

Land capability and procurement

Introduction

- 5.1 The Committee engaged Defence on a number of land procurement projects. Some of these are occasioned by the need to periodically upgrade military vehicles, but in addition there are new requirements that have emerged from the ADFs current overseas deployments.
- 5.2 Coalition involvement in 'asymmetric' conflicts in Iraq and Afghanistan has introduced a significant increase in threats to personnel from Improvised Explosive Devices (IEDs), a type of weapon favoured by opposition forces in these conflicts.
- 5.3 This has highlighted shortcomings in military vehicle design. Current military patrol and other military vehicles, such as the current US standard Humvee vehicle, have been found to be vulnerable to IEDs.
- 5.4 In particular under-vehicle profiles, including wheel wells and other features, have been found to trap blast forces, thus increasing the destructive effect of IEDs on both vehicles and vehicle occupants.¹ Defence procurement in Australia and other countries has sought to respond to these threats.

1 Ogorkiewicz, R M 2009, 'Shaping up for the fight: vehicle design responses to challenge of mine warfare', *International Defence Review*, 10-Mar-2009, viewed 01/04/09
http://search.janes.com/Search/documentView.do?docId=/content1/janesdata/mags/idr/history/idr2009/idr12011.htm@current&pageSelected=allJanes&keyword=IEDs&backPath=http://search.janes.com/Search&Prod_Name=IDR&.

- 5.5 As a result, a new generation of vehicles is being sought with designs more resistant to this kind of threat. There are a number of Australian defence acquisition projects relevant to this area.
- 5.6 Procurement projects in related areas, to provide new or upgraded land vehicles and higher levels of protection, are Defence's involvement in the US-led Joint Light Tactical Vehicle program; LAND 121 - Overlander; and the LAND 106 - M113 Upgrade Project.²

Project LAND 121 - Overlander

Introduction

- 5.7 The Defence Materiel Organisation's project description for LAND 121 Project Overlander notes that it is:
- ... a multi-phased project that will provide the Field Vehicles, Modules and Trailers (FVM&T) and the associated support items that the ADF requires beyond the life-of-type of the current assets in order to meet ADF mobility requirements. This large project will deliver several thousand vehicles, modules and trailers over the next decade.³
- 5.8 This approach represents a new model for procurement of this kind, based on an imperative to increase commonality between types:
- Previously, FVM&T replacement programs were based on a fleet by fleet basis. LAND 121 is an amalgamation of the entire FVM&T requirements of the ADF into a single project, seeking to facilitate a materiel solution based on a 'capability brick'.⁴

Public hearings

- 5.9 In hearings, Defence provided further detail to the Committee on the progress of LAND 121:
- It is a complex project. Initially it was a \$3.1 billion project to replace all of army's light, heavy, medium vehicles, trailers and

2 Defence Materiel Organisation 2009, *Land Projects*, viewed 02/04/09
http://www.defence.gov.au/dmo/dmo/function.cfm?function_id=72

3 Defence Materiel Organisation 2009, *LAND 121 - Overlander*.

4 Defence Materiel Organisation 2009, *LAND 121 - Overlander*.

modules – some 12,000 pieces of kit. It was divided into three segments – three RFTs for the heavy medium, the light lightweight capability, and the trailers. The light lightweight segment RFTs are on track and the heavy medium and the trailer segments are going to plan.⁵

5.10 The Committee asked Defence if delays suffered by the project were due to ‘scope creep’ – where the purchaser changes requirements for a project are changed over time, making it more difficult for contractors to meet requirements, and for projects to be completed on time.⁶

5.11 Defence told the Committee that delays for elements of the project arose because ‘basically, industry could not provide the vehicle that they said they would in the tender, and subsequently the scope could not be met by the industry bid’.⁷ As a result, Defence:

...had to adjust the scope after testing in the market. The selected company is now coming back with proposals to meet that program and we are assessing those bids.⁸

5.12 While this process had as a whole resulted in project delays, Defence told the Committee that its response to these eventualities underscored the strength and effectiveness of the reformed procurement process that had resulted from the Kinnaird report, ‘that all these things were found between first and second pass and we could take the decision to government’.⁹

5.13 Defence told the Committee that contractors submitting proposals faced an inherently complex task:

In testing the market we expect companies to position themselves at either a cost or a capability trade off. It is difficult for companies and it is difficult for the requirer when they are going for a whole new capability. This is a complex project; it is about the modules and the module fit and there are many variants within each sector.¹⁰

5.14 This process encourages contractors to adopt a pragmatic response to requirements, and to engage Defence in a conversation on what kind of

5 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.22.

