

Force Protection

Background

- 4.1 In July 2009, the then Minister for Defence directed the then Chief of the Defence Force (CDF) to carry out a review of the force protection measures available for Australia's deployed troops.¹ This direction reflected the fact that the Government places the protection of soldiers deployed in Afghanistan as one of its highest priorities.²
- 4.2 In June 2010, Defence outlined the outcomes of the Review:
- ... this work put forward 48 recommendations for enhancements to our force protection measures, particularly reflecting the escalating improvised explosive device (IED) and rocket attacks in Uruzgan Province. It ensured a coherent, comprehensive and complete approach to force protection.
- The force protection improvements... cover a variety of active and passive measures, which range from personal protective equipment for our soldiers, to unmanned surveillance systems.³
- 4.3 In order to implement these changes, the Government in 2009 committed \$1.1 billion of funding for enhanced force protection measures for troops in Afghanistan. This was in addition to approximately half a billion dollars of existing measures. Hence, a total of \$1.6 billion was committed

1 Senator the Hon John Faulkner, Minister for Defence, 'Force Protection Measures', Media Release, 01 June 2010, p. 1

2 Senator the Hon John Faulkner, Minister for Defence, 'Force Protection Measures', Media Release, 01 June 2010, p. 1

3 Senator the Hon John Faulkner, Minister for Defence, 'Force Protection Measures', Media Release, 01 June 2010, p. 1

to enhanced force protection measures over the financial period 2009-10 to 2012-13.⁴

4.4 During the public hearing for this inquiry, Defence outlined the current status of this funding:

\$150 million of that has been returned to government because we did not need either the capability or the level of funding that was allowed for when the plan was first done. There is about \$250 million planned to be spent this year in that program.⁵

4.5 Thus, the review of force protection conducted in 2009 provides critical context for the Committee's inquiry into force protection. Both the Committee and Defence were focussed on ensuring that the Review's recommendations were being adequately implemented. Hence, current force protection issues were discussed with regular reference to the Review.

4.6 The Committee focussed on a range of force protection issues, entailing three particular categories.

- First, the Committee was concerned with force protection capabilities which seek to protect against harm on an individual level, such as body armour, helmets and physical employment standards.
- Second, the Committee inquired into capabilities protecting the force as a whole on a larger scale, such as through vehicles as well as intelligence, surveillance and reconnaissance (ISR) capabilities.
- Third, the Committee was mindful to inquire into Defence's processes for responding to force protection issues and improving capabilities.

4.7 Notably, the Committee's consideration of the issue of force protection capabilities has been closely intertwined with the effects of the drawdown from Afghanistan. This drawdown is dealt with in greater detail in Chapter Two.

Protection of individuals

4.8 The first element of force protection entails capabilities directly aimed at making individual uniformed personnel less likely to be harmed in operations, and minimising harm when it does occur. These capabilities

4 The Hon Stephen Smith MP, Minister for Defence, Question without Notice - Force protection measures, 28 October 2010, p. 1.

5 Air Vice Marshal Hart, Australian Defence Force, *Transcript*, 15 March 2013, p. 16.

occur in two forms: first, equipment of individual force members; second, physical characteristics of these force members.

- 4.9 In relation to force protection equipment for the individual, the Committee focussed on night-vision goggles, combat helmets and 'new camouflage' uniforms, as well as the over-arching consideration of the weight of a soldier, 'fully-kitted' with appropriate equipment.
- 4.10 In relation to individual force member characteristics, the Committee focussed upon physical training as well as employment standards for various roles in the Australian Defence Force (ADF).

Night-vision goggles

4.11 During its visit to Afghanistan in 2011, the Committee was informed that the night-vision goggles in use were about 10 years old. The Committee was therefore concerned that night-vision goggles available to personnel in Afghanistan were not up to date.

4.12 Defence responded to this concern by acknowledging the problem, explaining the causes and emphasizing the priority given to the issue. Specifically, Defence stated:

The issue here is that Australia competes across the world for access to state-of-the-art equipment. We have an ageing fleet of night vision devices and there is a program inside the Defence Capability Plan (DCP) to upgrade that to the next generation; we will do that; it is still a very high priority.⁶

4.13 Defence further stated that the operational requirements demanded of the system, particularly by special forces in Afghanistan, have been met where they can be through sourcing available stocks. However, these stocks are in short supply.⁷

4.14 Defence stated that improvements have been made in the 18 months since the Committee's visit to Afghanistan. However, Defence explained the practical challenges involved in dealing with this issue, and acknowledged that the current situation is not optimal:

I am not sure we have satisfied all of the soldier requirements but we have certainly made important steps. I cannot, nor can the Defence Materiel Organisation (DMO), produce equipment for soldiers if it is not there to actually procure.⁸

6 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 17.

