the risk of providing potential adversaries with information of the ADF's strengths and weaknesses without necessarily providing further information of value.²⁰

7.25 Furthermore, Defence stated that some information on the various assessments of the campaign are made available to the public:

ISAF conducts its own assessments of the overall campaign in Afghanistan and reports on these regularly through North Atlantic Treaty Organisation (NATO). At the appropriate time, NATO releases information publicly, the US Commander provides updates to the media and provides testimonies to the US Congress. Furthermore, ISAF provides briefings to the media on operations, including how ISAF assesses the overall campaign. An extract is available on the ISAF website.

Finally, the Minister for Defence, Minister Smith, provides regular updates to Parliament on the progress of the mission in Afghanistan. Regular updates to Parliament in 2013 have included operational reviews, updates on operational incidents and

18 Department of Defence, *Submission No. 6*, p. 1.

19 Mr Brown, *Transcript*, 16 May 2013, p. 3 and Mr James Brown, *Submission No. 1*, p. 11.

20 Department of Defence, *Submission No. 6*, p. 1.

detainee management, as well as transition progress in Afghanistan.²¹

Committee comment

- 7.26 The Committee is of the view that Defence's annual reporting, as it currently stands, does not provide sufficient detail on performance or on the readiness of the ADF. While the Committee acknowledges that the *Defence Annual Report* is not the only place where Defence's performance is examined, it could still be expanded to include more information.
- 7.27 The Committee agrees with Mr Brown's contention that reporting tends to be overly optimistic, and that Defence could be using its annual reporting to flag potential future issues and operational pinch points.
- 7.28 The Committee shares Mr Brown's concerns about the three ticks methodology for reporting performance. Not only does this method not shed much light on the extent to which Defence is fulfilling its functions, it also makes it difficult to monitor performance between annual reports as no indication is given as to how the number of ticks is arrived at.
- 7.29 As a result, the Committee sees considerable value in expanding the information included in the Defence annual report. This should include, at a minimum:
- the specific performance targets which underlie key performance indicators and deliverables;
 - how performance is assessed in relation to these targets; and
 - when targets are not achieved, specific details on the reasons.
- The expanded performance reporting framework should draw on international experience in the capabilities acquisition and sustainment arena.

21 Department of Defence, *Submission No. 6*, pp. 1-2.

Recommendation 3

The Committee recommends that the Department of Defence enhance its public reporting by:

- Developing a more precise method for reporting performance on capabilities acquisition and sustainment, which would detail:
 - ⇒ Specific performance targets;
 - ⇒ how performance is assessed in relation to these targets; and
 - ⇒ the specific reasons why targets are, or are not, achieved;
- Including some detail on emerging areas of concern and potential future issues;
- Enhancing its reporting on the Defence budget and its implications for capabilities acquisition and sustainment;
- Undergoing a periodic review conducted by independent experts, similar to the United States' Quadrennial Defense Review; and
- Including information on operational readiness.

The Australian Defence Force Parliamentary Program

7.30 One of the key challenges to strengthened Parliamentary oversight of Defence highlighted in Mr Brown's submission was the lack of military experience of many Australian parliamentarians. Mr Brown noted that while:

Prior military service is not a precondition for developing a deep understanding of defence... it is a good start. As warfare becomes more technical and specialised, knowledge of the military becomes harder to access. A parliamentarian may form views on health policy through personal visits to a hospital, but absent a period of military service, most parliamentarians are unlikely to have encountered the military in anything other than a ceremonial role.²²

7.31 Mr Brown noted that while nearly eight per cent of Australia's parliamentarians do have military experience:

22 Mr James Brown, *Submission No. 1*, pp. 8-9.

...in 50 per cent of cases military service has been limited to brief stints in reserve training units. Not a single member of the 43rd Parliament has served in a combat position, only two have experience in the ADF post-9/11.²³

- 7.32 One highly successful means of remedying this is the Australian Defence Force Parliamentary Program (ADFPP). The Defence website gives a background to the genesis of this program:

In late 2000, there was a growing awareness that the number of parliamentarians who had direct experience with the Australian Defence Force (ADF) had diminished markedly. Defence took the position that it needed to increase parliamentarian's exposure to the ADF and provide them with an opportunity to gain an insight into the ADF and its capabilities. In turn, this was expected to assist parliamentarians in the facilitation of a more fulsome Defence debate on issues of national security and budgetary expenditure, issues which had attracted increased attention through the nineties as a result of heightened world events.²⁴