6 *Transcript*, Thursday 16 April 2009, p.23.

7 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.22.

8 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.22.

9 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.23.

10 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.23.

solution will best meet Defence's twin concerns of providing capability while staying within budget constraints:

To get specific, when a company bids it has to position itself to trade off and to provide the most capable vehicle at the least cost. In that capable vehicle there is a trade off between numbers and capability. Again, companies are positioning themselves to say, 'I can provide you with a very capable vehicle and fewer numbers of them. I can provide you with a lower capability or at least I can meet the essential requirements. It is a lower cost and you can get more of them'.¹¹

- 5.15 Defence also told the Committee that the reformed procurement process not only allowed Defence to respond to these proposals in a more flexible manner, but also to respond to changing environmental characteristics, and their consequences for materiel requirements. A chief characteristic of this process is that it allows Defence to step back where requirements are not met, potentially to re-consider requirements in such a way as to respond either to the capability of the market to deliver, or to change, requirements:

The contract was never let; that was the thing about the Kinnaird process. We did not get to contract with them. In the testing of the vehicle the vehicle did not meet the requirements that we wanted. Subsequently, in looking at the re-tender, the ballistic protection requirements had moved on with the threat in the MEAO [Middle East Area of Operations] and capability said, 'Now is an opportunity to re-look at the heavy medium and recast that scope.' It is not a linear process.¹²

- 5.16 The result, Defence told the Committee, is a palpable improvement in procurement practice:

I think we are quite proud of the ability of the DMO...to be able to re-position itself without prejudice to the contractors to say, 'The capability requirement is moving and we will take every opportunity in the Kinnaird process to deliver that high capability.'¹³

11 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.23.

12 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

13 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

Project Land 121 – Phase 4 - Joint Tactical Light Vehicle

Introduction

- 5.17 The Joint Light Tactical Vehicle (JLTV) is a US Department of Defence project to develop and acquire new-generation military vehicles to meet these requirements.¹⁴ Australia is reported as participating in the 'technology demonstration phase' of the project,¹⁵ and this is confirmed by statements by the Minister of Defence.¹⁶
- 5.18 Defence anticipates that participation in the JLTV program will provide 'options available to deliver protected mobility vehicles for the Army under project LAND 121 Phase 4'.¹⁷
- 5.19 Project LAND 121 Phase 4 is a proposal to:
- ...provide the ADF with a light Protected Mobility Vehicle capability (PMV-L), which will serve as the platform for command, control, communications, computers, intelligence, surveillance, reconnaissance and electronic warfare capabilities.¹⁸
- 5.20 Defence may source vehicles from the JLTV project as a means to fulfil this requirement.¹⁹

Public hearings

- 5.21 In hearings, the Committee engaged Defence on two particular aspects of Australia's involvement with the JLTV project:
- the size, scope and cost of Australia's procurement with respect to this stage of the project; and

14 Feickert, Andrew 2008, *Joint Light Tactical Vehicle (JLTV): Background and Issues for Congress*, Congressional Research Service, viewed 02/04/09
<http://www.fas.org/sgp/crs/weapons/RS22942.pdf>.

15 Walters, Patrick 2008, 'Australia to join US in developing army vehicles that offer better protect from roadside bombs', *The Australian*, October 29, 2008, viewed 31/03/09
http://www.theaustralian.news.com.au/story/0,,24568421-31477,00.html?from=public_rss.

16 Fitzgibbon, Joel 2009, *Opposition wrong on joint light tactical vehicle*, Department of Defence, 18 Mar 2009, viewed 31/03/09
<http://www.minister.defence.gov.au/Fitzgibbontpl.cfm?CurrentId=8896>.

17 Fitzgibbon, Joel 2009, *Opposition wrong on joint light tactical vehicle*

18 Defence Materiel Organisation 2009, *LAND 121 - Overlander*, viewed 28/05/09
<http://www.defence.gov.au/dmo/lsd/land121/index.cfm>.