7 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 17.

8 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 17.

Combat helmets

4.15 The 2009 force protection review specified 'improved body armour' as an important element of force protection initiatives.⁹ As a result, the Committee focussed upon the effects of an upgraded combat helmet.

4.16 Defence explained that all close combatants are currently using the upgraded Enhanced Combat Helmet (ECH).¹⁰ Defence then elaborated on exactly what the ECH offers:

It has the same weight and ballistic protection as the non-upgraded ECH. The weight is 1.35 kilos. The improvement with the upgraded helmet is that it provides better blunt force protection, and that is largely because of its improved padding and suspension system. It is also able ... to accommodate various other systems that are on the soldier. That is most particularly the case with night vision goggles.¹¹

4.17 Furthermore, the Committee inquired what the troops' assessment has been of the upgraded helmet. Defence responded by noting that the troops were consulted throughout the study which informed the upgrade, and then the eventual selection and procurement of the upgraded helmet. The feedback from troops has been positive in response to the upgraded ECH.¹²

New camouflage uniforms

4.18 The Committee sought feedback from Defence on the testing of a new camouflage uniform for the Australian army, namely the 'Crye patterned uniforms', in the context of force protection.

4.19 Defence responded that the feedback has been very good, and subsequently explained the specifics of this positive feedback as drawn from soldiers, stating:

The feedback has been very good. You might be aware that initially, on fielding the new uniform, we had some problems with the wear and tear – literally – of the uniforms, most notably in the trousers. That has been resolved now. The stitching on the uniforms has proved to be very successful, and, while you will still have damage to uniforms because of the environment that they are worn in, the utility of the new uniforms, both in terms of fit and in

9 The Hon. Greg Combet AM MP, Minister for Defence Materiel and Science, 'Defence Budget Breakfast' Speech, National Press Club, 12 May 2010, p. 2.

10 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 35.

11 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 35.

12 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 20.

terms of camouflage, has been very highly rated by those who have used them. Soldiers like the adaptations that have come with uniforms – most particularly the lighter fabric that can be worn under the body armour that soldiers wear, and that has pointed a way for me as the Chief of Army to the future.¹³

4.20 In terms of the future direction of these uniforms, Defence explained:

We are looking at the moment at where we go with the replacement of our current uniform, but that will be done within the budget that is allocated to the Army.

The pattern has proved to be very good in the operating environment that it is used in, in Afghanistan, but I have asked for a broader study to be done about its utility in different environments... So these decisions are all coming into play now.¹⁴

Overall weight of soldier

4.21 An over-arching issue when considering the various specifics of force protection equipment for an individual, is the overall weight of a fully kitted soldier.

4.22 Defence explained that there is not a standard weight for a soldier as it is dependent on the specific role they perform, and hence 'kit' that they require. However, as a general comment, Defence stated that at the moment, ADF soldiers' load-carrying has gotten heavier as the ADF has been able to furnish them with additional equipment.¹⁵

4.23 Defence then stipulated three responses to the issue of heavier loads for soldiers:

- The first is ensuring that the equipment that we furnish them with is the lightest and most functional that we can provide, and we certainly do a lot of weight testing as part of the selection process as we look at new pieces of equipment. Batteries are a prime example, and the need for batteries bedevils almost all modern armies. We have so many systems now that have to be powered by battery, and that is added to the weight. There is a lot of work done to consider that.
- The second area is that we need to look at the physical training that we give our soldiers. We know that weight carriage is an important part of a number of the roles that our soldiers perform, and the recent introduction of the physical employment standards across the ADF, but certainly in the Army, was done after considerable discussion and trialling

13 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 20.

14 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 20.

15 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 21.

with Defence Science and Technology Organisation (DSTO) assistance. That has allowed us to do a number of other things as well, most particularly open up all of our trades to women, because physical employment standards have to be met irrespective of gender.

