

# House of Commons Committee of Public Accounts

# The cost-effective delivery of an armoured vehicle capability

# Fifty-ninth Report of Session 2010–12

Report, together with formal minutes, oral and written evidence

Ordered by the House of Commons to be printed 30 November 2011

#### **Committee of Public Accounts**

The Committee of Public Accounts is appointed by the House of Commons to examine "the accounts showing the appropriation of the sums granted by Parliament to meet the public expenditure, and of such other accounts laid before Parliament as the committee may think fit" (Standing Order No 148).

#### **Current membership**

Rt Hon Margaret Hodge (Labour, Barking) (Chair)
Mr Richard Bacon (Conservative, South Norfolk)
Mr Stephen Barclay (Conservative, North East Cambridgeshire)
Jackie Doyle-Price (Conservative, Thurrock)
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Mr Austin Mitchell (Labour, Great Grimsby)
Nick Smith (Labour, Blaenau Gwent)
Ian Swales (Liberal Democrats, Redcar)
James Wharton (Conservative, Stockton South)

The following Members were also Members of the committee during the parliament:

Dr Stella Creasy (Labour/Cooperative, Walthamstow)

Dr Stella Creasy (Labour/Cooperative, Walthamstow Justine Greening (Conservative, Putney)
Eric Joyce (Labour, Falkirk)
Rt Hon Mrs Anne McGuire (Labour, Stirling)

#### **Powers**

The committee is one of the departmental select committees, the powers of which are set out in House of Commons Standing Orders, principally in SO No 152. These are available on the internet via www.parliament.uk.

#### **Publications**

The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the internet at www.parliament.uk/pac. A list of Reports of the Committee in the present Parliament is at the back of this volume. Additional written evidence may be published on the internet only.

#### **Committee staff**

The current staff of the Committee is Philip Aylett (Clerk), Lori Verwaerde (Senior Committee Assistant), Ian Blair and Michelle Garratty (Committee Assistants) and Alex Paterson (Media Officer).

#### Contacts

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# Summary

Armoured vehicles such as tanks, reconnaissance and personnel-carrying vehicles are essential for a wide range of military tasks. Since the 1998 Strategic Defence Review, the Ministry of Defence (the Department) has attempted to acquire the vehicles it needs through a number of procurement projects. However, none of the principal armoured vehicles it requires have yet been delivered, despite the Department spending £1.1 billion since 1998, including £321 million wasted on cancelled or suspended projects. As a result there will be gaps in capability until at least 2025, making it more difficult to undertake essential tasks such as battlefield reconnaissance.

Partly as a result of this £1.1 billion failure to yet deliver any armoured vehicles, and to meet the specific military demands of operating in Iraq and Afghanistan, the Department was provided with a further £2.8 billion from the Treasury Reserve to buy Urgent Operational Requirements (UOR) vehicles. The Department has used the faster UOR process to deliver mine-resistant vehicles for operations. However, these vehicles are expensive and are designed for specific circumstances, so will not meet the wider requirements identified in the recent Strategic Defence and Security Review (SDSR). Delays to the delivery of the principal armoured vehicles have meant that other equipment, such as helicopters and other vehicles, have been used more frequently to undertake tasks such as battlefield reconnaissance and transporting personnel. Using helicopters and other vehicles in this way can be less effective and may divert expensive military assets from other essential tasks.

Over the past six years, the Department has removed £10.8 billion from armoured vehicle budgets up to 2021. Armoured vehicles projects have suffered more severe budget cuts than other equipment projects, largely because they involve lower levels of contractual commitment and are therefore easier to cut. This has left £5.5 billion available for the next ten years, which is insufficient to deliver all of the armoured vehicle programmes which are planned. The Department needs to be clearer about its priorities, and stop raiding the armoured vehicles chest every time it needs to make savings across the defence budget.

The Department acknowledges that it has been both indecisive and over-ambitious in setting vehicle requirements, and that the ways it has sought to procure armoured vehicles have been too complicated. The Department will need to set more realistic requirements in future if it is to deliver projects on time and to budget. We are also concerned that the Department was unable to identify anyone who has been held to account for the clear delivery failures. It is critical the Department has named senior staff with the necessary powers and sufficient time in post to take proper responsibility for and be held accountable for such projects.

The Department has yet to balance its defence budget fully and devise a plan to close capability gaps, despite having conducted the SDSR and two subsequent planning exercises. The Department needs to determine its armoured vehicle equipment priorities and deliver these as rapidly and cost-effectively as possible, including making an assessment of which of its existing vehicles should be retained after combat operations in

Afghanistan cease.

On the basis of a Report by the Comptroller and Auditor General, we took evidence from the Ministry of Defence on its progress in delivering armoured vehicles.

## Conclusions and recommendations

- 1. The Department has failed to deliver any vehicles from its core programmes despite spending £1.1 billion since 1998. A major contributory factor is that it has cut £10.8 billion from its armoured vehicles programme in an attempt to balance its overall equipment budget. Armoured vehicles have suffered more severe cuts than any other equipment area because lower levels of contractual commitment have made it an easy target. The Department concedes that it needs to be clear about its military priorities and not commit to projects it cannot afford, such as the original Future Rapid Effect System programme which sought to deliver 3,700 vehicles at a cost of £14 billion. The Department should ensure that future procurement decisions are based on a clear analysis of its operational priorities, and must challenge proposals vigorously to ensure they are both realistic and affordable. Once budgets have been set, they must be adhered to.
- 2. The Department's inability to deliver its armoured vehicles programme has been exacerbated by over-specifying vehicle requirements and using complex procurement methods. The Department conceded these shortcomings but claimed that budgetary pressures had led it to introduce a more pragmatic and cost-conscious approach: the Foxhound vehicle, for example, had been procured more simply to meet a requirement that was driven by realism. It was aiming to purchase more vehicles "off the shelf" through international competition, while seeking to retain the ability to upgrade and maintain vehicles in the UK. The Department needs to demonstrate in future projects that its procurement culture has changed towards realistic specifications and simpler procurement routes. It should buy vehicles off the shelf through international competition where possible, having identified and assessed the consequent impact on the UK's industrial capability.
- 3. The Department has spent £2.8 billion meeting urgent operational requirements (UORs) necessitated by its failure to deliver the core armoured vehicle programmes. A failure to plan properly has led to extra money being spent outside departmental budget limits to fund essential equipment needed by troops on the front line. Meeting the UORs has meant buying more vehicles than would otherwise have been required and, compared to core vehicle programmes, they are expensive, less reliable, and will not meet the full requirements of the Strategic Defence and Security Review (SDSR). In future, the Department must avoid introducing UORs to compensate for its own poor programme and financial management but should use them only to respond to urgent military imperatives.
- 4. Delays bringing core vehicles into service have meant the Department has had to use other equipment to deliver essential capabilities. This has required helicopters in particular to undertake additional battlefield reconnaissance and other tasks, spreading scarce resources more thinly. The Department acknowledges that this is neither effective nor efficient. The Department must ensure it does not delay any further in deciding which armoured vehicles it can afford and bring them into service. It should apply the positive lessons of its more pragmatic approach to meeting urgent operational requirements to speed up the core procurement process.

- 5. The Department has yet to devise a coherent plan for delivering the equipment it needs to meet its strategic defence commitments. Despite having conducted the SDSR and two subsequent reviews, the Department has yet to reach a clear set of defence priorities which are achievable within the defence budget. The Accounting Officer assured us that the Department would not commit to expenditure if it did not have the budget to do so, and that it would stay within its budget in the 2011-12 financial year. Living within the 2011-12 budget should not mean making cuts in the short term which involve extra expenditure over time. The Department should urgently complete the unfinished work of the SDSR to balance its budget fully, identifying the equipment required to meet its capability needs and allocating resources accordingly. In the case of armoured vehicles, it should act urgently to establish which existing vehicles it intends to retain in service, and which new vehicles it can afford to procure.
- 6. There is poor accountability for long-term equipment projects, such that no-one has had to answer for this prolonged failure of management. Senior Responsible Owners do not remain in post long enough to ensure continuity on large scale programmes, making it difficult to hold anyone responsible for whether they succeed or fail. Despite having failed to deliver any principal armoured vehicles for over a decade, the Accounting Officer was unable to tell us who was responsible or whether anyone had paid the penalty for these failures. The Accounting Officer should ensure that the lines of accountability for projects, and the way in which those responsible will be held to account, are clearly articulated and understood throughout the Department.

# **1** The failure to deliver an armoured vehicles programme

- 1. Since the 1998 Strategic Defence Review, the Department has tried to acquire armoured vehicles through a number of programmes. It originally intended to procure around 1,000 vehicles through two programmes: 'TRACER' (Tactical Reconnaissance Armoured Combat Equipment Requirement) and 'MRAV' (Multi-Role Armoured Vehicle). However, in 2002 the Department proceeded instead with the Future Rapid Effect System (FRES) project, and TRACER and MRAV were cancelled. FRES aimed to supply 3,700 vehicles at a cost of £14 billion, with planned delivery of vehicles from 2008.<sup>2</sup>
- 2. Despite spending a total of £1.1 billion since 1998, the Department has so far failed to deliver any of its core vehicle projects. As well as cancelling the TRACER and MRAV projects, the Department has, to date, been unable to deliver FRES. The largest element of that project, FRES Utility, was indefinitely suspended in 2008, and the FRES Scout variant is also delayed and not expected to enter service until 2017.³ In total, £321 million has been spent on projects cancelled or indefinitely suspended, and £397 million on projects that have yet to deliver. Only £407 million of the expenditure since 1998 has resulted in vehicles being delivered (some 160 specialist vehicles).⁴
- 3. The Department admitted to us that the delivery of armoured vehicle projects was undermined by the budget cuts it made in an attempt to balance the overall defence budget.<sup>5</sup> Over the past six years the Department has removed £47.4 billion from its equipment programme up to 2020-21. The largest contribution to these savings has come from reducing forecast spend on armoured vehicles, which has fallen by £10.8 billion over the same period.<sup>6</sup> In addition, the Department has also removed up to £1 billion from the budget for protected vehicles, which are designed to offer improved protection against specific threats such as roadside bombs.<sup>7</sup>
- 4. The Accounting Officer acknowledged that if the overall defence budget had been in balance, it would not have been necessary to go back and cut funding from the equipment programme.<sup>8</sup> We heard that armoured vehicles projects were cancelled and delayed primarily because funds for these projects were not contractually committed.<sup>9</sup>

<sup>2</sup> C&AG's Report, Figure 1, p 5

<sup>3</sup> C&AG's Report, Figure 1, p 5

<sup>4</sup> C&AG's Report, para 3 and Figure 1, p 5

<sup>5</sup> Qq 13, 122

<sup>6</sup> C&AG's Report, Figure 5, p 23; Ev 15. The £10.8 billion in armoured vehicle savings includes the £7.4 billion of funding reductions identified in Figure 5 of the C&AG's report. The C&AG's supplementary memorandum identifies an additional £600 million removed as part of the Planning Round 2011 and £2.8 billion removed during the subsequent Three-Month Exercise.

<sup>7</sup> Qq 20, 77, C&AG's Report, Figure 7, p 32, spending on 'Vehicles – Protected'.