- 7.33 Defence's website elaborated on the role of the program:

The stated aim of the ADFPP was, and remains, to provide Senators and Members of Parliament with practical experiences of the ADF so that they can play a more informed and constructive part in the Defence debate. The program has the following objectives:

- provide an understanding of a unit's role and missions,
- provide an opportunity to experience life as a service person, and
- provide an awareness and understanding of Defence capabilities, personnel and management issues.²⁵

- 7.34 Since the program's inception in 2001, 293 placements have been undertaken by members of the Federal Parliament. These placements have been in a variety of operational areas, and Defence offers some examples from the 2013 program:

During 2013, 19 attachment options are offered. The Middle East Gulf Region and Afghanistan operational options remain at the forefront of the program. Activities for this option include undertaking an operational naval patrol on an ANZAC frigate in

23 Mr James Brown, *Submission No. 1*, p. 9.

24 Department of Defence website, *Defence Parliamentary Engagement Program: History*, viewed 11 June 2013, <<http://www.defence.gov.au/adfpp/history.htm>>.

25 Department of Defence website, *Defence Parliamentary Engagement Program: History*, viewed 11 June 2013, <<http://www.defence.gov.au/adfpp/history.htm>>.

the Gulf of Aden, or engaging in activities with service personnel on deployment at Tarin Kot and Kandahar in Afghanistan.

Attachments to other Areas of Operation include the longstanding Border Protection activity to the North and the ADF's Regional Assistance to the Solomon Islands, which will complete this year.

Options within the three services in Australia include attachment options to Navy's Fleet Base West with a focus on the Collins submarine, to Army's major firepower exercise CHONG JU, or to Air Force's Royal Australian Air Force Base Williamstown, home of the F/A 18 Hornet and the new Wedgetail Airborne Early Warning and Control aircraft.²⁶

- 7.35 Given the success of the program in fostering a deeper understanding of the issues faced by Defence, and Defence's uniformed personnel in particular, Mr Brown recommended that it be expanded into other areas of the ADO where Members of Parliament may have fewer opportunities to engage:

The ADF Parliamentary Program... is highly successful (34 per cent of the current parliament has completed at least one rotation). However, the tactical focus of the program makes it more akin to a work experience program for politicians than a mechanism of parliamentary oversight. Parliamentarians wear military uniforms, complete tactical tasks, and are awarded special boomerang insignia when they complete multiple placements. Whilst the program helps make life in ADF units familiar to parliamentarians, a more mature program of defence fact finding and inspection is needed. This program should prioritise visits to consider strategic and operational issues at Headquarters Joint Operations Command, Russell HQ, and the [Defence Materiel Organisation].²⁷

Committee comment

- 7.36 The Committee recognises the value of the Defence Parliamentary Engagement Program. This Program has been of immense value in terms of informing parliamentarians about the lives and activities of Australia's servicemen and women, and the Committee is very supportive of the Program's continuation.

26 Department of Defence website, *Defence Parliamentary Engagement Program: History*, viewed 11 June 2013, <<http://www.defence.gov.au/adfpp/history.htm>>.

27 Mr James Brown, *Submission No, 1*, p. 9.

- 7.37 Nevertheless, the Committee would like to see the Defence Parliamentary Engagement Program extended into other areas. The Committee sees value in extending the Program to include placements with the Department of Defence, with a particular focus on strategic policy and the DMO.

Recommendation 4

The Committee recommends that the Defence Parliamentary Engagement Program include placements with the Department of Defence policy areas and the Defence Materiel Organisation.

Joint Strike Fighter

- 7.38 In its *Review of the Defence Annual Report 2010-2011*, in light of the conflicting perspectives presented to it on the cost, schedule and capabilities of the JSF, the Committee resolved to maintain a focus on the project to ensure that it does provide Australia with ongoing regional air superiority in a cost-effective and timely fashion.

- 7.39 The *Defence Annual Report 2011-2012* states that:

Lockheed Martin is contracted to the United States Government for the development and production of the F-35 Joint Strike Fighter. Australia is procuring the aircraft through a government-to-government agreement.

During 2012, this project signed the long lead acquisition contract for Australia's first two JSF aircraft. Production of aircraft components has commenced to support delivery to the United States Pilot Training Centre in early 2014. Full contract signature (known as definitisation) has been delayed and is not expected to occur until mid-2013, however this is not expected to impact the 2014 delivery.