- The third area that we look at now is whether we need to carry all of our equipment all of the time... We have looked at how we can provide soldiers with lighter packs that are used for shorter periods of time and we bring heavier stores up to forward operating bases or to areas where they have ready access to it. That has changed, in some respects, the way the Army operates and it has been a recognition of the need to be able to address the tactical requirements that we have.¹⁶

Physical characteristics of uniformed personnel

- 4.24 The second element of Force Protection considerations for individuals entails physical characteristics of uniformed personnel. The Committee considered this both in terms of employment standards for entry into the force, as well as the physical training of individuals once they are serving in the ADF.
- 4.25 When asked about the nature of physical employment standards in the ADF, Defence stated that there is a baseline standard for all categories of ADF personnel that must be met, irrespective of size or gender.¹⁷
- 4.26 Defence stated that the focus of employment standards is on getting the right person in the right job at the right time. Certain occupations in the Army entail physiological criteria.¹⁸
- 4.27 Further, Defence explained that there are also certain physiological criteria for particular positions in the Air Force. For example, if an individual is colour blind, this disqualifies them from certain positions. Also, anthropometric measurements become relevant to employment standards in terms of fitting into aircraft and ejecting.¹⁹
- 4.28 The Committee noted that it may be possible for an individual to meet a certain physical standard on a certain day, but then not meet the standards in the days following due to problems of recovery. This may particularly be the case for women. Thus, the Committee inquired as to whether the ADF considers this recovery aspect in employment and training.

16 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 21.

17 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 22.

18 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 22.

19 Rear Adm. Walker, Australian Defence Force, *Transcript*, 15 March 2013, p. 22.

- 4.29 Defence explained that this recovery aspect is part of the standard that must be met. Moreover, the training given to ADF personnel ensures they are able to maintain this standard, with adequate recovery:

You cannot employ a physical employment standard (PES) and have a soldier meet it once and just allow them to develop from there. The standard itself is one part of this but it is the training that allows you to attain that standard and then maintain that standard which is actually the heart of what we call the PES system. I agree with you that the physical capacity of women to carry out arduous physical activities in an enduring way needs to be examined. The PES was introduced late last year and there is a year-long trial currently underway, with the Army as the primary agent for conducting the trial. I have had some feedback talking to women who have been undergoing it that they have some concerns about particular areas. My point to them is that we will take that information and incorporate it into the year-long trial but, having opened up all of our trades to women, the standard has to be such that we are confident that you can perform at that standard or higher in an enduring way, otherwise we would actually see a degradation of capabilities.²⁰

Protection of force as a whole

- 4.30 Capabilities associated with protecting the force as a whole occur on a much larger scale than individual items. The Committee sought an update on the status of these capabilities within the context of the drawdown from Afghanistan.
- 4.31 In regard to funding, Defence explained that current force protection activities are predominately funded through operational supplementation. As a result the Committee focussed on inquiring about funding issues for these capabilities going forward, amidst the withdrawal from operations.
- 4.32 Further, Defence explained that there are ongoing questions regarding what equipment is to be brought back from Afghanistan and what is done once it is returned, particularly in terms of remediating equipment.²¹
- 4.33 Fundamental to modern force protection in the ADF is protection against improvised explosive devices (IED). Therefore, the particular focus of these larger-scale capabilities tends to occur in the counter IED space.

20 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p. 22.

21 Air Vice Marshal Hart, Australian Defence Force, *Transcript*, 15 March 2013, p. 15.

Counter IED Capability

- 4.34 In the context of capabilities protecting the force as a whole, Defence identified three key 'platform' based capabilities central to counter IED:

I would say the three big platform based items we need to make decisions about are in the counter IED space and that is in the route clearance area, counter rocket and mortar fire capability (CRAM) – the radars and the vehicles and so forth – and then the intelligence, surveillance and reconnaissance (ISR) area, where we own some platforms and we have others on contract. What do we do with those as we wind down. They are the three big areas.²²

- 4.35 Defence subsequently elaborated on the costs of these capabilities, noting that the total acquisition costs for CRAM were approximately \$253 million; counter IED \$429 million, and ISR \$160 million. Defence further noted that:

The annual cost to support these capabilities in-theatre has been approximately \$149 million. These figures do not include items such as consumables which can be attributed across a range of activities.²³

- 4.36 Central to the status of counter IED capabilities are decisions associated with Defence's response to the 'wind down' in Afghanistan, which is discussed in further detail in Chapter Two of this report.

Route clearance

- 4.37 Enhanced route clearance capability was an initiative stemming from the 2009 Force Protection Review as an element of counter IED capability. Defence offered further detail on the current status of the initiative:

... we have introduced into theatre a much more hardened and mobile counter-IED road clearance or route clearance system built on a configuration of a number of vehicles that work together to produce that. I think we still need to make a decision about whether we want to retain that or how much of that we would want to retain back in Australia once it comes back... We are still very much learning how to use that.²⁴

22 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 16.

23 Department of Defence, *Submission No. 5*, p. 8.

24 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 14.