<sup>8</sup> O 56

<sup>9</sup> Qq 11-12

- 5. For the procurement of its 'core' armoured vehicles, the Department used its standard equipment acquisition process. However, the Department accepted there had been failings in its procurement of armoured vehicles.<sup>10</sup> The procurement process was overly complex and the Department has suffered from a culture of setting over-ambitious requirements especially its desire to use cutting edge technology in its equipment.<sup>11</sup> This led to projects which were not affordable within the funding available.<sup>12</sup> The Chief of Materiel (Land) recognised that the procurement and requirements setting process had been "slow, lumbering and bureaucratic it was aiming for the stars when, as it now is, it should have been much more pragmatic."<sup>13</sup>
- 6. The witnesses also acknowledged that compared to other nations, the UK has been particularly indecisive and poor at making decisions about the equipment it wants. <sup>14</sup> The Accounting Officer told us that the Department was now starting to do things differently, and the procurement of the Foxhound vehicle was an example of improved procurement and requirements setting. <sup>15</sup> The Department now accepts it does not necessarily need to use leading edge technology. It is trying to set more realistic requirements for vehicles which may deliver a lower capability initially, while allowing for further upgrades through the life of the vehicle. <sup>16</sup>
- 7. In our *Major Projects Report 2010*, we reported that Senior Responsible Owners for programmes only remain in post for short periods, typically two to three years.<sup>17</sup> We heard this was also the case for armoured vehicles.<sup>18</sup> This has resulted in poor accountability for long-term acquisition projects, and it is consequently difficult to hold anyone responsible for failures, delays and overspends. The Accounting Officer was unable to identify whether anyone had paid a penalty for the failures in the delivery of armoured vehicles projects.<sup>19</sup>

<sup>10</sup> Q 25

<sup>11</sup> Qq 19, 49, 81-82

<sup>12</sup> Q 13

<sup>13</sup> Q 91

<sup>14</sup> Qq 18-19

<sup>15</sup> Q 55

<sup>16</sup> Qq 54, 87, 92

<sup>17</sup> Committee of Public Accounts, Twenty-third Report of Session 2010-11, Ministry of Defence: Major Projects Report 2010. HC 687. conclusion 3

<sup>18</sup> Q 5

<sup>19</sup> Qq 26-29

# 2 Consequences for current operations

- 8. Delays in programmes, and cuts to armoured and protected vehicle budgets, have resulted in gaps in capability.<sup>20</sup> Consequently, it became necessary for the Department to rely on additional funds from the Treasury for the rapid procurement of Urgent Operational Requirements (UOR) vehicles at an additional cost to the taxpayer that has now reached £2.8 billion.<sup>21</sup> This enabled the Department to procure mine-protected vehicles for troops in Iraq and Afghanistan quickly.
- 9. We note that some UOR vehicles would have been required even if core programmes had been delivered on time, because of the need for the vehicles in Iraq and Afghanistan. However, the Department acknowledged that delivery failures meant even more UOR vehicles had to be ordered than would otherwise have been the case.<sup>22</sup>
- 10. UOR spending has involved the purchase of new vehicles and enhancements to existing vehicles. This included procuring equipment optimised to defeat the specific threats found on current operations, particularly roadside bombs.<sup>23</sup> The Department has taken a much more pragmatic approach to delivering equipment through the UOR process and its willingness to compromise on requirements has resulted in the rapid delivery of equipment for operations.<sup>24</sup>
- 11. UOR vehicles are typically more expensive, in terms of both initial procurement costs and support costs.<sup>25</sup> There have also been issues with the reliability of UOR vehicles, and the Department has only recently met its target to make 80% available for operations.<sup>26</sup> Furthermore, because they are bespoke vehicles designed for a specific role, they do not meet the wider requirements of the Strategic Defence and Security Review for flexible and adaptable military equipment, even with further upgrades.<sup>27</sup>
- 12. The Department has stated that it is trying to apply the lessons from the experience of using UORs. For example, the Department is trying to be more realistic about requirements setting so that equipment can be purchased more rapidly. It is important these lessons are applied to the procurement of the next generation of vehicles, such as the Warrior upgrade and Specialist Vehicles. However, the witnesses acknowledged that behaviours have not completely changed within the Department.<sup>28</sup>

<sup>20</sup> C&AG's Report, para 6 and 12

<sup>21</sup> Q20

<sup>22</sup> Qq 17, 24

<sup>23</sup> Q 86

<sup>24</sup> Qq 87, 98, 114

<sup>25</sup> Qq 21, 80, 129

<sup>26</sup> O 16

<sup>27</sup> Qq 78, 102-105

<sup>28</sup> Q 54

# 3 Future gaps in military capability

- 13. Delays and cancellations to programmes have resulted in gaps in armoured vehicle capability that will not be filled until at least 2025.<sup>29</sup> This is also partly due to long lead times in the procurement of armoured vehicles. These capability gaps mean that it will be difficult for the Department to achieve the aspirations of the Strategic Defence and Security Review (SDSR) to make the Army "more mobile and more flexible."<sup>30</sup>
- 14. The consequence of recent cuts to armoured vehicles programme over the last five years is that just £5.5 billion remains in the budget for the next ten years.<sup>31</sup> This is insufficient to fund the Department's current armoured vehicles programme.<sup>32</sup> The Department has yet to devise a plan for how it will close the gaps in both its budget and vehicle fleets.<sup>33</sup> To deliver better value for money in future it plans to purchase off the shelf vehicles through international competition, with upgrade and support carried out by UK industry for reasons of security of supply.<sup>34</sup>
- 15. Current UOR vehicles are not able to act as substitutes because they cannot be used to meet the range of military tasks set out in the SDSR. Furthermore, the Department would need to find additional budget cover to bring these vehicles into its core fleet. The Department has not yet identified which UOR vehicles it intends to retain in service after the UK ceases to be involved in combat operations in Afghanistan around 2014.<sup>35</sup>
- 16. In order for the Department to meet its necessary capabilities in future, it will need to find alternative ways of delivering the SDSR's requirements using other types of defence equipment. The witnesses acknowledged that this was not the most effective approach to delivering the Department's requirements.<sup>36</sup> This is because other capability areas will have to be stretched to cover the gaps, which overall is likely to have a detrimental effect.<sup>37</sup>
- 17. The Accounting Officer told us the defence budget "is broadly in balance. It is not yet completely in balance". This is despite the work started in the SDSR and continued in two subsequent reviews to balance the budget. <sup>39</sup> The Accounting Officer confirmed that the Department will deliver its budget in the current financial year<sup>40</sup> and that in future the

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29 Q 117
30 Qq 117, 120-121
31 Q 13, Ev 15
32 Q 113, C&AG's Report, Figure 1, p 5
33 Qq 113-115
34 Qq 126-7
35 Q 115
36 Qq 30-33
37 Qq 40, 46-47
38 Qq 63-64, 71, 122
39 Qq 68, 119
40 Q 71
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Department will only commit to spend on equipment projects if it has the budget to do so. $^{41}$ 

## **Formal Minutes**

#### Wednesday 30 November 2011

Rt Hon Margaret Hodge, in the Chair

Stephen Barclay Austin Mitchell
Matthew Hancock Nick Smith
Chris Heaton-Harris Ian Swales
Fiona Mactaggart

Draft Report (*The cost-effective delivery of an armoured vehicle capability*) proposed by the Chair, brought up and read.

*Ordered*, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 17 read and agreed to.

Conclusions and recommendations 1 to 6 read and agreed to.

Summary read and agreed to.

*Resolved*, That the Report be the Fifty-ninth Report of the Committee to the House.

Ordered, That the Chair make the Report to the House.

*Ordered*, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Written evidence was ordered to be reported to the House for placing in the Library and Parliamentary Archives.

[Adjourned till Monday 5 December at 3.00pm

# Witnesses

Мо	onday 24 October 2011	Page
CB	ula Brennan, Permanent Under-Secretary, Lieutenant-General Gary Coward OBE, Chief of Materiel (Land), and Vice-Admiral Paul Lambert, Deputy Chief Defence Staff (Capability), Ministry of Defence	Ev 1
Li	st of printed written evidence	
1	Ministry of Defence	Ev 14
2	National Audit Office	Ev 15

# List of Reports from the Committee during the current Parliament

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

#### Session 2010-12

First Report	Support to incapacity benefits claimants through Pathways to Work	HC 404
Second Report	Delivering Multi-Role Tanker Aircraft Capability	HC 425
Third Report	Tackling inequalities in life expectancy in areas with the worst health and deprivation	HC 470
Fourth Report	Progress with VFM savings and lessons for cost reduction programmes	HC 440
Fifth Report	Increasing Passenger Rail Capacity	HC 471
Sixth Report	Cafcass's response to increased demand for its services	HC 439
Seventh Report	Funding the development of renewable energy technologies	HC 538
Eighth Report	Customer First Programme: Delivery of Student Finance	HC 424
Ninth Report	Financing PFI projects in the credit crisis and the Treasury's response	HC 553
Tenth Report	Managing the defence budget and estate	HC 503
Eleventh Report	Community Care Grant	HC 573
Twelfth Report	Central government's use of consultants and interims	HC 610
Thirteenth Report	Department for International Development's bilateral support to primary education	HC 594
Fourteenth Report	PFI in Housing and Hospitals	HC 631
Fifteenth Report	Educating the next generation of scientists	HC 632
Sixteenth Report	Ministry of Justice Financial Management	HC 574
Seventeenth Report	The Academies Programme	HC 552
Eighteenth Report	HM Revenue and Customs' 2009-10 Accounts	HC 502
Nineteenth Report	M25 Private Finance Contract	HC 651
Twentieth Report	Ofcom: the effectiveness of converged regulation	HC 688
Twenty-First Report	The youth justice system in England and Wales: reducing offending by young people	HC 721
Twenty-second Report	Excess Votes 2009-10	HC 801
Twenty-third Report	The Major Projects Report 2010	HC 687

Twenty-fourth Report	Delivering the Cancer Reform Strategy	HC 667
Twenty-fifth Report	Reducing errors in the benefit system	HC 668
Twenty-sixth Report	Management of NHS hospital productivity	HC 741
Twenty-seventh Report	HM Revenue and Customs: Managing civil tax investigations	HC 765
Twenty-eighth Report	Accountability for Public Money	HC 740
Twenty-ninth Report	The BBC's management of its Digital Media Initiative	HC 808
Thirtieth Report	Management of the Typhoon project	HC 860
Thirty-first Report	HM Treasury: The Asset Protection Scheme	HC 785
Thirty-second Report	Maintaining financial stability of UK banks: update on the support schemes	HC 973
Thirty-third Report	National Health Service Landscape Review	HC 764
Thirty-fourth Report	Immigration: the Points Based System – Work Routes	HC 913
Thirty-fifth Report	The procurement of consumables by National Health Service acute and Foundation Trusts	HC 875
Thirty-seventh Report	Departmental Business Planning	HC 650
Thirty-eighth Report	The impact of the 2007-08 changes to public service pensions	HC 833
Thirty-ninth Report	Department for Transport: The InterCity East Coast Passenger Rail Franchise	HC 1035
Fortieth Report	Information and Communications Technology in government	HC 1050
Forty-first Report	Office of Rail Regulation: Regulating Network Rail's efficiency	HC 1036
Forty-second Report	Getting value for money from the education of 16- to 18-year olds	HC 1116
Forty –third Report	The use of information to manage the defence logistics supply chain	HC 1202
Forty-fourth Report	Lessons from PFI and other projects	HC 1201
Forty-fifth Report	The National Programme for IT in the NHS: an update on the delivery of detailed care records	HC 1070
Forty-sixth report	Transforming NHS ambulance services	HC 1353
Forty-seventh Report	Reducing costs in the Department for Work and pensions	HC 1351
Forty-eighth Report	Spending reduction in the Foreign and Commonwealth Office	HC 1284
Forty-ninth Report	The Efficiency and Reform Group's role in improving public sector value for money	: HC 1352
Fiftieth Report	The failure of the FiReControl project	HC 1397

Fifty-first Report	Independent Parliamentary Standards Authority	HC 1426
Fifty-second Report	DfID Financial Management	HC 1398
Fifty-third Report	Managing high value capital equipment	HC 1469
Fifty-fourth Report	Protecting Consumers – The system for enforcing consumer law	HC 1468
Fifty-fifth Report	Formula funding of local public services	HC 1502
Fifty-sixth Report	Providing the UK's Carrier Strike Capability	HC 1427
Fifty-seventh Report	Oversight of user choice and provider competition is care markets	HC 1530
Fifty-ninth Report	The cost-effective delivery of an armoured vehicle capability	HC 1444

### Oral evidence

## Taken before the Committee of Public Accounts on Monday 24 October 2011

Members present:

Margaret Hodge (Chair)

Austin Mitchell Mr Richard Bacon Jackie Doyle-Price Nick Smith Mrs Anne McGuire Ian Swales

Amyas Morse, Comptroller and Auditor General, Ross Campbell, Value for Money Director, National Audit Office, Robert Prideaux, Director of Parliamentary Relations, National Audit Office, and Marius Gallaher, Alternative Treasury Officer of Accounts, HM Treasury, were in attendance.

#### REPORT BY THE COMPTROLLER AND AUDITOR GENERAL

#### **Armoured Vehicles**

#### **Examination of Witnesses**

Witnesses: Ursula Brennan, Permanent Under-Secretary, Ministry of Defence, Lieutenant-General Gary Coward CB OBE, Chief of Materiel (Land), and Vice-Admiral Paul Lambert, Deputy Chief of Defence Staff (Capability), gave evidence.