19 Defence Materiel Organisation 2009, *LAND 121 - Overlander*.

- opportunities for the Australian defence industry to engage with the project. In particular, the Committee sought to explore whether the Australian Bushmaster vehicle, the outcome of LAND 116, could form the basis of a proposal to the JLTV program.²⁰

Scope of project

- 5.22 With respect to the size, scope and character of the project, Defence affirmed to the Committee that it had contributed money to this JLTV program under the administration of Defence in the US:

Just to clarify, the government has approved that we participate in the joint light tactical vehicle program, which is a United States program. We have contributed our money to their money and their program has selected those three companies to deliver a number of prototypes for evaluation.²¹

- 5.23 The JLTV project will be based on an assessment of these prototypes.²²
- 5.24 Defence told the Committee that the JLTV would come in 'various forms from transport that carries about six people down to what I would call a two-seater that carries one tonne of stores'. Out of a variety of possible configurations, Defence were considering four.²³
- 5.25 Defence told the Committee that Australia would seek to acquire, under LAND 121 Phase 4, 1,200-1,300 vehicles with a load capacity of 1 tonne, depending on the configuration.²⁴
- 5.26 In characterising the type of vehicle in question, Defence confirmed that those to be acquired under LAND 121 phase 4 were intended to replace Land Rover vehicles currently in use by the Australian Army.²⁵
- 5.27 Defence advised the Committee that vehicles acquired under an Australian involvement in the JLTV program would provide requisite levels of protection from IEDs, including blast-deflection, consistent with relevant NATO standards.²⁶ Defence could not provide exact requirements for blast-protection as this was classified information.²⁷

20 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, pp.13-14.

21 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.14.

22 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.14.

23 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.29.

24 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, pp.14, 16.

25 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.17.

26 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.17.

27 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.30.

Australian industry engagement

5.28 With respect to opportunities for the Australian defence industry to engage with the JLTV project, the Committee asked Defence whether Australian defence contractors had been given an opportunity to provide prototypes to the US JLTV program.²⁸

5.29 In particular, the Committee asked Defence if it had sought to approach the Australian defence contractor Thales, 'given their success' with the Bushmaster military vehicle in project LAND 116.²⁹

5.30 Defence told the Committee that it had 'consulted industry' in Australia prior to contracts being awarded in the US, but there had been no expressions of interest within the nominated time-frame.³⁰ Defence stated:

We joined the joint light tactical vehicle program which had been underway for a long time and there was nothing else on the market. Nothing else was going at the same time.³¹

5.31 The Committee questioned whether the Australian defence contractor Thales was asked whether it had the capacity or opportunity to design a JLTV:

Did you ask them at any time whether they had the capacity, a design, a draft, or an opportunity?³²

5.32 Defence's response was: 'I did not'.³³

5.33 Requests for proposals for this project were called a second time. In respect of this new requested proposal, Defence advised:

One of the senior directors from Thales came to my office and gave me a rough sketch outline of a proposal on which he had been working.³⁴

5.34 The Committee asked:

...looking at Australian defence industry, there will then be an opportunity for those that put in an RFP that is successful to

28 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April 2009, pp.14-17; Vice Admiral Tripovich, *Transcript*, Thursday 16 April, pp.14-17.

29 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April, p.14.

30 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.15.

31 Vice Admiral Tripovich, *Transcript*, Thursday 16 April, p.15.

32 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April, p.15.

33 Vice Admiral Tripovich, *Transcript*, Thursday 16 April, p.15.

34 Vice Admiral Tripovich, *Transcript*, Thursday 16 April, p.16.

attract financial support from the government for the development of their prototypes?³⁵

5.35 Defence replied:

We will look at the proposals when they come back, but I imagine that if those proposals required some financial contribution to enable them to be fairly developed I think I would be making that suggestion.³⁶

5.36 At the time of the hearings, Defence told the Committee that it was anticipating a point in the near future where Australian industry had a chance to participate:

The important thing is that now that we know there is an opportunity, we are moving quickly to get a request for proposal out and to get industry to tell us what it can do.³⁷