In the 2012-2013 budget, the Australian Government confirmed its commitment to the first two JSF aircraft but deferred the acquisition of the subsequent 12 aircraft by two years. This decision was taken to maintain alignment with the United States

Program which has recently deferred the acquisition of 179 aircraft.²⁸

- 7.40 The Committee received an update on the JSF project from senior Defence officials. This update focused particularly on the Committee's three key areas of concern: cost, schedule and capability.

Cost

- 7.41 The Committee's *Review of the Defence Annual Report 2010-2011* found that cost estimates had increased throughout the life of the JSF project, and flagged this as a particular issue of concern for the project.²⁹

- 7.42 At a public hearing, Defence advised the Committee that the JSF would be delivered within budget:

From a cost perspective, the approved AIR 6000 phase 2A/B stage 1 – that is, the “first 14 aircraft” – remains within budget. The unapproved AIR 6000 2A and 2B stage 2 – that is, the “next 58 aircraft” – remains within its Defence Capability Plan provision.³⁰

- 7.43 Furthermore, Defence told the Committee that costs were expected to decrease through the life of the project, as production increased:

There is now strong alignment between the aircraft acquisition cost estimates from the independent US Cost Assessment and Program Evaluation Office, the US F-35A Joint Program Office, and the Australian New Air Combat Capability Project Office. However, the aircraft costs are sensitive to US and partner nation purchase profiles. The actual costs for each successive low-rate initial production lot continue to be below the US congressional estimates. Our first two aircraft are expected to be around, or less than, the \$130 million estimate that Defence has had since before 2011. Overall, in 2012 dollars and exchange rate at A\$1.03 to US dollars, 72 F35As are expected to cost an average of A\$83.0 million – unit recurring flyaway cost – if ordered in the 2018-19 to 2023-24 time frame.³¹

- 7.44 It was also noted by Defence that the figures it estimated independently are consistent with US Congressional cost estimates:

The latest official US congressional F-35A cost estimates, sourced from the publicly available Selected Acquisition Report of 2011,

28 *Defence Annual Report 2011-2012*, p. 169.

29 Joint Standing Committee on Foreign Affairs, Defence and Trade, *Review of the Defence Annual Report 2010-2011*, p. 81.

30 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 7.

31 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 7.

are consistent with the Australian estimates and indicate the cost of the F-35A – unit recurring flyaway cost – reducing from a price of about \$130 million in US then dollars for aircraft delivered in 2014 reducing over time down to about \$82 million in US then dollars for aircraft delivered in the 2020 time frame.³²

- 7.45 Defence also discussed the likely sustainment costs, noting that while they are currently high, they are likely to decrease over time:

The sustainment costs are high but reducing, and we should see further refinement of these costs now that the F-35A has been fielded at several units in the US. This area is a particular focus of the US JSF Program Office at present, who have been implementing initiatives such as improving the supportability of high-value and high-usage aircraft components; opening up greater competition for sustainment work; and further developing programs to reduce the cost of ownership of F-35A support equipment.³³

Schedule

- 7.46 In its review of the previous *Defence Annual Report*, the Committee found that while Defence and Lockheed Martin were positive about future developments, the schedule for the delivery of working JSFs had slipped considerably since the inception of the project.³⁴

- 7.47 Defence provided the Committee with an update on the schedule for the delivery of the JSF to Australia:

Following the re-baselining of the program by the US Joint Program Office, in 2010-11, the program has stabilised and the manufacturer is meeting its key milestones. Technical problems with systems such as the helmet mounted display system are being addressed. We now have a greater level of confidence that the program will deliver the required capability by 2020. We have reached this view based on three independent reviews conducted by Defence. These consist of two software focussed reviews using the schedule compliance risk assessment methodology, or SCRAM, and also a further DMO-led review that was independent of the Project Team, in March/April 2013. These reviews have confirmed the assessment made by the new Program Executive

32 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 7.

33 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 7.

34 Joint Standing Committee on Foreign Affairs, Defence and Trade, *Review of the Defence Annual Report 2010-2011*, p. 82.