Q1 Chair: Welcome. A number of my Members want to try and keep this as a tight session. I am conscious that we let you down last time. It would be really helpful and the session will go much better-I know I say this to you, Ursula Brennan, every time if you come at us direct, even if we do not like what you say. If you do that, we can probably get through many of the issues more quickly. As a starter, why is Bill Moore not here?

Ursula Brennan: There was some discussion with the Committee about this. With me are Bill Moore's boss, Vice-Admiral Lambert, and Lieutenant-General Coward, who is, if you like, the delivery side. So this is the requirements capability side and the delivery side. Bill Moore was going to be here, but there was some discussion about Paul Lambert coming, then the Committee came back to us at the end of last week, by which time Bill Moore, thinking he was not required, had gone off-

O2 Chair: Was this when I said, "Not four; we've got to have three in," and he dropped out?

Ursula Brennan: Yes. I am not sure what happened, but he thought he was not needed and he is on holiday today.

Q3 Chair: We may come back to that, because he was clearly the SRO.

Ursula Brennan: He is not actually the SRO.

Q4 Chair: That is what our papers tell us.

Vice-Admiral Lambert: The SRO for the ground close combat is Brigadier John Patterson. Bill Moore is responsible to me and the Joint Capability Board for looking at the whole of the land environment and making sure that there is coherence with all the programmes across the land environment. But specifically for land vehicles, I have a head of capability who works with the Joint Capability Board and he is a brigadier.

Q5 Chair: How long has he been in that particular

Vice-Admiral Lambert: He has only been in that post since September. Before that I had Brigadier Riddell-Webster looking after that post and he was in the post for nearly three years.

Q6 Chair: Generally it is much more helpful for us and in the style of the Committee and the nature of our recommendations to get the responsible officer in front of us. You are running a massive multi-million pound procurement programme. Can I ask you first, Ursula Brennan, at what level of expenditure do you take the decisions?

Ursula Brennan: I do not personally take the decisions in quite that way. The decisions are taken and approvals are done by the Investment Approvals Committee on behalf of the Department. There is a structure of delegations within that and the biggest programmes tend to get discussed at the Defence Board and the previous Secretary of State set up a Major Projects Review Board to look at the biggest projects and review them more generally. But approvals are done through the Investment Approvals Committee.

Q7 Chair: Who chairs that?

Vice-Admiral Lambert: The finance director, Jon Thompson, chairs the Investment Approvals Committee.

Q8 Chair: So the decisions on these armoured vehicles are taken there?

Vice-Admiral Lambert: At the IAC, yes.

Q9 Chair: Right. Then let me ask you the second question. I don't know who wants to answer this one. What criteria do you use when you decide to cut armoured vehicle capability?

Ursula Brennan: The criteria that we used in the SDSR and then again in the thing we called the threemonth exercise, which was announced in July, are a combination of actions needed to bring our budget into balance, the capabilities that we require as an organisation, and the capabilities that will most deliver the adaptable force that we set out in the SDSR. So Vice-Admiral Lambert is responsible for advising the Defence Board on, if that is our SDSR objective, what are the capabilities we need to deliver it and how should we prioritise below that.

Q10 Chair: Okay. So maybe you should answer the question. As far as I can tell from a rather complex Report, this was a £14 billion<sup>1</sup> budget in 2005, thereabouts, when FRES was invented. It is now about £5 billion. Why did you decide to cut from £14 billion to £5 billion? I accept that it was not each time, but why? We have wasted a lot of money as per usual in this area, but why on earth did you decide to cut such a lot out of this capability?

Vice-Admiral Lambert: May I just go back to the previous question before I answer that one, if you don't mind, Chair? Investment Approval Committees make decisions on procurement and on spending. They do not make the decisions on which programmes are cut. I put up the arguments on which programmes we move ahead with and which ones we cut, basically on priorities and on capabilities.

**O11 Chair:** Basically on what? What I am suspicious of is that you do it because you don't have the contract.

Vice-Admiral Lambert: There is always a degree of pragmatism within it.

Q12 Chair: How much is the pragmatism and how much is the capability?

Vice-Admiral Lambert: It is a combination of both. If one does not have enough money for the programmes one has for the next few years, there is no point in cancelling a programme where the liabilities will be greater than the savings.

**O13 Chair:** Let me put it to you that I think on this programme, because your contracts are not there, you have cut it. It is a massive cut from £14 billion to £5 billion odd. That is a heck of a cut. You are a third of what you originally intended it to be. In today's prices £14 billion would probably be £25 billion, knowing the MOD. So that is a massive, massive cut. The driving force was that you were not contractually

Vice-Admiral Lambert: I would not disagree with you, Chair, but there is an awful lot that went into the programme in the past that was wishes. People thought that if they put a requirement in the programme, it would be delivered, whereas the totality of the equipment programme was not affordable. We

In 2005 the MoD planned to spend £4 billion on Armoured Vehicles over the next 10 years, not £14 billion.

needed to get down to an affordable programme before we started.

Q14 Chair: You could say that across the piece. I remember—this was on the previous Government's watch—when Sarah Bryant was killed in 2010<sup>2</sup>. The press coverage in The Guardian at the time reported that, "soldier after soldier came forward to express the concerns they had felt when they heard they would be using lightly armoured Snatch Land Rovers for their mission in Helmand province." What we ended up with, according to some sources, was 35 deaths caused by roadside bombs in Afghanistan, because we did not have the right armoured vehicles.

Vice-Admiral Lambert: I would dispute that. I think that the procurement of the right vehicles for Afghanistan, through the urgent operational requirements process, delivered the capabilities that we required in that theatre.

Q15 Chair: So all these press reports are wrong, are they? I remember this period rather well, because that was evidence that came out at the time. It was just when the previous Prime Minister was giving evidence to the Chilcot inquiry. He was faced with the accusation that he had not put enough money into the system. The two are connected. At that time in 2010, people died because they did not have the right vehicles, because we cut, because we were not contractually committed.

Vice-Admiral Lambert: In 2010, I can assure you that the urgent operational requirements process had delivered the right vehicles to the right theatres. At that time, we would have had Mastiffs for PPVs. We would have had the whole gambut of protected vehicles, which we had spent a couple of billion pounds on, through the requirements from the Treasury. I would dispute what you said for 2010.

**O16 Chair:** Too often we are forced to use evidence that is given to us by other people. The minutes of a meeting held in 2011 of 16 Air Assault Brigade commanders, which was quoted in your Report, state, "Mastiff and Ridgback never got above 65 per cent availability. Risk was taken when vehicles were not fully functional." A brigade source said that, "Ridgbacks and Mastiffs are supposedly mine-proof, so 65 per cent of capability is a disgrace. Afghanistan is dangerous enough without being let down by equipment."

Lieutenant-General Coward: Perhaps I can chip in as a soldier. I think that it is fair enough to say that 65% is not enough availability. The requirement is 80% of the available fleet. It is only very recently-about a month ago-that we have consistently achieved 80% availability with the vehicles that you speak of: the Mastiff and the Ridgback. It is fair to say that 65% was not good enough. When you urgently deploy these vehicles into theatres, it takes time to build up the spares and the resilience, so that you can learn and maintain them on the road as well as you would expect. I would add that part of the reason why only 65% were available was down to the fact that many

Cpl Sarah Bryant was killed alongside LCpl Reeve, LCpl Larkin and Pte Stout on 17 June 2008.

of them had been struck by IEDs in 2009 and 2010. We were struggling to repair those quickly enough and get them back on the road. No, it was not good enough, but it has got much, much better. I suspect that if you spoke to Ed Davis, the returning commander of 3 Commando Brigade, he would tell you that he was more than satisfied with the availability that is now being delivered.

Q17 Chair: I am glad to hear that, but I have to say-this is not a criticism of you-that what has clearly happened, in this terrible saga that we are looking at today, is that you had huge cuts to a key programme, which meant that you were left vulnerable without the appropriate vehicles that would have not been impacted by IEDs, or that might have been more resistant to IEDs, or that could have gone over territory in a way that your vehicles did not, so that they did not hit IEDs. There were all sorts of capabilities that you required in theatre that simply weren't there, because in the MOD's traditional way they were cut—an easy-cut programme, where there is no contractual commitment—thinking not about the defence need but about the financial imperative. Do you want to comment on that? You looked as if you were agreeing with me, Lieutenant-General.

Lieutenant-General Coward: I do agree, because we had to deliver urgent operational requirements. But even the Americans, who have dollars to spare so to speak, went out and bought new vehicles because even their Stryker vehicle, which was perhaps one of the vehicles that we were looking to procure for our core programme, was overmatched by the threat. A properly resourced core programme will allow you to deploy into harm's way in a reasonable level of risk, but there will still be risk, and we found in both Iraq and Afghanistan that even a well-equipped AFV fleet is challenged by heavy IEDs and externally forged fragments.

Q18 Chair: Okay, but on that—then I'm going to go to Nick and then Ian-let me just quote to you from Peter Flach, who you probably know well from RUSI. I am interested in benchmarking our performance against other countries and what he says, talking about armoured vehicles, is this: "The failure of the UK to derive affordable requirements is recognised in the AFV"—that's armoured fighting vehicles, I assume— "industry. The industry likes customers who know what they want and can afford it, such as"-this is the really scary bit—"US, Canada, Australia, Germany, the Netherlands and Belgium. They have other customers who either do not know what they want or haven't got the money for it, and these are more of a problem. Too often the UK falls into a third category of being unable to decide what it wants and not having the funds."

I have to say that that is an outrageous condemnation of our whole procurement process in this one absolutely key area, benchmarked against everyone else. What is your view of that, Lieutenant-General? Lieutenant-General Coward: Peter is entitled to his opinion. I would not put us third; I would perhaps put us in the second rank. We have been indecisive. We have had well-recorded difficulties with the FRES programme, as this Report reflects, and that is a fair criticism. But we have learned lessons from that period of indecisiveness and over-aspiration, and I believe that our programme is beginning to head in the right direction.

Chair: I'm just going to ask Paul Lambert and then Ursula Brennan to comment on that, and then I'll come to you Nick.

Vice-Admiral Lambert: If one looks back a few years, as we moved out of the cold war the UK was of a mindset that we wanted deployability for our armed forces. That was a key criterion, which drove us down the route of looking at lightweight armour and equipment that you could deploy very quickly on aircraft, and I think that we learnt a hard lesson in places such as Afghanistan and Iraq that protection is more important than deployability. That is one of the reasons why we went down the urgent operational requirements route, and many of the vehicles now are a lot heavier than we had envisaged five or 10 years

O19 Chair: Are we worse than America, Canada, Australia, Germany, the Netherlands and Belgium at making these decisions, which is what he asserts?

Vice-Admiral Lambert: I agree with the General that we have changed our mind over the past few years, but part of changing our mind is because we have learned some hard lessons on deployed operations, and we have conducted a lot of deployed operations over the years.

**Chair:** I will take that as a yes.

Ursula Brennan: I think we do acknowledge that we had over-complex requirements and an over-complex procurement route for some of our attempts to purchase armoured fighting vehicles in the past. The only thing I would say is that in relation to theatres-Iraq and Afghanistan—it is genuinely the view in the Ministry of Defence that even if we had made up our minds and stuck with the procurements that we were intending to do, and even if they had come in speedily, we would still have needed to procure urgent operational requirements for Afghanistan.

It would be a pity if the Committee were left with the impression that people had died in Afghanistan because of our shilly-shallying about the procurement of armoured fighting vehicles, because the thing that mattered for Afghanistan was our recognising speedily what the requirements were and delivering them. Our core programme gave us some base vehicles, but the thing that we needed to do to respond to those threats was to be really speedy in getting the UORs into theatre. That is what we put all our energy into doing.

Q20 Chair: I have to say that it is your own commanders on the ground who say that. It is the people with whom Lieutenant-General Gary Coward works. It is not this Committee. It cannot make sense to dump a billion quid of a planned programme and then spend £2.8 billion of actual Treasury money, which is probably the reason that you did it, on second-rate alternatives. That cannot make sense in any world to dump a billion there and spend £2.8 billion over there.

*Vice-Admiral Lambert:* I would not say that the protective vehicles that we have for Afghanistan are second rate at all.

**Q21 Chair:** You are going to have to spend a lot of money on them, aren't you?

*Vice-Admiral Lambert:* Yes, but we have given our soldiers in Afghanistan the level of protection that no other country has got in their protective vehicles.