5.37 In light of the \$40 Million provided by the Australian Government to the US program, the Committee asked Defence whether it would consider providing a similar amount of money to support Australian Defence contractors wishing to engage with the JLTV program.³⁸

5.38 In response, Defence told the Committee that:

... if proposals come back that would allow an industry involvement we will take that back to government. It would require money to facilitate it and that is something we would be recommending to government. However, it is for the government to decide whether or not to do that.³⁹

5.39 Speaking to the question of whether Australian defence contractors would receive that support, Defence told the Committee, in effect, that proposals would be considered on merit:

... it is important to have a level playing field...depending on what comes back in the proposals, we will consider them and make some recommendations to the government.⁴⁰

5.40 Defence told the Committee that Australian defence contractors would indeed have an opportunity for input to the JLTV program:

35 The Hon Bob Baldwin MP, *Transcript*, Thursday 16 April, p.16.

36 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.16.

37 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.16.

38 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.15.

39 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.15.

40 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.16.

In October 2008 the government gave approval to go to the Thales JLTV program. On 16 March 2009 the director general of land development....received an email from Thales saying that they would like to brief him about an idea that they had relating to the Land 121 Phase 4. As is subsequently known, they came and talked to us and provided us with an unsolicited proposal. That resulted in us looking at the potential for having a formal request for proposal and, as you know, that process is about to get underway.⁴¹

5.41 This is consistent with statements by the Minister of Defence.⁴²

Committee comment

5.42 The Committee was interested to explore whether the Bushmaster could have formed the basis of a bid for work under the JLTV program. If Bushmaster were to be part of the JLTV, and Defence acquired outputs of the JLTV program, there would be both economies of scale and overseas military sales, producing benefits for Australian Defence Industry.

5.43 In the Committee's view there are two salient issues in Australia's involvement in the US JLTV project.

5.44 First, it appears that Defence in Australia is pursuing a policy of selection-on-merit for the products of local Defence contractors, and this is to be applauded. Australia should lend a measure of support to local contractors with respect to the costs of generating prototypes and similar inputs to development programs, but the choice of best fit for task should conform to a merit principle.

5.45 The second hinges on the importance of an indigenous defence industry in Australia. This is important for both strategic and economic reasons. The Committee will continue to take an interest in the level of support from government to defence suppliers particularly to deal with initial resource issues in bidding for work in the developmental stages of defence contracts.

5.46 The Committee notes the increasing tendency for Defence and indigenous defence contractors to think in terms of participation in international collaborations to develop and produce materiel, and looks forward to future developments with interest.

41 Vice Admiral Tripovich, *Transcript*, Thursday 16 April 2009, p.29.

42 Fitzgibbon, Joel 2009, *Opposition wrong on joint light tactical vehicle*.

Bushranger – LAND 116

Introduction

- 5.47 Bushmaster vehicles have been discussed above as a possible input to the US-led JLTV program. This section considers another dimension of the program which gave rise to the Bushmaster.
- 5.48 The Defence Materiel Organisation's web-page for LAND 116 describes its purpose and scope:

Project BUSHRANGER will provide protected land mobility to Army combat units and the Royal Australian Air Force's Airfield Defence Guards with the Bushmaster Protected Mobility Vehicle (PMV). A total of 737 Thales Australia Bushmaster vehicles in seven variants will be acquired. The variants are Troop; Command; Mortar; Assault Pioneer; Direct Fire Weapon; Ambulance; and Air Defence.⁴³

Public hearings

- 5.49 In hearings, the Committee engaged Defence on LAND 116, inquiring into project governance and, in particular, questions over the contribution of 'scope creep' to any delays as had occurred in the delivery of project outputs.⁴⁴ The Committee also touched on this question above, in relation to project LAND 121 - Overlander.

Defence told the Committee that such changes in requirements as had occurred in LAND 116 could not accurately be considered 'scope creep'. Defence told the Committee that scope creep was:

...about bad practice – putting out a requirement and then in the negotiating phase increasing the requirement beyond that tolerance so that a company has to increase its costs and you then change the project approval or whatever.⁴⁵

- 5.50 However, Defence told the Committee, in 'the case of tenderers who were invited back to look at the new requirement after the first round, that is not scope creep'.⁴⁶

43 Defence Materiel Organisation, *LAND 116 Bushranger*, viewed 29/05/09 <http://www.defence.gov.au/dmo/lld/land116/index.cfm>.