ISR capability

4.38 ISR capability was also outlined in the force protection review of 2009 as an important element of force protection, within counter IED capability.²⁵

4.39 Given the importance of ISR to effective force protection, Defence explained the recent cancellation of the funding for the acquisition of Intelligence, Surveillance Reconnaissance Electronic Warfare (ISREW) aircraft, stating:

What we had there was to move the sensor pack and put it on a different platform. So we moved it across to an unmanned aerial vehicle (UAV) rather than a manned aircraft. So we now have that change-detection capability, for example, that we did not have before. That would be something we would want to continue on... it is a very good capability.²⁶

4.40 Defence further explained the current status of UAV capability. Whilst this capability is moving forward, there are elements of uncertainty amidst the drawdown from Afghanistan:

We went into Afghanistan with UAV programs coming through in the Defence Capability Plan, so there is a platform there for funding into the future... We have operated now three different types of UAVs: ScanEagle, Shadow and Heron. As we look to the future now... what does that transition path look like?²⁷

4.41 Defence elaborated on this 'transition path', noting that if a UAV capability is taken back from Afghanistan, decisions must be made as to how to bring it in to the ADF and sustain it, in the Air Force for example.²⁸ Defence told the Committee that it is mindful of these issues and is continually considering them.

Force protection improvement process

4.42 The Committee raised concerns regarding two procedural elements of developing and improving Force Protection capabilities. The first concern related to Australia's research and development activities in this area, particularly in the context of the drawdown from Afghanistan. Second, the Committee expressed concern regarding the 'filtering up' of force

25 The Hon. Greg Combet AM MP, Minister for Defence Material and Science, 'Defence Budget Breakfast' Speech, National Press Club, 12 May 2010, p. 2.

26 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 15.

27 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 15.

28 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 15.

protection issues from soldiers on the ground to the relevant decision-makers upon Force Protection capabilities. These two issues were explored in detail at a public hearing.

Research and development

- 4.43 The Committee was concerned with ensuring that research and development, particularly in regard to critical force protection capabilities like counter IED capabilities, is not hampered by the withdrawal from Afghanistan. Given that a lot of leading edge thinking and ability occurs in the context of active involvement in operational tasks and developing solutions to particular threats. Hence, the Committee sought evidence from Defence indicating that this important element of advancing Force Protection capabilities would not atrophy post-withdrawal.
- 4.44 Defence responded by referring to the Counter IED Task Force (CIED TF). The CIED TF was established in 2006 to coordinate and monitor the ADF's response to the IED threat, and is constantly exploring technology-based opportunities to strengthen counter IED capabilities. Research and development is critical in this area, particularly through the work of the DSTO.²⁹
- 4.45 The Committee asked whether the CIED TF is potentially an area of ongoing support for the Afghan National Army (ANA) post 2014, assuming the insurgency there continues to use IEDs with their indigenous forces.
- 4.46 Defence responded that this may not be a role for the ADF taskforce alone, and further that:
- I think it would be more US led with contributions from others in terms of assisting. So at the moment the program that the North Atlantic Treaty Organisation (NATO) Training Mission Afghanistan is looking at is how to provide – and there is already some kit being filtered – an individual counter-IED capability that has [...] an anti-tamper capability – it cannot be backwards engineered and so forth.³⁰
- 4.47 Specifically, the NATO Training Mission in Afghanistan is currently looking at how to provide an individual counter-IED capability with certain features.³¹ A lot of work has gone into this in the last 18 months,
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29 Department of Defence, 'Global Operations – Afghanistan – Factsheet', viewed on 29 May 2013, <<http://www.defence.gov.au/op/afghanistan/info/factsheet.htm>>

30 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 14.

31 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 14.

with significant involvement from the ADF. In fact, DSTO has produced an item which performs certain features 'perfectly well', such as an anti-tamper capability that cannot be backwards engineered. The ADF is in discussions with the US regarding using this item.³²

- 4.48 Defence offered an explanation as to how they were seeking to prevent any 'atrophy' in terms of DSTO's technical, innovative design and development capabilities, as Australia withdraws from areas of active counterinsurgency:

There are two aspects to that. We will continue to maintain a counter-IED analysis development capability in the ADF, fundamental to our future capability. Whilst we are in Afghanistan, we will keep a link in the US counterparts, who are really the leaders in this and then secondly with the Brits, so we will keep the technical expertise up. Further to that, we are already engaged in the region in trying to develop in specific countries their counter-IED capability as well.³³

- 4.49 The Committee expressed concern that the ADF is moving merely towards a 'monitoring overwatch' in Afghanistan. This monitoring role might miss an opportunity to continue to engage Australia's scientific and technical workforce in an operational environment where a lot of leading edge thinking and ability comes.