**Q22 Chair:** You dumped a billion and you spent £2.8 billion. Anyone with a little bit of common sense knows that there is something awry in that. You must see that yourself.

Vice-Admiral Lambert: The dumping of nearly a billion for going down the wrong route and for a whole variety of—

Chair: It was not the wrong route. It was a route you decided you could get out of when you had more commitments than you had money. It wasn't the wrong route in terms of defence capability. It was a route that you got out of as a short-term decision and you then got an extra dollop of money from the Treasury.

Comptroller and Auditor General: Can I make sure that we have this point clear? If I understood Vice-Admiral Lambert correctly, if we had gone ahead more quickly with procuring conventional vehicles at that time, the likelihood is that they wouldn't have been proofed against the blast devices that were deployed in Afghanistan and they probably would have ended up having to buy more vehicles anyway. Just for clarity, our Report is not suggesting that there is a direct crossover between the vehicles you might have needed in Afghanistan—you might have been able to use them—and the others.

Q23 Nick Smith: Your last question touched on the point that I was trying to understand, which is the business of overall performance. We were a bit disconcerted by Vice-Admiral Lambert's point about things in the round having gone "rather well". I would still appreciate the Department acknowledging point 6 in the Report, which is that the Department has managed to spend over £1.1 billion through the standard acquisition process since 1998 without delivering any of its principal armoured vehicle projects. Are you going to acknowledge that point?

*Ursula Brennan:* Sorry, could you quote the reference again?

**Nick Smith:** It is on the first page—excuse me, it is from our briefing.

**Mr Bacon:** It is on page 6, paragraph 4: "The list of armoured vehicles projects cancelled, suspended or delayed in Figure 1 suggests that...the Department's standard acquisition process for armoured vehicles has not been working."

*Ursula Brennan:* We have acknowledged that there were failings in our procurement of armoured fighting vehicles. Yes, we do acknowledge this.

**Q24 Mr Bacon:** Who has paid the price for that? Who has paid the penalty for that scale of error? Because for most of this decade—although we have had an enormous financial crunch since 2008 or late

2007—it was a period of rising Government spending. It is a huge failure. Who is paying the penalty for that? Is anyone?

Ursula Brennan: The reasons—

**Q25 Mr Bacon:** Apart from the soldiers on the ground, obviously, who has paid the penalty for this failure in the Ministry of Defence?

Ursula Brennan: The reasons—

**Q26 Mr Bacon:** No, no, my question is who? The answer must be a person or no person.

Ursula Brennan: The reason why I wanted to say the reasons is because the reasons why certain programmes were stopped or cancelled were to do with decisions that were taken, in some cases about the procurement routes, between Ministers and officials at the time about the way it was chosen to procure—

**Q27 Mr Bacon:** You are answering a question that is not the question I asked. You are giving me an explanation of how we reached this position through decisions having been taken. Plainly, some decisions must have been taken for us to end up in a particular position. There must have been bad decisions for us to end up in a particularly bad position such as this one. My question is who has paid the penalty for this in the Ministry of Defence? It's a simple question. Who?

Ursula Brennan: I can't point the finger at one person, because there isn't one person who was responsible for the different sets of decisions that were taken about individual vehicles.

**Mr Bacon:** Is there anybody who has paid the penalty for this?

Vice-Admiral Lambert: If I can—

**Mr Bacon:** No, no, no. I am looking at Ms Brennan. I am asking her a question. She is the accounting officer. She is the permanent secretary. My question stands; I've asked it three or four times now. It is very simple and very clear. Is there anybody in the Ministry of Defence who has paid a penalty for this?

Ursula Brennan: No. I don't think I can point the finger at anybody.

**Q28** Nick Smith: What tasks outlined in the SDSR will the armed forces not be able to carry out due to the lack of armoured vehicles, given that we are going to wait so long for the ones that are planned to come through?

Vice-Admiral Lambert: In the whole gamut of capabilities, we are able to do all the capabilities we require, but maybe not at 100% in the way we'd like to. I will give you an example. Within the armoured vehicles is a vehicle for reconnaissance. You will see that we have a programme for the future for reconnaissance, but our present reconnaissance vehicles are fairly aged. Does that mean we can't do reconnaissance? No, because we can do reconnaissance using overhead assets. We can use helicopters and other vehicles. The specific vehicle has not been delivered in accordance with the programme, but it doesn't mean that the capabilities aren't there or being delivered in a slightly different

way. We have to look at the balance of capabilities. The Report is specific about vehicles rather than the capabilities that those vehicles deliver.

Another example is how we move people around the battlespace. There is a programme in here for a utility vehicle, which is all about how we move soldiers around the battlespace, but it doesn't mention helicopters, which is another way of moving people around the battlespace, or any other types of vehicle that we procured. Is there any capability that we can't do? No. Are there capabilities we would like to do better and in a different way? Yes. If these programmes had delivered, there would be different ways of doing it. That is where we are trying to get to.

Q29 Nick Smith: It sounds like you are saying that we are not going to have the capability and that we are going to have to do it in a different way, which may not be as effective.

Vice-Admiral Lambert: I won't disagree with you on that. I won't disagree.

Q30 Chair: And what do you feel, Lieutenant-General?

Lieutenant-General Coward: That's a fair answer.

**Q31 Chair:** What are you not going to be able to do? Lieutenant-General Coward: I don't think you can say specifically as yet. As I think you will appreciate, the funding available for the armoured vehicle programme has now been set, and the Army is reappraising what the best mix will be within that pipeline of funding. We would be crystal ball-gazing to say, "We couldn't do reconnaissance in the way we would like. We couldn't do armoured infantry, couldn't do this or couldn't do that." There will be compromises that we will have to make.

Q32 Chair: Have you got enough helicopters? My information is that there aren't even enough helicopters.

Vice-Admiral Lambert: The announcement that we were moving ahead with the Chinook programme gives us the capability-

Q33 Chair: When?

Vice-Admiral Lambert: The order has been made, and they are in production at the moment.

Chair: Will you have enough helicopters?

Nick Smith: Particularly for reconnaissance, given you've highlighted that as problem.

Vice-Admiral Lambert: We have enough helicopters for Afghanistan at the moment. Have we got enough helicopters for Future Force 2020 and all the missions that we're likely to want? With the timetable for delivering we will look at what capability shortfall-

Q34 Chair: What does that mean? When are you going to get them? Will there be enough?

Lieutenant-General Coward: The new Chinooks will start coming in in 2015.

Q35 Chair: In 2015. How many have you ordered? Lieutenant-General Coward: Fourteen.

Q36 Chair: So you will get the first one in 2015 and the last one in-

Lieutenant-General Coward: I think slightly before that. But their capability, with people trained, will be around 20153.

Q37 Comptroller and Auditor General: As I understand it, the argument says, "Of course you can do reconnaissance with something other than one specific vehicle." Who could argue with that? You can use something else in your defence capability to do all those. Of course that makes sense. But when you've got less of everything, the amount of these tasks in total that you can do at one time steadily goes down, doesn't it? Isn't that also fair? It is an answer, but it is not a solution to everything.

Q38 Mr Bacon: Could you remind us what the Government's policy is on British troops coming out of Afghanistan—the draw-down?

Lieutenant-General Coward: We are due to be out of combat operations by the end of 2014. The reduction over time between now and then is still being developed: will it be a glide slope, a cliff edge, a convex, or whatever?

Q39 Mr Bacon: The combat side is expected, at least under current plans, to be finished by the end of 2014. Lieutenant-General Coward: Correct.

Mr Bacon: The helicopters arrive in 2015.

Lieutenant-General Coward: The additional helicopters, yes.

Q40 Mr Bacon: But they won't be used in combat in Afghanistan if current plans are stuck to. Is that right? Lieutenant-General Coward: Correct. The point is that they are, in part at least, replacing some platforms that will be going out of service in future. The Sea King, for example, of which we withdrew a number from Afghanistan last month, is going out of service in 2016. Replacing those as a capability for defence is, at least in part, what the additional 14 Chinooks will do.

Q41 Mr Bacon: Are the additional 14 Chinooks we are getting an advance on the Mk 3? What are they? Lieutenant-General Coward: They will be described as Mk 6 and combine the latest European cockpit with an American upgrade to a digital platform. They will provide a full range of capability, not in exactly the same way as the Mk 3-

**Mr Bacon:** One hopes not.

Lieutenant-General Coward: The Mk 3s are now flying in the UK and providing valuable output for training crews and soldiers.

Q42 Mr Bacon: I hope so, given how much you've paid for them. Will you tell us how much the new Chinooks will cost each?

Lieutenant-General Coward: I cannot give you that answer; I don't have it.

Under current plans, the first of the new Chinooks will enter service with the RAF in May 2014, while 3 aircraft will be available for deployment with trained crews and all necessary support in January 2015.

Vice-Admiral Lambert: We'll have to come back to the Committee on that.

**Q43** Chair: Can we get a logical issue out of this? The Chinooks are replacing something else; they are not replacing the armoured vehicles that you have cut out of your programme.

Vice-Admiral Lambert: I think the Comptroller and Auditor General put it quite well.

**Q44** Chair: It could be done, but you haven't got the capability. You haven't got enough of them to do it. *Vice-Admiral Lambert:* We will always try and mix our equipment so that we provide the capabilities. What happens is that it has to be stretched thinner across the total requirement.

Chair: Not very satisfactory.

**Q45 Ian Swales:** How many people work in the MOD areas that look after the purchase of armoured vehicles?

*Lieutenant-General Coward:* I don't have the real number. I would hazard a guess that, in the MOD and the requirement-setting organisation, we are talking about handfuls.

*Vice-Admiral Lambert:* No more than a dozen. *Lieutenant-General Coward:* In Abbey Wood my guesstimate—it is but that—is about 200 or 300 at the most<sup>4</sup>.

Q46 Ian Swales: That is far fewer than I expected. The Committee heard a much higher number just for helicopters, so I am quite surprised at that. Having said that, a heading on page 14 of the Report states, "A reluctance to compromise in setting armoured vehicle requirements puts delivery at risk", and on page 16 it states, "The armoured vehicles' requirements setting process has proved insufficient in a rapidly changing operational environment." If you meet manufacturers of defence equipment—the Chair mentioned this earlier—there is a constant cry that we keep on changing our minds and we don't know what we want. We keep changing requirements and asking them to change from standard designs and so on. Can you comment on the way that we buy this type of equipment?

Vice-Admiral Lambert: I do not disagree with what the Report says. I think it is right that in the past we have asked for everything rather than honed down and headed towards a more off-the-shelf solution. The TRACER programme, with which the Report starts, needed cutting-edge technology right across the piece from how the propulsion would work through to the type of armour and gun needed. That was too big an ask; it was always going to be expensive and was too high a risk.

**Q47** Chair: Were you involved in that decision? *Vice-Admiral Lambert:* No. The programme started in 1992, I am afraid, Chair.

**Q48 Chair:** And when did you come to this project—how long have you been in this post?

*Vice-Admiral Lambert:* I have been in this job just over two years. The TRACER programme started almost 20 years ago.

**Q49 Ian Swales:** And what has it delivered and at what cost?

Chair: It hasn't delivered anything.

Vice-Admiral Lambert: It hasn't delivered nothing.

**Q50 Ian Swales:** At what cost?

Chair: £700 million<sup>5</sup>.

Vice-Admiral Lambert: We have been moving towards more off-the-shelf procurements and a lower set of requirements to make things more affordable. That process has been moving that way across the piece.

**Q51 Ian Swales:** Are we in the middle of any of those similar programmes, where we will spend far more than we expected and achieve little or nothing as a result? Can you think of another such programme we will be hearing about in this Committee in the future, or have we learned the lessons from this programme and completely changed?

Vice-Admiral Lambert: I do not think we have completely changed; I think we are in the process of changing. I do not think we can yet draw a line underneath all the asking we have had in the past, but if you look across the whole of the three environments—maritime, air and land—we are moving towards a more sensible approach and a more off-the-shelf approach, and we are getting away from asking for the very top, high-end specs, which we never deliver anyway. We have to move to a solution set which we can upgrade often, and we need to be able to afford to do that, rather than to afford one or two very high specs.

**Q52 Ian Swales:** As the accounting officer, Ms Brennan, are you happy that that culture, which Vice-Admiral Lambert has described, is now embedded in the MOD?