Officer, Lieutenant General Bogdan, to the Defence subcommittee during his briefing at Avalon, and in his April 2013 testimony to the US congress, that the program is likely to deliver the threshold capability needed for an Australian IOC in 2020, based on block 3i of the aircraft software. Defence assesses a medium risk for the delivery of the software capabilities needed to meet the Australian IOC requirements in 2020.³⁵

7.48 Specifically, Defence told the Committee that:

It is now less than two years before the first two Australian F-35A aircraft are delivered, and seven years before the Initial Operating Capability, or IOC, of the F-35A in the Royal Australian Air Force. [...]

The first two Australian F-35A aircraft are on track for delivery in the United States in late 2014 and will be used for training the first Australian pilots at Luke Air Force Base from 2015. Production ramp up from 35 to 100-plus F-35A aircraft and engines per annum presents a challenge, but the F-35A Joint Program Office and the recent DMO-led review assess that it is achievable. Lockheed Martin and Pratt and Whitney appear to have the resources and expertise to deliver the system development and demonstration program and hence achieve an Australian IOC of 2020.³⁶

7.49 Furthermore, a recent independent, DMO-led review found that 'the F-35A, in a block 3F configuration, together with its weapons and support systems, is likely to be ready to meet an Australian IOC schedule'.³⁷

7.50 Nonetheless, Defence flagged some potential risk areas in terms of schedule:

From a schedule perspective, software remains a key risk; however, the risk appears to be reducing. The block 2B release is expected to be delivered to the fleet in mid-2015, and block 3I in 2016, representing about a four-year schedule buffer to the planned Australian IOC of 2020.

The independent DMO SCRAM review assessed about 11 months of schedule risk in the block 3F software. This assessment appears valid with about three months slip now forecast by the US JSF Program Office. The block 3F fleet release is planned for the third quarter of 2017, but could be as late as mid-2018 if the risk is

35 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 6.

36 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, pp. 6 and 7.

37 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 6.

realised. Defence will have better idea of fleet release date for block 3F after the block 3 critical design review in mid-2013.³⁸

Capability

- 7.51 In its *Review of the Defence Annual Report 2010-2011*, the Committee received conflicting evidence on whether the JSF would offer the type of capabilities needed to maintain Australia's regional air superiority, particularly in light of the fact that other nations are currently in the process of developing fifth generation fighter jets.³⁹
- 7.52 Defence offered the Committee an overview of the capability that would be offered by the JSF:
- The F-35A, as a 5th generation strike fighter, will provide Australia the capability to succeed in the air across the spectrum of conflict. It will bring to the fight a degree of networking that is a force multiplier for airborne forces, as well as for land and maritime forces. The F-35A will be able to operate and win in very high threat environments where most other fighters will struggle. Very importantly, it is at the start of its operational life and will be able to evolve and improve over decades as the threat evolves.⁴⁰
- 7.53 Defence elaborated on the results of the testing that had been conducted so far, noting that the JSF will meet requirements upon IOC:
- Of course, with only 35 per cent of flight testing of the F-35A complete, and ground fatigue testing of the F-35A just entering the second life of testing, there is still the potential for issues to emerge. The Block 2B/3i configuration of the F-35A aircraft is assessed to be at least as capable as the Classic Hornet in the priority IOC roles and will meet the threshold requirements for IOC. At this time, all planned capability is expected to be fielded in the Block 2B/31 configuration, but there are several 'drops' of Block 2B software to be delivered in the next few months. Some capability features of the block 3F software may potentially be deferred because of the limited budget and schedule available to the F-35A System Development and Demonstration program.⁴¹
- 7.54 Nonetheless, Defence noted that risks to capability do exist, particularly in the area of the weapons being designed for use of the JSF:

38 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 7.

39 Joint Standing Committee on Foreign Affairs, Defence and Trade, *Review of the Defence Annual Report 2010-2011*, p. 82.

40 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 6.

41 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, p. 6.