44 *Transcript*, Thursday 16 April 2009, p.24.

45 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

46 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

- 5.51 In this case, Defence told the Committee, 'the vehicles did not meet the specifications', and this led to a new phase of consideration by Defence of 'what could be met and what had to be met':

So it was not creep; it was a question of, 'This is what our requirement is after we have tested the market and seen what can be provided.' We have now gone back again.⁴⁷

- 5.52 Defence then provided more detail about this process in general within procurement:

There are a large number of specifications on these vehicles, and rightly so, to discriminate between contenders and to settle the requirement. They are graded as essential, important and very important. When bidders come back they have a range of capabilities that they can offer. Bidders might be strong in some areas but they might not comply with others. In the negotiation period it becomes a matter of cost.⁴⁸

- 5.53 Defence added:

Subsequently the scope changed quite fairly and companies have been re-bidding on that scope. But it became clear that the vehicle that was tendered at the cost it was tendered gave it an advantage. In a large number of cases it did not meet the requirements that we wanted. To do so, the costs were adjusted up significantly, which made it necessary to go back to government and to say, 'This is not the solution that we want.'⁴⁹

- 5.54 Defence advised the Committee that this was an example of the reformed Defence procurement process, that 'this is the Kinnaird process working':

We did this test and evaluation; we have the tenders in; we have evaluated the tenders; and we found that they did not meet the requirements. We then said to the tenderer, 'No, we will not progress.' That is not what we were doing 10 or 15 years ago. We would probably have selected somebody and we would then have found out what was going wrong. This process is working.⁵⁰

47 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.24.

48 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.25.

49 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.25.

50 Mr Gillis, *Transcript*, Thursday 16 April 2009, p.25.

M113 Upgrade – LAND 106

- 5.55 The Committee asked Defence to comment on delays experienced in connection with the M113 Upgrade project.
- 5.56 LAND 106 is a project to 'provide a major upgrade' to all of 'the Army's in-service M113A1 vehicles', to a total of 431 vehicles. Defence claims that the 'upgrade will provide significant enhancements in protection, lethality and mobility while also providing improved supportability'. Seven variants of the M113A1 vehicle are in production.⁵¹
- 5.57 Defence told the Committee that the project had 'experienced some technical problems', which have now been 'overcome':

We were behind with the technical problems. Before we went into full production we were a year behind, which has been well canvassed in the public. We are now looking at clawing back a year of that schedule and the company is committed to delivering all the 350 vehicles by December 2010 in accordance with the original contract.⁵²

- 5.58 This, Defence told the Committee, was:

... a terrific effort for the project and the company. Usually when you get that far behind in a project you do not deliver; that lag position remains. So we have done pretty well.⁵³

While the company is still 'behind its planned production rate', steps have been taken to increase capacity by establishing new facilities. Defence told the Committee that while 'this is still a high-risk program', in view of this increased production, all 'indications are that that program will be delivered in accordance with the contract timetable.'⁵⁴

Committee Comment

- 5.59 Defence is making real efforts to bring robust improvement to its procurement procedures. Notable improvements have emerged in Defence's agility with regards to project requirements.

51 Defence Material Organisation 2009, *LAND 106 – M113 Upgrade*, <http://www.defence.gov.au/dmo/lsd/land106/index.cfm> viewed 28/05/09

52 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.20.

53 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.21.

54 Mr Sharp, *Transcript*, Thursday 16 April 2009, p.21.

- 5.60 It affords Defence a greater capacity to respond to other eventualities, outside the procurement process, to which it may need to respond, such as emerging IED threats faced by ADF personnel in particular theatres of war.
- 5.61 An ongoing commitment to procurement reforms will result in better capability and a better state of readiness for the ADF, providing better value for money.
- 5.62 Land 106 also brings some good news on defence procurement: that projects that fall behind schedule can, under current methods of contract management, be moved back onto schedule.
- 5.63 The Committee welcomes this outcome, and anticipates a future in which it is the norm rather than the exception for defence procurements to come in on-time and on-budget. Every project that does so in the near-term contributes to changing the culture of defence procurement in this direction, and that is an outcome greatly valued.