Ursula Brennan: I was just going to comment that I think we have learned lessons, and some of that is beginning to be visible in the procurements that are ongoing at the moment, like Foxhound, maybe also Terrier, and some of the FRES arrangements. There are things that we learned about buying in batches; having a simpler contract structure with a prime contractor, and not trying to have the complex contract structure that we had before and making sure that industry is ready and able to deliver the capabilities that we are after, and that we are not asking for something that is at the leading edge.

There are three other key things that we have done. One is that we are absolutely clear about not committing to expenditure when we do not have the money in the budget line. We are clear about being able to say, even if there is a reduced budget, that we expect to be able to spend it, and we do not have to go back and dig it up, because it is in balance. That is one thing that we have learned.

The second thing relates to giving the Army clearer responsibility for making decisions in this area, and

<sup>&</sup>lt;sup>4</sup> Total number of Crown Servants working on AFVs in Abbey Wood is 365

<sup>&</sup>lt;sup>5</sup> Total spend on TRACER was £131 million not £700 million.

similarly the Navy, with ships, and so on. We then have a stronger sense of, "Here's the budget and here are the objectives we're trying to achieve. Now, you come up with a proposition and own it."

Thirdly, our new Chief of Defence Materiel, Bernard Gray, is engaged in a major programme of rethinking the way we actually do all this procurement down in Abbey Wood to change the kind of project teams and the way they think about how they do procurement.

Q53 Ian Swales: Specifically on armoured vehicles, we heard from Mr Smith about the delay in getting what the 2010 SDR said we needed, and we heard that it would be 15 years before we got it. What is the cause of that delay? Is it simply budget availability, or are we in the process of some major technological innovations, which are delaying all this? Are we just talking about the budget? We all have to be concerned whether the technology will still be okay in 15 years' time and, given what the Report says about this programme perhaps being sacrificed sometimes to overspends elsewhere, whether we will even make the 15-year horizon.

Ursula Brennan: That was the point I was trying to get at. If we have our budget in balance, we do not have to go back and unpick programmes because there is not the money there. Just at the moment, we are looking at what happened in Libya, and asking what lessons we learned and what the implications are for equipment. That is inevitable and will lead to urgent operational requirement-type approaches. The thing we can try and stop is having to have volatility driven by problems in the budget.

O54 Chair: Can I come in on this? This is the narrative that we have heard before, and the reality is very different. I am just going to put it to you that if your budget worked, you would not have had to do the three-month review. You have just pulled out money because you were going to spend more in 2011-12 than you had in your budget. That is right, isn't it? That is what the three-month review is about.

Ursula Brennan: The three-month review was not about 2011-12. It was about the 10-year programme. Chair: But you have cut 2011-12 spending on this programme.

Ursula Brennan: Not, I thin as part of the threemonth exercise. I am not sure.

Q55 Chair: The sum of £2.8 billion sticks in my memory. Perhaps Ross Campbell-

Ross Campbell: That's over 10 years, Chair.

**Q56 Chair:** And how much in this year?

Ursula Brennan: I am trying to recall. I don't dispute that over different planning rounds we have been taking money out.

Q57 Chair: But this year?

Ross Campbell: It is just £3 million this year, Chair. The bulk of it is spread over the next 10 years.

Q58 Chair: Nevertheless, you have cut. The other thing is this: is your budget in balance?

Ursula Brennan: I think that the words that the previous Secretary of State used when he made the three-month exercise-

Chair: You tell me. You are the accounting officer. Ursula Brennan: Were "broadly in balance". And that is my view.

Q59 Chair: You tell me. Is it in balance? Ursula Brennan: It is broadly in balance. It is not yet completely in balance.

Q60 Chair: What does "broadly" mean? How much are you over-committed to what you have got? Ursula Brennan: We are in the process of conducting the planning round, which will enable us to-

**Q61 Chair:** Don't tell us that you are getting better at it, because you are doing another planning round to cut more. "Broadly in balance" means you are not in balance, so just tell me how much over you are

Ursula Brennan: I can't tell you the answer to that, because we don't-

Chair: I bet you can—you are just not willing to share it with me.

Ursula Brennan: No, no. I genuinely cannot tell you the answer to that, because we are in the middle of a planning round.

Q62 Chair: But you can tell me what the planning round is trying to identify.

Ursula Brennan: The planning round is trying to make sure that the process that we started in the strategic defence and security review, and that we took a stage further and nearly completed in the threemonth exercise, needs to be completed in the planning round that we are doing now. The National Audit Office will actually be auditing these numbers very shortly and you will have an opportunity to see-

Chair: The NAO will audit it after you have done it, but for you to sit and tell the Committee, "We've now learned all these lessons; we're in balance", is not true, because you have had a three-month round and you are now having what you call a planning round, which to me is just an in-year budget cut because you have got too much. That must be right.

You are not willing to share with us by how much, but currently if you did not have this last bit of cuts you would be overspending in 2011-12. Am I right about that? Just tell me yes or no on that. Maybe that is the best way of putting it. If you did not have this final planning round—that is what you call the cuts exercise that you are currently engaged in-you would be overspending in 2011–12.

Ursula Brennan: The three-month exercise was predominantly not about 2011-12.

Q63 Chair: No, but you're doing another planning

Ursula Brennan: We're doing a planning round, but not for 2011-12. 2011-12 is the current financial year. We are doing a planning round that is looking at forward expenditure, not at the current financial year.

Q64 Chair: And this year "broadly in balance" means "not in balance", but you are not prepared to share with us how much you are over.

Ursula Brennan: Just to be absolutely clear, we will deliver our budget in the current financial year. We have said, and it is correct, that we are broadly in balance over the decade. We are not yet completely in balance over the decade. That is what we are seeking to get to.

**Q65** Chair: And how much are you out?

Ursula Brennan: Well, we are doing the planning round to reach that conclusion. We will deliver our budget in the current financial year. We are trying to get-it is very difficult to do this in one go. We made decisions in the SDSR; they have knock-on effects; in the three-month exercise, we made the change around reserves and regulars, and the Germany rebasing; and all of those things have to knock through. Our intention is to get to a balanced budget and to have it audited by the NAO.

Chair: So the SDSR is what we have all said—it was set without having regard to the financial implications of it. That is the problem you are now picking up.

**Q66** Nick Smith: Does that mean that you will delay the implementation of the Warrior upgrade? What will happen to that?

Ursula Brennan: The previous Secretary of State announced that we would be proceeding with the Warrior upgrade when he made his statement in July.

Q67 Nick Smith: Will it happen on time or will it be delayed?

Ursula Brennan: When he made the announcement, I don't know that he-

**Q68 Nick Smith:** So the plan is for them to arrive on time. And what will happen to Scout?

Ursula Brennan: There were certain things that the former Secretary of State announced on 18 July, and those things we are clear about. We are engaged in the piece of work that the Army is doing about the rest of the equipment programme, within that envelope of funding that we have given it. So I cannot give you any other details yet, because the Army is working that through.

Q69 Austin Mitchell: In retrospect, it looks as though there is a certain amount of budget juggling going on at the Ministry of Defence, which speaks to a certain amount of chaos. You have spent £2.8 billion from the Treasury's reserve by the urgent operational requirements, but then you took out £1 billion from the standard vehicle budget to fund other areas of defence. This is juggling, isn't it? What other areas of defence were being funded from the standard budget? Ursula Brennan: I would not quite describe it as saying we took it out of armoured fighting vehicles to fund defence, because if you are alluding to the-

Q70 Austin Mitchell: Well, you are getting money from the Treasury and not using your own budget.

Ursula Brennan: These are two distinct things. The urgent operational requirements are about specific vehicles to meet the specific threat-

#### Q71 Austin Mitchell: Yes, improvisation.

Ursula Brennan: Not just IEDs, but other things to do with the weather, the heat—all sorts of things for which we had to adjust our vehicles and get new vehicles. That was specifically for the threats in theatre. We have been seeking to balance our budget and taking money out all over the place to bring it into balance. We didn't specifically target armoured fighting vehicles.

We did a balance that said "There is no point in taking out cost from programmes that are already on contract, where the liability is greater than the saving we can make." So yes, it's true we looked at, first, the places where the spend was uncommitted; but that wasn't the only reason why we came to-

Q72 Austin Mitchell: But that means you are getting the vehicles at a higher price, because paragraph 15 says that the cost would have been lower had more armoured vehicle projects of the Department's core programme been delivered as originally planned; so you are paying more for the process of improvisation that is going on.

Ursula Brennan: It's certainly true, and I think we have acknowledged, that there were failings in the procurement of armoured fighting vehicles, and if we had actually delivered some of those vehicles that we planned to deliver on time, clearly some of the cost would not have been nugatory.

Vice-Admiral Lambert: Some of the £2.8 billion has been spent on upgrading vehicles that are part of the core programme; but it is right that, if the core programme had delivered a vehicle for the troops, that would have been used instead of some of the PPVs, so I think that comment here is partly correct.

Q73 Austin Mitchell: Well, improvisation had to go on, of course, because people were being killed, but let's turn now the question of why the core programme didn't deliver; because figure 1 on page 5—if you look at projects that are part of the core programme—looks as though you are making them over-elaborate or gold-plating them beyond the necessary technical limits. "Tactical Reconnaissance Armoured Combat Equipment Requirement... Cancelled". "Multi-Role armoured vehicle... Cancelled." "Future Rapid Effect System—Utility Vehicle...Suspended. "Future Rapid Effect System-Specialist Vehicle...Delayed: in-service." "Warrior Capability...Delayed: In-service". "Terrier armoured engineer vehicle...Delayed: in-service".

Why is all this going on? Why are you making such a cock-up of the standard budget? Or why did you? It wasn't you; because as usual the people appearing before us have been appointed later than the mess; but why did the mess occur?

Vice-Admiral Lambert: I think the TRACER programme was started with the best intention, and there were several other programmes, which started with the best of intentions of trying to get to the

cutting edge so that we could deliver equipment right at the forefront of technology-

Q74 Austin Mitchell: They were over-elaborate, though. Men were dying, meanwhile.

Vice-Admiral Lambert: No; the **TRACER** programme, which was cancelled in 2001, would have delivered a reconnaissance vehicle that would have been at the cutting edge anywhere around the world. It was over-elaborate. The multi-role armoured vehicle programme was something completely different. The requirement was for something that could be deployed very rapidly; with the MRAV programme, as it progressed the view was that it was going to become too heavy to be deployed quickly by air. In hindsight it probably wasn't. In hindsight, the amount of armour that was going on MRAV was probably about right, and our priority of putting deployability over armour was not right. The UV programme got over-complex in the commercial arrangements and part of that was—and this is where they had systems of systems, integrators, etc-a commercial issue rather than an issue of requirement.

**Q75 Chair:** What did you get right?

Vice-Admiral Lambert: The Warrior programme was right. The whole of the UOR programme has created-

Q76 Chair: The Warrior programme was right but you have delayed it?

Vice-Admiral Lambert: Yes, it has been delayed.

Chair: Well, that's not right.

Vice-Admiral Lambert: The Urgent Operational

Requirements are right. **Chair:** Tell me about that.

Vice-Admiral Lambert: Things like Mastiff and-

Q77 Chair: That's because you get money out of the Treasury. What did you get right? You just look at this and think there's nothing right here.

Vice-Admiral Lambert: The procurement of those operational requirements—it doesn't matter whether it came from the core budget or the Treasury-and the delivery to theatre were absolutely right for those programmes.

Q78 Chair: But they might not have been the right vehicles.

Vice-Admiral Lambert: They are right for that specific theatre.

Chair: So it isn't right, in that when your predecessors have sat around and thought, "What does the Army need?", they haven't come down to what you ended up getting in Afghanistan. Lieutenant-General Gary Coward has told us about the implications of that decision. It is very difficult to find anything you got right.

Q79 Mrs McGuire: The Department has almost undertaken a handbrake turn. We have gone from gold-plating and Christmas tree-or even, as I said once, gold-plating the Christmas tree—in the procurement process, to something that is more linked to a budget. Vice-Admiral Lambert, how have you managed to change the culture within the MOD? You said earlier that we are now looking at off-the-shelf and a capacity that is more limited than you might otherwise have attempted. How have you managed that change to alert people to the fact that they need to be more price-sensitive, and that, instead of going to Waitrose, they might also find that Asda has the same thing—the military equivalent—only cheaper? Vice-Admiral Lambert: I think that "gold-plating" has got into our vocabulary and we need to be careful about it. I don't think anybody starts off with the idea that they want a gold-plated solution. They want a solution that, when we go into a conflict zone, protects the people and gives us a chance of winning. My predecessors have always ensured that we have the cutting-edge capability delivered to the theatres of war. What has changed is that, in the past, we used to deliver many of our platforms and we would use the same platform over a long time. So what was delivered on day one would be the same capability we were using 10 or 20 years later. One of the big changes in defence is the idea that you can upgrade quickly and cost-effectively. So the key platform needs to be upgradable and then we need to do a spiral development—a development over a period of timeso that you don't need all the capability delivered on day one and can upgrade over a period of time. Then you can start looking at some of the key cost drivers of those programmes and driving them down. I think that has probably been one of the biggest changes of

Q80 Chair: May I ask Lieutenant-General Gary Coward what cutting-edge capability in this area has been delivered to you over the past decade?

mindset-you don't have to have everything on day

one; you can get it over a period of time.