- 4.50 Defence responded to these particular concerns by further elaborating on the two elements of their earlier response:

... we will want to be involved and we will stay involved in the development program. How active we can be in Afghanistan when we do not have a requirement in the field ourselves, is an issue but we will stay involved in the counter-IED fight. We are in an excellent place now and I do not want to lose that.³⁴

Force protection issues response

- 4.51 Issues of force protection are of critical importance as they directly affect the safety and livelihood of troops 'on the ground' at operational level. The Committee asked what Defence is doing to ensure that force protection issues experienced by troops are 'filtering up' to the relevant decision-makers.

32 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 14.

33 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 14.

34 Gen. Hurley, Australian Defence Force, *Transcript*, 15 March 2013, p. 15.

4.52 Defence described the processes they have instituted that are specifically designed to ensure force protection issues experienced by troops are dealt with by the relevant decision makers.³⁵

4.53 Defence conceded that:

... in the early parts of the operations in Afghanistan, where we were trying to ensure that the equipment that soldiers used, either for a military purpose or for self-protection, was appropriate, it was probably not supported by a system back here in Australia that was as responsive as it could have been.³⁶

4.54 However, Defence contended that improvements have been made and lessons have been learnt in this regard:

That was a lesson for the Army as it was for the DMO, but it is a lesson that I can say confidently has been learnt. Certainly, over the last three years... we have put in place a system that allows us to look rapidly at issues that are presenting themselves in the battle space and make appropriate responses to them.³⁷

4.55 Defence further explained that a key element of this improved system of response has been the establishment of the 'Diggerworks' organisation. This is an organisation of Army personnel in the DMO and the DSTO. The key role of Diggerworks is to conduct soldier engagement while coordinating rapid trialling and implementation of soldier combat systems,³⁸ and ultimately to deliver new equipment to better protect Australian troops.³⁹

4.56 Defence further explained that Diggerworks has improved Defence's response to 'ground-level' force protection issues by utilizing recent operational experience:

Diggerworks has been a major feature in improving the flash-to-bang, if you like, of what is a tactical or operational requirement and having it met. Almost all of the staff at Diggerworks have had recent operational experience... so they have taken very current knowledge back here into the DMO to make sure that the correct focus is given. That has resulted in a very much improved allocation of operationally required equipment into theatre.

35 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p 17.

36 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p 17.

37 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p 17.

38 The Australian Army, 'Army and Diggerworks', viewed on 29 May 2013, <<http://www.army.gov.au/Our-work/Partnerships/Army-and-Diggerworks>>

39 The Hon. Jason Clare MP, Minister for Defence Material, 'Diggerworks - New team established to enhance protection of Australian soldiers in Afghanistan', *Media Release*, 28 August 2011.

Supporting that has been a capability assessment board that now runs in Army that takes the lessons learnt from the tactical level... and fuses that with the soldiers' desires for particular pieces of equipment.⁴⁰

- 4.57 In addition to these formal mechanisms for responding to force protection issues, Defence outlined the informal communication that further informs these processes. Defence stated that all of the senior officials who visit Afghanistan ask questions about soldiers' views on equipment:

I asked maybe 700 soldiers the last time I was there in the various visits I made to forward operating bases – the overwhelming response is that we have the best equipment in the world.⁴¹

Committee comment

- 4.58 The Committee is mindful of the need to ensure that force protection issues experienced by troops at ground level are being adequately communicated to and dealt with by decision makers. The Committee is reassured by evidence presented by Defence that these 'filtering up' processes are adequate and continually improving, through both formal and informal mechanisms.
- 4.59 The Committee is concerned that amidst the ADF withdrawing from operations, research and development in the area of force protection capabilities may deteriorate. Defence provided evidence to reassure the Committee that it will continue to actively prioritise advancement in this area.
- 4.60 The Committee is also mindful of the need to ensure that force protection capabilities at the level of individual items were up-to-date and of high-quality. Defence contended that whilst all requirements are not met perfectly due to resource constraints, Defence places a high priority on these capabilities and is continually monitoring potential improvements through regular engagement with troops.
- 4.61 The Committee notes ongoing issues with force protection capabilities amidst the drawdown from Afghanistan. The Committee resolves to monitor decisions regarding what capital machinery and vehicles to bring back, and what to do with them once they return. The Committee will maintain a focus on this issue into the future.

40 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p 17.

41 Lt Gen. Morrison, Australian Defence Force, *Transcript*, 15 March 2013, p 18.