Maritime strike capability is a high-capability priority for Australia, and also is a very high US Department of Defense priority for block 4A, planned for release to service in the 2020-21 timeframe. Defence assess a medium risk that the implementation of the Joint Stand-Off Weapon, or JSOW C-1 maritime strike weapon, could be delayed to beyond the planned F-35A final operating capability date of 2023. This risk will be reassessed once the final block 4A content and priorities are confirmed in around September 2013 and advised as a part of the AIR 6000 phase 2A/2B second-pass consideration to government.⁴²

7.55 Additionally, the large volumes of data were posing potential risks in regard to capability:

A high risk remains in the area of generating a suitable mission data load for the F-35A at IOC. The mission data load contains threat parameters, weapons information and other mission data. Ways of mitigating this risk are being investigated, including the sourcing of an initial mission data load from the United States.⁴³

7.56 The Committee questioned Defence about the technical problems with the new helmet mounted display, requesting more detail on what the problems were and how they were being addressed. Defence responded at length:

They have been conducting a series of flight tests purely devoted to exploring the issues with the helmet mount display system and also some of the fixes that they have been putting into the helmet mounted display to improve its performance. That testing has just been completed and they are now finalising the analysis of it. I will give you an initial readout on what the analysis is indicating there. As you are well aware there is a dual path on the helmet. We currently have the VSI Gen II helmet. The VSI Gen III helmet, which will have an improved low-light night vision capability will be coming in about 2015 and that will then take over. We will no longer have the VSI Gen II. We will go to an all VSI Gen III helmet. You are well aware that the other path is a BAE helmet that has a night vision goggle arrangement attached to it as an interim helmet and as an alternate helmet to the VSI helmet. At the moment both paths are being progressed but of course the flight testing was all about the VSI Gen II helmet.

42 Vice Adm. Jones, Australian Defence Force, *Transcript*, 16 May 2013, pp. 6-7.

43 Air Vice Marshal Osley, Australian Defence Force, *Transcript*, 16 May 2013, p. 7.

I think you are across the issues but I will briefly cover them. Alignment is a key one. You hop into the aircraft and on occasion the helmet display may not be aligned with the earth. That requires you to get out of the aircraft and have it realigned on the ground. They are working on a proposal to have that, whereby you in fact fine-tune that prior to getting in the aeroplane; the pilot can do it as part of his normal checkout procedures. At the moment you have to return the helmet and basically go back and have it adjusted in the workshop. They are making it so that it is pilot-adjustable.

The next one is green glow, and that is a factor of the design of the helmet, using liquid crystal displays. It implies that there is a whole lot of extraneous light that is coming in at night around the display. Even though it is noted by a few of the test pilots it is not considered an operationally significant issue for them and they can overcome that one.

The third one is jitter. There were in excess of 35 flight tests; I believe there were 38 by the time I had been to Edwards, and there were more being planned. The initial results were that they were seeing positive improvements from the modifications that had been made. So, they had adjustments to the software to counteract the jitter, and in the pre-jitter software the pilot considered that it was acceptable but that it would require some workarounds and some compensation operationally. The post-modification ones for the anti-jitter in the software were showing significant improvement. That is all I could get out of them at the time, from the commander there.

The fourth issue is distributed aperture system latency – that is, the display has a lag in it. That lag has proven in the test flights to not be significant, so it is no major concern. It is expected to meet United States Air Force operational requirements. They have tested it and measured it and the USAF is now considering that data, but it is looking good.

The final one is the night vision camera. The Generation II helmet is not compliant in its night vision capability, and that is an issue not so much for the USAF – it can achieve their operational requirements – but for the US Marine Corps, in particular for fine motor skills of landing on the deck of an landing helicopter dock and the fine motor skills involved in air refuelling off KC-130s at night doing the probe refuelling. It is a problem both with the amount of resolution you have and with the location of the camera, as you are aware. That will be fixed in the Generation III

helmet by using a better system, and they are working on that. And in the interim of course the US Marine Corps are assessing whether it is operationally acceptable to go to IOC in 2015 with it, noting that they also have the alternate helmet as the backup at this time.⁴⁴

Committee comment

- 7.57 The Committee is encouraged by the update on the JSF project provided by Defence. It is pleased to see that, since the re-baselining in 2010-2011, the project has been meeting its objectives particularly in terms of cost and schedule.
- 7.58 While some concerns around capability do still exist, the Committee notes Defence's confidence that these risks can be managed. The Committee notes that many of the key areas of risk in regard to capability are actually still under development. Thus, it cautions that a close watch must be kept on these aspects of the program.
- 7.59 The Committee resolves to continue to seek updates on the JSF project in future reviews of the *Defence Annual Report*, so that it can stay up to date on current and emerging areas of risk.

Hon Joel Fitzgibbon MP
Chair

44 Air Vice Marshal Osley, Australian Defence Force, *Transcript*, 16 May 2013, pp. 9-10.