Lieutenant-General Coward: In the armoured vehicle area?

Chair: Yes. What cutting-edge capability have you had delivered?

Lieutenant-General Coward: Almost exclusively in the UOR field.

**Chair:** Cutting edge?

Lieutenant-General Coward: For the theatre? Yes, I would say so. It has been optimised for the theatre. On the basis that our protective mobility vehicles, on which we spend a considerable amount of money-

Q81 Chair: Optimised is not necessarily cutting edge.

Lieutenant-General Coward: I hesitate to say this, but since deploying those vehicles we have had casualties in them, but no one has been killed<sup>6</sup>. In our core vehicle programmes in Iraq, and in other vehicles, we have had casualties and many deaths, as you rightly reflected. So I do think that the Cougar family of vehicles and the Husky and so on are cutting edge. The Americans are procuring the same vehicles and we are putting cutting-edge armour on them, over and above that which the Americans produce.

No-One has died in a Cougar-based platform (Mastiff, ridgeback and Wolfhound) or in Husky as a result of enemy

Q82 Mrs McGuire: If you move from that position of cutting edge, what would be the impact on the safety of our personnel in theatre? You have clearly indicated that by going for the cutting-edge solution, you have delivered a far safer environment for our personnel, inasmuch as the theatre can be safer. Does it cause you nightmares that you are moving to this more off-the-shelf approach and that, in two or three years' time, it may well be the case, although I hope not, that you will be back in front of another Commons Committee—not necessarily this one trying to justify why you did not go for the cutting

Lieutenant-General Coward: May I qualify what I was talking about? I specified UOR. In terms of our core programme, the vehicles that we are being, rightly, in my view, criticised about were aiming for the cutting edge—they were going for a close to 100% solution. We have learned by these examples that that is not a sensible thing to do, so in our requirementsetting we are now compromising, within the financial envelope available, to deliver the best balance of capability against cost. Yes, in future there will be those people who, when they attend a coroner's court, might argue that if we had waited for a bit longer for another bit of technology, Rifleman X may have been saved, but if we wait that long we will not have any vehicle. So it is a balance between that requirement and what we can deliver in the time available.

Q83 Mrs McGuire: Do you think that Committees such as this conflate the two issues of the budgetary pressures and the procurement process, which has frankly left a lot to be desired? Should we actually be looking at the procurement process even within the new approach of having an 80%—or whatever capability? Rather than concentrating on the budget, should we be looking at the procurement process?

Lieutenant-General Coward: You should look at both. There is a budgetary issue, which Mrs Brennan has addressed, and there is the requirement-setting and procurement process, which has been slow, lumbering and bureaucratic-it was aiming for the stars when, as it now is, it should have been much more pragmatic. With what we have done with the Warrior capability sustainment programme, with the Scout programme and especially now with the Foxhound, we are beginning to learn those lessons. You will have to judge us on that delivery.

Q84 Mrs McGuire: How do you benchmark whether you should go for the cutting edge, and there may well be circumstances in which you would want to go for the cutting edge, or for something that is closer to 80%—is it 80% or 75%?—of capacity?

Vice-Admiral Lambert: We look at upgradeability these days. One thing we are doing in our vehicle programmes is putting in the electronic architecture so that we can add things on afterwards. Getting that architecture absolutely right is therefore important and, after that, we can wait for what we will add on. It is really about looking at that upgradeability. Again, with vehicles and perhaps with other equipment, we are looking to make sure that we can upgrade themthat we have the space and the energy and propulsion plants that we can upgrade, rather than making sure that everything is there on day one.

Q85 Jackie Doyle-Price: I want to come back to figure 1. When you look at the figures, they show that, of the £1.1 billion spent, only £407 million has delivered any vehicles, so for £1.1 billion we have 160 vehicles. It's not great, is it?

Ursula Brennan: I think we have acknowledged that there were failings. They were not all for the same reasons. Sometimes we entered into something with the Americans and the Americans pulled out, and we were left high and dry. Sometimes we were overelaborate in our procurement route. There were a variety of different reasons. We acknowledge that it was not good that there were projects that we cancelled and had nothing to show for it. There are others, however, where money continues to be spent and the vehicles are actually in production. Terrier is in production, I think, so it will deliver.

Q86 Jackie Doyle-Price: So ultimately only £323 million has been completely wasted—okay.

I want to get to the bottom of why some projects might have been more successful. You just mentioned that other partners have pulled out of things. Looking at the numbers involved in each of these projects, the two that you have delivered are those that were smaller in quantity than the perhaps more overambitious ones. Is that a factor in making a project more deliverable?

Ursula Brennan: I don't think the volume of order is what made it complex, although one of the things that we are doing at the moment across the whole of the equipment programme is to try, as far as possible, to have a contract that enables us to call off equipment as we need it rather than having to buy in bulk. One of them, the MRAV, was this business about, "Are we going for something light enough that you can fly it somewhere?" It got too heavy, so we thought, "That's not right". Then, as it turns out, the problems we face in Afghanistan meant that all of us, all nations, have had to up-armour their vehicles. Ironically, it may be that if we had all stuck with MRAV-I don't know whether that would have been part of the answer.

Q87 Jackie Doyle-Price: Again, you look at this table and at the dates: the project commenced in 1992 and was cancelled in 2001. These projects, on average, all have a 10-year life cycle, which seems to me extremely long.

Ursula Brennan: Indeed.

Q88 Jackie Doyle-Price: I assume that when you started out in 1992, the end date was not anticipated to be that long. What causes the delay? Is it because you are constantly reacting to other budgetary pressures; is it constantly reacting to demand, or is it just incompetence?

Ursula Brennan: We've acknowledged that there were a series of things that were a problem, and we are seeking to address them. One was over-elaborate requirements. One was over-complex procurement routes. One was the fact that, because our budget did not balance, we were juggling programmes to make

them fit within the budgetary envelope. So a variety of things were wrong and, gradually, we have been tackling each of those.

**Q89 Ian Swales:** Are we effectively funding research through these periods, potentially for commercial organisations?

Ursula Brennan: We've certainly learned from some of the failures and have taken some of the development into other vehicles, but generally we fund research separately rather than through these programmes.

Q90 Jackie Doyle-Price: Can I just quickly ask Lieutenant-General Coward a question? When you are reacting to the requirements in the theatre of war, how quickly can you make a decision to procure a particular vehicle and how quickly is it then deployed?

Lieutenant-General Coward: The best example, probably, was Mastiff 1, which was a combination of Îraq and perhaps ministerial involvement. We delivered vehicles, with the US Marine Corps's help, in months. We can now deliver similar vehicles in somewhere between months and a year. The most recent example is Foxhound. Having looked at buying something off the shelf and not being able to deliver the levels of protection necessary, we have entered into a development of a vehicle, but it will deliver capability 18 months after signing the contract with the provider.

Q91 Chair: Are you on target with the Foxhound time frame?

Lieutenant-General Coward: Yes, Chair.

Q92 Chair: The Department intends to have the Foxhound available for training for 2011. Is it available?

Lieutenant-General Coward: Yes. They will be off the production line—I hope to be there with our Minister to see them—at the end of the month, and training should start in November<sup>7</sup>.

Q93 Mrs McGuire: You mentioned ministerial involvement that rushed something through. What was the level of ministerial involvement? I mean, they didn't take out screwdrivers and things like that. What did they do that made a difference?

Lieutenant-General Coward: I was not involved at the time, but anecdotally-

Mrs McGuire: Collective memory is, I think, a better phrase.

Lieutenant-General Coward: Lord Drayson applied energy and focus, and tried to force through decisions that were perhaps having difficulty getting through at the time.

**Mrs McGuire:** He is a loss to the diplomatic corps.

**Q94** Chair: He is a loss. Can I take you to paragraph 4.5 on page 28, where there is a discussion about Mastiff? The end of that paragraph states: "The Department has stated that '...a vehicle such as Mastiff, does not come close to meeting the Future Rapid Effect System requirement,' which is designed to operate across all". Is that true?

Lieutenant-General Coward: Yes, I agree.

Q95 Chair: If that is true, is there money in the budget to ensure that you would do the necessary changes? Is the money there?

Lieutenant-General Coward: I do not think you could convert Mastiff sufficiently to make it deliver to within about 80% or 85% of the utility vehicle requirement.

**Q96 Chair:** So we are going to dump it, are we? Lieutenant-General Coward: No. My own view is that we should retain, pro tem, the Mastiffs, and adapt them to a small extent. We don't have very much money. There is a limit to what you can use them for, but they will provide protected mobility—not manoeuvre, which is what the Army desperately wishes to have, but we will make do with them.

**Q97** Chair: What won't it do? Just explain to a little layperson like me, who doesn't really get these things, what it won't do.

Lieutenant-General Coward: With the utility vehicle or with MRAV, we were seeking to be able to manoeuvre across country and in all terrains with a full vehicle load. Mastiff, even in version 3, doesn't have that level of mobility. It is also not a properly integrated platform.

Q98 Chair: Is there money in the budget to do the repairs and changes required at least to keep it going? Is the money there, yes or no? Yes or no?

Vice-Admiral Lambert: We have a budget, which I've asked-

**Q99** Chair: Is the money there?

Vice-Admiral Lambert: I have a budget and I've asked the Army to give me its priorities as to which equipments it wants to move forward.

**O100 Chair:** Mrs Brennan, is the money there? Ursula Brennan: We don't allocate the money in that way. We've allocated the budget to the Army-

Q101 Chair: In deciding the budget, is the money there to do the job on Mastiff—the changes?

Ursula Brennan: We're not allocating the money to a single vehicle in that way.

Q102 Chair: But when you set the budget, you think to yourself, "We've got to do a, b, c and d." Ursula Brennan: Indeed.

Q103 Chair: And one of the things that paragraph 4.5 says to me is that Mastiff is not good enough, but we've just heard from Gary Coward that actually you're going to have to spend a bit of money on it to make it serviceable until 2025 or whenever. Is the money there? You must have decided. Yes or no?

Ursula Brennan: No, we haven't, genuinely. We have not decided because-

Foxhound will be off the production line in November, and training is due to start in December.

Chair: That sounds so awful to me. When I was a Minister, setting my budgets, I knew what I could afford to do and not do within those budgets. I didn't pass the buck down the line to somebody else; I took responsibility for those decisions, and I'm sure Anne McGuire felt exactly the same. We wouldn't have said, "Oh, well, the budget has been cut; it's down to you what to do," knowing they didn't have the money to do it.

*Ursula Brennan:* Can I just be really clear? The armoured fighting vehicles budget covers a whole raft of vehicles: protected mobility, manoeuvre, all sorts of things—

**Q104 Chair:** You've cut the budget from £15 billion<sup>8</sup>—in today's prices, it probably ought to be £20 billion—to £5.6 billion. Is there money in there to deal with some of the Mastiff problems?

Ursula Brennan: We have not allocated it in that specific way. We have urgent operational requirements vehicles in Afghanistan, we have existing vehicles; we have plans to buy new vehicles; we have announced the intention to proceed with a Warrior upgrade. What we are doing now is saying, "Across that complete range of vehicles, which are the ones that we want to carry on investing in and to make some changes to and bring into core?" Some of these vehicles will be worth investing in; some won't, so I can't tell you now that we have put specific money—

Q105 Ian Swales: Do you actually know how much it will cost to do what you want to do with them? Twice, Admiral Lambert has talked about upgradeability. Did you plan for what you were going to do, having spent these billions, with these vehicles afterwards? Is there any plan?

Vice-Admiral Lambert: With the vehicles that we got for Afghanistan, the most important thing was to deliver them as quickly as possible. Time was of the essence, and we traded out a number of capabilities, including upgradeability, that we would have got from something like the utility—

Q106 Ian Swales: So you had no plan as to what you were going to do with them? Do you have a plan now? Vice-Admiral Lambert: The utility vehicle, as General Coward explained, has a capability to manoeuvre across land so that we can use it within a wider force. But one of the other things that we have learned during the operations in Iraq and Afghanistan is that we can no longer put our soldiers—that's the infantrymen—in unprotected vehicles. We never had a programme for that<sup>9</sup>, so across the piece we have to look at protection for everybody, from the light infantrymen all the way through to the Mechanised Brigade. We are doing the work at the moment to see whether the urgent operational requirements that we procured are worth bringing into core, because the cost of supporting some of them may be extortionate.

**Q107 Chair:** General Coward, do you want the money now?

Lieutenant-General Coward: I do need a balance of resource to deal not only with the core programme, but with those UORs that we will take into core.

Chair: Dear, dear, dear. Nick?

Q108 Nick Smith: On page 29 of the Report, it says that "from 2014–15, a significant period of recovery and re-equipment will be required...Without changes to plans for defence spending the likelihood of meeting the Strategic Defence and Security Review aspirations of making "...the Army more mobile and more flexible" appears to be remote until...2025." General Coward, is that good enough?

Lieutenant-General Coward: It is what it is.

**Q109** Nick Smith: I thought I would leave that hanging in the air for a while. So you are saying that the Army will not be flexible for a period of about 10 years.

Chair: At least.

*Lieutenant-General Coward:* It will be less flexible than we had at one stage anticipated.

Vice-Admiral Lambert: In the same way as requirements can be at the cutting edge, the asking capabilities can also be at the cutting edge, and we occasionally have to give them priorities.

**Chair:** We have just had an SDSR. You might have thought that, in setting the SDSR, you would have set some figures against it, and we have not done that. That is really the criticism here, which I hope will come out in our conclusions.

Comptroller and Auditor General: I suppose it is quite a similar question. As we look through the period for bringing all these vehicles in—it is great that the budget is more balanced and that it is getting into balance over a long period—is it not imbalanced, but with a very long time scale for bringing in all these vehicles? Will you not have to compress this rather more for it to be really satisfactory in terms of when these vehicles come into service? If you look at some of them, you are thinking shorter term and yet there are some very long-term in-service dates and that is still in the plan. Are you not going to have a way of drawing some of that back into a shorter time scale?

Lieutenant-General Coward: Surely it is down to the profile of the money that is available, rather than any magic of procurement to shave a few years off a procurement process.

Comptroller and Auditor General: I quite agree, but if you are making commitments that are not coming into service for such a long time and if you have been saying that you will become a lot more agile, is there any point in planning on something that is going to come into service so far in the future?

*Lieutenant-General Coward:* It is the best plan that we can have given the resources that are available.

**Q110 Austin Mitchell:** I have just one question on the armoured vehicle problem. I would have thought that it was fairly basic. Such vehicles are fairly crucial in saving lives against the kind of terrorism that we have had to face in Iraq and Afghanistan, but it seems

<sup>8</sup> In 2005 the MoD planned to spend £4 billion on Armoured Vehicles over the next 10 years, not £15 billion.

<sup>&</sup>lt;sup>9</sup> Vector Protected Patrol Vehicles (PPV) and upgrades to Snatch vehicles were delivered through core programmes. The Medium PPV programme (Vector replacement in service 2018) was cancelled in the SDSR.

to have been the fall guy of the system. Paragraph 3.11 on page 22 of the Report states that "the armoured vehicle sector has had the largest amount of funding removed of any individual sector in the five planning rounds conducted between 2005 and 2010" and figure 7 in appendix one shows that—though the impact of the SDSR on combat air is greater—the amount removed from armoured vehicles in the previous planning rounds is still well ahead of everything else.

Why is it that such an important programme, which is so important for preserving the lives of our troops and for delivering them for deployment, is so badly cut? Is that likely to happen again if there are any more cuts in the defence budget?

Ursula Brennan: In terms of taking money out of the defence programme, we have explained that we have had to do that in successive years because the budget was not in balance. We have worked through the SDSR, and in our announcement in July, and we have got it nearly there. It is not quite there yet, but we have it nearly there over 10 years, so we are not expecting to be taking further big bites out of it.

It is always difficult. You can compare and ask what we took out of particular areas, but you can also look at the areas where we actually sought to protect spending. We have been attempting to shift our money more towards things such as ISTAR, enablers, air transport and so on, which are the things where we are particularly short.

It is very difficult to do that when a lot of your budget is already committed, and so it is true that we sometimes have to look at the balance between the spend that is committed and the spend that is uncommitted. In doing so, however, we are guided by Admiral Lambert's team, which looks at the capabilities that we require to be able to deliver and which shows the areas where we can take more risks. Our aim is to get to a point where we have a balanced budget and where we do not have to make those judgments.

Q111 Chair: Okay. We know all that. I am just trying to draw us to a close. Anne wants to come in. Do you agree with recommendation "b" on page 10 of the Report, which says that you should report to Parliament where gaps in the structure and capabilities arise as a consequence of resource management decisions?

Ursula Brennan: We are concerned about the notion of reporting gaps in capabilities—about where the gaps are—that would actually give comfort to our enemies.

Q112 Chair: As a consequence of resource management decisions.

Ursula Brennan: Even if they were as a consequence of resource management decisions, we don't really want to publish something that says, "This is where you can come and get us because we've got gaps." We need to think about how we would respond to that. We try to avoid publishing things that say, "This is where our staff are not very well trained," or, "This is where our equipment isn't very good," because it is just an invitation to people to attack us in those areas. Q113 Mrs McGuire: There is a bit of a divide here between what is a balanced budget and what is good, effective procurement. The issue of a balanced budget is probably for political discussion rather than for discussion here. As for whether or not the budget is actually the right size: you can balance a budget that is tiny in the same way that you can balance a budget that is large.

In the closing minutes, I want to look at the relationship between the MOD and the defence industries. We place a great deal of emphasis on your effectiveness and efficiency in negotiating contracts. Can I ask what engagement there has been with the defence industries, in terms of the new environment? I will not use the word that Vice-Admiral Lambert does not like.

We are going for more off-the-shelf solutions. What discussions have there been with the industry? What has been its response? Has any assessment been made of the wider economic implications of withdrawing some of those issues relating to research and development, which might perhaps have been part of the partnership in the procurement process? I appreciate that there are three or four questions there. Vice-Admiral Lambert: There is no doubt in industry's mind that we are heading towards more procurement off the shelf, that we are looking at making sure that we understand fully the cost drivers behind the programmes and that we need to ensure that we can upgrade all our programmes.

Q114 Mrs McGuire: Does "off the shelf" mean off the shelf inside the UK, or with the USA, South America or eastern European countries? What exactly

Vice-Admiral Lambert: I believe that international competition is the route that will give us best value for money. As far as dialogue with industry, that is done at Abbey Wood. I don't know if General Coward would like to comment.

Lieutenant-General Coward: There has been a long dialogue with industry that goes back before the defence industrial strategy, where we made a judgment that for this sector, as Admiral Lambert said, best value for money was through international competition, although we do require the ability to maintain, modify and upgrade our vehicles onshore. So, generally, industry teams with someone else. On the Scout programme, GD took a Spanish-Austrian product, brought it onshore and will modify it for use by the UK. With the utility vehicle, three competitors looked at international platforms, but they had onshore capability to deliver, maintain, upgrade, and

Most of industry understands the direction of travel and companies such as BAE Systems, Lockheed Martin and GD UK are beginning to shift. They are beginning to look towards maintaining and upgrading those vehicles to maintain their core engineering capability and a degree of production. But production is largely build-to-print and assembly rather than the very sophisticated cradle-to-grave production that we may have had in the '50s and '60s.

Q115 Mrs McGuire: Does that give you any concern about future security of supply for our service personnel? Are you concerned about how we would be able to respond as a country as part of a larger alliance, be it NATO or the EU?

Lieutenant-General Coward: That is a concern, but with our arrangements, and by focusing on upgrade and modifications, we retain sufficient expertise onshore to deliver what we require, either routinely or in a time of crisis.

**Q116 Mrs McGuire:** Do you share that view, Vice-Admiral?

Vice-Admiral Lambert: I do not share the concern. Most, if not all, of the urgent operational requirement vehicles have come from overseas, and they have delivered to time and provided what we require.

Q117 Chair: But throughout their life they might be more expensive, because of the service, spares, logistics and so on.

Ursula Brennan: Depending on what we did with them, yes.

**Chair:** We would enjoy continuing this session, but there is a debate in the Chamber that is of some importance to Committee members, so we will terminate. Thank you for much clearer evidence this afternoon.

#### Written evidence from the Permanent Under-Secretary, Ministry of Defence

MINISTRY OF DEFENCE: ARMOURED VEHICLES

Thank you for your letter of 25 October covering a copy of the uncorrected transcript of oral evidence from the PAC hearing on "Armoured Vehicles", held on 24 October 2011.

I enclose a version of the transcript with corrections shown as tracked changes. I would be grateful if you would arrange for the corrected version of the transcript to be posted on the PAC website.

I also enclose a note providing the supplementary material which we undertook to provide on the Costs of the Chinook Mk6.

I am copying this to the Comptroller and Auditor General and the Treasury Officer of Accounts.

#### ARMOURED VEHICLE PAC HEARING—SUPPLEMENTARY NOTE

Question 45—The unit cost of the Mk6 Chinook helicopter that will be available in 2015

Chinook Costs:

The approved budget for the Demonstration and Manufacture contract for the purchase of the 14 new Chinook aircraft is £841 million. This includes:

- 1. The prime contract with Boeing for:
  - (a) The non-recurring costs for development, test and evaluation
  - (b) The recurring production costs for the aircraft
  - (c) Initial spares provisioning
- 2. Third party contracts for additional items that are purchased separately by the MOD and then fitted to the aircraft by Boeing (eg Defensive Aids Systems) and to support the acquisition process (eg independent safety advice).
- 3. The project's management reserve and provision for the compound effect of inflation

The unit production cost for the aircraft is £34 million at 2011 economic conditions including engines and those items purchased by MOD outside the Boeing prime contract (of which £27 million is the recurring cost of each aircraft alone at 2011 economic conditions). These figures have, due to commercial sensitivities, been rounded to the nearest million pounds.

3 November 2011

#### Written evidence from the National Audit Office

THE COST-EFFECTIVE DELIVERY OF AN ARMOURED VEHICLE CAPABILITY: IMPACT OF THE MINISTRY OF DEFENCE'S THREE-MONTH EXERCISE

#### BACKGROUND

1. Despite the broad range of savings identified in the October 2010 Strategic Defence and Security Review and progress in making the defence programme more affordable, there remained a mismatch between the planned Defence budget and the cost of the Equipment Plan over the next decade.

- 2. As part of its focus on improving financial management, the Department conducted a further review of its forward equipment expenditure plans in spring/summer 2011, known as the Three-Month Exercise. The Exercise incorporated a review of the costs of key programmes, including an examination of the need for greater financial contingency in forward plans, and development of a series of options for a balanced and affordable Equipment Plan.
- 3. In order for the Department to be able to plan on a long term basis, the Exercise included discussions with HMT on the financial planning assumptions that could be made about the level of resources likely to be available to Defence beyond the end of the current Spending Review period, in 2014-15. As part of these negotiations the Department secured a one per cent a year increase in real terms on the defence equipment and equipment support budget between 2015-16 and 2020-21.
- 4. In his statement to the House on 18 July on Defence transformation, the former Secretary of State confirmed the procurement of 14 additional Chinook helicopters, the upgrade of the Army's Warrior vehicles, spending on the Joint Strike Fighter, the procurement of the Rivet Joint intelligence and surveillance aircraft, the 'cats and traps' for the Ouen Elizabeth class carriers, and the development of the Global Combat Ship. He also noted that: "we will rationalise vehicle acquisition to make the best use of those we have already procured to support operations in Afghanistan". The Secretary of State further noted that: "...in future: we will order only what we can afford to buy."1

#### UPDATED CHARTS: FUNDING ON EQUIPMENT AND THE ARMOURED VEHICLE PROGRAMME

- 5. Since our May 2011 report on the Cost-effective Delivery of an Armoured Vehicle Capability, the Department has further reduced its forecast spend on the Equipment Programme, both as part of Planning Round 11 and through the additional measures taken as part of the Three-Month Exercise. In recent years, additional costs have been added to the equipment programme at the start of each Planning Round. The reductions described here reflect the removal of these additional costs and the impact of moving money beyond the current planning horizon, as well as changes to the volume of activity within the programme.
- 6. Equipment Programme funding: The updated Figure 4 indicates that £5.2 billion was taken from the 10year Equipment Programme as part of the Planning Round 11 measures, in additional to the £20.2 billion removed by the Strategic Defence and Security Review and the £20.6 billion removed by previous planning rounds between 2005 and 2010. The Three-Month Exercise reduced project funding within the Equipment Programme by a further £6.6 billion.
- 7. Armoured Vehicle funding: Updated Figure 5 indicates that Planning Round 11 removed £596 million from the 10-year armoured vehicle programme. The Three-Month Exercise removed a further £2.8 billion, thereby reducing funding for armoured vehicles to £5.5 billion over the next decade.
- 8. Armoured Vehicle programme: Updated Figure 2 indicates the impact the savings measures have had on the principal armoured vehicle programmes at the outcome of PR11. Known or anticipated changes are:
  - Tanks: Challenger 2 CSP has been descoped from its previous planned form; options are still under consideration in PR12 but at the outcome of PR11 no changes have been agreed since the May 2011 position.
  - (b) Armoured Infantry: The Department has announced its intention to proceed with an upgrade to the Warrior Infantry Fighting Vehicles. The demonstration and manufacture contract has not yet been signed, but it is assumed that the final platform numbers will be reduced from earlier assumptions, and the in-service date will be delayed to 2020 with delivery commencing in 2018.
  - (c) Reconnaissance: The in-service date of Scout SV was delayed by nine months in PR11 and is 2017.
- 9. Urgent Operational Requirements' spend: Updated Figure 6 indicates that Urgent Operational Requirements' funding on armoured and protected mobility vehicles has risen by £33 million.
- 10. Spend across equipment areas: Updated Figure 7 profiles the impact of savings across the equipment areas, and identifies the armoured vehicle sector as having taken the largest absolute reduction in spend in terms of options taken over the ten year planning horizon from each of the successive planning rounds.

http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm110718/debtext/110718-0002.htm

Role	Principal Legacy Vehicles	First year in service	2010	2015	2020	2025
Tanks	Challenger 2	1998	Challenger 2 Technology Obsolete	ogy Obsolete		Challenger 2 CSP (120mm Gun Obsolete)
Armoured Infantry	Warrior	1988	Warrior 30mm Cannon Obsolete	) Obsolete		Warrior CSP
Mechanised Infantry	FV432	1962	FV432 Obsolete			FRES Utility vehicle
Recconaissance	CVR(T) & CVR(W)	1972 / 1973	CVR(T)			FRES Scout
Protected Mobility	Snatch	1991	No N	No core funding		
Support Vehicles	FV430 Series	1960s	FV432 Obsolete			FRES Utility vehicle
CSP - Capability Sustainment Programme FRES - Future Rapid Effects System UORs - Urgent Operational Requirements CVR(T) - Combat Vehicle Reconnaissance (Tracked) CVR(W) - Combat Vehicle Reconnaissance (Wheeled)	- Capability Sustainment Programme - Future Rapid Effects System - Urgent Operational Requirements - Combat Vehicle Reconnaissance (T	nme nts ce (Tracked) ce (Wheeled)	Strategic Defence & De Security Review to 0 2010  Fully Meets Requirements Requirements existing fleet	Department ex to cease comb Afghanistan ag obsolescence	pects UK Armed Forces SDSR Fores underta operations in operations in substantially Meets Requirements Requirements Gradual introduction of new vehicles	SDSR Force structure able to undertake expected range of operations  Doesn't meet Requirements  coduction

Figure 4 IMPACT OF THE 2005–10 ANNUAL PLANNING ROUNDS, STRATEGIC DEFENCE & SECURITY REVIEW, 2011 ANNUAL PLANNING ROUND AND 3 MONTH EXERCISE ON PLANNED EXPENDITURE WITHIN THE DEPARTMENT'S EQUIPMENT PROGRAMME



Figure 5 IMPACT OF THE 2005–10 ANNUAL PLANNING ROUNDS, STRATEGIC DEFENCE & SECURITY REVIEW, 2011 ANNUAL PLANNING ROUND AND THREE MONTH EXERCISE ON PLANNED ARMOURED VEHICLE EXPENDITURE

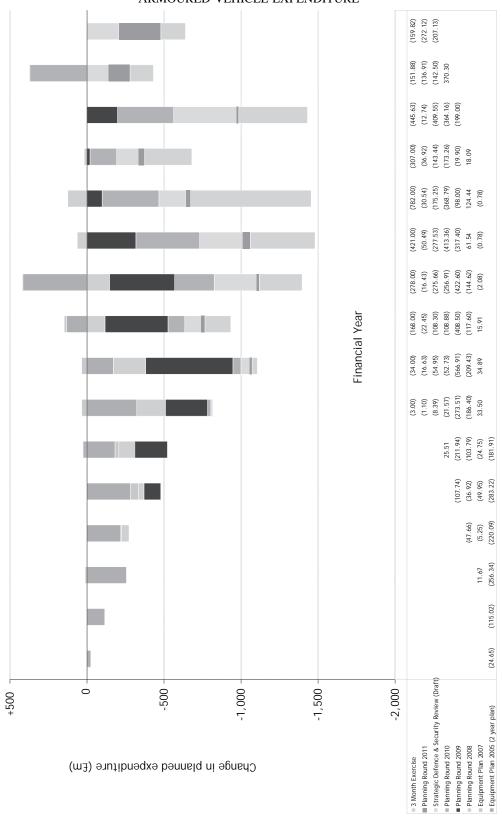


Figure 6 APPROVED EXPENDITURE ON ARMOURED AND PROTECTED MOBILITY VEHICLES THROUGH THE URGENT OPERATIONAL REQUIREMENTS PROCESS (MILLIONS)

Challenger 2         Vehicles         Q1         Q2         Q3         Q4         Q1         Q2         Q3	Vehicle Type	Vehicle	Number of		2002	02			2003	3			2004	94			20	2005	
Challenger 2         Challenger 2         E12m         £9m         P           Warrior         Buldidgg         900         80			Vehicles	õ	075	03	Q 4	õ	075	<b>8</b>	Q 4	õ	075	8	Q 4	õ	Q2	, 03	Ø
Warrior         Warrior         Warrior         Warrior         Warrior         ESm         E1m         E2m	Tanks	Challenger 2					£12m	£9m											
Buildog   900	Armoured Infantry	Warrior																£2m	
Viking Suzon CVR(T) WMIK Jecker Mastiff 1         £5m         £1m         £4m         £2m           CVR(T) Jecker Mastiff 1         220+         £4m         £23m           Cougas* Vector Mastiff 1         220+         £4m         £23m           Cougas* Varthog Ridgback Fickback Forkound* Counter-IED Task Force Protected Mobility* 100+         177         \$1m         \$1m           Panther Wolfhound* Husky Cycles         100+         \$1m         \$1m         \$1m           Support Vehicles Support Vehicles         75+         \$1m         \$1m         \$1m           EPLS Support Vehicles         200         \$1m         \$1m         \$1m           Armour enhancements         Armour enhancements         \$1m         \$2m         \$1m           Ambulance modifications         \$1m         \$1m         \$1m         \$1m	Mechanised Infantry	Bulldog	006																
Saxon  CVR(T)  WMIKI Jackal Shatkal Shatk variants Vector Mastiff 1 Cougar Warthog Ridgback Counter-IED Task Force Protected Mobility Fauther Worthound Worthound Fauther Worthound Worthound Fauther Worthound Worthound Fauther Fowner-IED Task Force Protected Mobility Fowner-IED Task		Viking																	
CVR(T) Voluntify         £5m         £1m         £2m         £4m         £23m           Snatch variants Snatch variants Snatch variants March og Warthog		Saxon													£0m		£0m		£1m
WMIK         WMIK         E1m         E2m           Suparckal         430         E4m         E23m           Subarck variants         180         E4m         E23m           Vector         30         E1m         E4m         E23m           Mastiff 1         290+         E1m         E1m         E1m           Mastiff 2         200         Coupar         E1m         E1m           Ridgback Forter Protected Mobility 100+         E1m         E1m         E1m           Panther Parther Husky         100+         E1m         E1m           Coyote Husky         75+         75+         E1m           EPLS Support Vehicle         B-Class support vehicles         E1c           Armour enhancements         E12m         E12m	Reconnaissance	CVR(T)					£5m								£2m				£1m
Jackel         430         E4m         £23m           Snatch variants         180         £4m         £23m           Nastiff 1         290+         £90+         £90+           Cougar <sup>2</sup> 30         £15         £1m           Nathog         200         £1m         £1m           Rigbard         200         £1m         £1m           Parther         100+         £1m         £1m           Noffhound <sup>5</sup> 100+         £1m         £1m           Parther         100+         £1m         £1m           Coyote         75+         £1m         £1m           Coyote         75+         £1m         £1m           Ambulance ments         £1m         £1m           Ambulance modifications         £1m         £1m		WMIK						£1m										£4m	£0m
Shatch variants Snatch variants Snatch variants Snatch variants  Nector  Natiff 1  Cougar 290+  Cougar 30  Warthog  Ridgback Fordound 2  Counter-IED Task Force Protected Mobility 4  Nolfhound 5  Touchter-IED Task Force Protected Mobility 4  Nolfhound 5  Touchter-IED Task Force Protected Mobility 4  Nolfhound 5  Snatch Ambulance  Amour enhancements  Amour enhancements  Amour enhancements  Amour enhancements  Ambulance modifications		Jackal	430																
Vector         180           Mastiff 1         290+           Cougar <sup>2</sup> 30           Wathog         115           Ridgback         177           Foxhound³         200           Counter-IED Task Force Protected Mobility⁴         100+           Panther         Wolfhound⁵           Husky         315+           Coyde         75+           Talisman         FLS           Support Vehicle         B-Class support vehicles           Ampulance ments         Amour enhancements           Ambulance modifications         E12m	PPVs	Snatch variants										£4m	£23m					£22m	
Mastiff 1  Cougar  Variogack  Ridgback Foxhound³  Counter-IED Task Force Protected Mobility⁴ Panther Punkfounds Husky Coyote FPLS Support Vehicle B-Class support vehicles Armour enhancements Ambulance modifications  E 100+ F12 F13 F14 F14 F15		Vector	180																
Cougar <sup>2</sup> 30           Warthog         115           Ridgback         177           Foxhound <sup>3</sup> 200           Counter-IED Task Force Protected Mobility <sup>4</sup> 100+           Panther         100+           Wolfhound <sup>5</sup> 315+           Coyote         75+           Talisman         FPLS           Support Vehicle         B-Class support vehicles           B-Class support vehicles         Armour enhancements           Ambulance modifications         E12m		Mastiff 1	290+																
Warthog Ridgback Fordboards Counter-IED Task Force Protected Mobility* 100+ Panther Wolfhound* 315+ Coyote Talisman EPLS Support Vehicle B-Class support vehicles Armour enhancements Amour enhancements Ambulance modifications FIGURA FAIRM FA		Cougar <sup>2</sup>	30																
Ridgback         177           Foxhound³         200           Counter-IED Task Force Protected Mobility⁴         100+           Panther         100+           Wolfhound⁵         315+           Husky         75+           Coyote         75+           Talisman         FL           Support Vehicle         Support vehicles           B-Class support vehicles         Armour enhancements           Armour enhancements         E12m		Warthog	115																
Foxhound³         200           Counter-IED Task Force Protected Mobility⁴         100+           Panther         100+           Wolfhound⁵         315+           Husky         75+           Coyote         75+           FPLS         Support Vehicle           B-Class support vehicles         B-Class support vehicles           Armour enhancements         Armour enhancements           Ambulance modifications         £12m		Ridgback	177																
Counter-IED Task Force Protected Mobility*         100+         E1m         E1m           Panther Wolfbound*         100+		Foxhound <sup>3</sup>	200																
Parther           Wolfhound <sup>5</sup> 100+           Wolfhound <sup>5</sup> 315+           Coyote         75+           Talisman         FPLS           Support Vehicle         B-Class support vehicles           B-Class support vehicles         Armour enhancements           Armour enhancements         E12m		Counter-IED Task Force Protected Mobility <sup>4</sup>						£1m								£4m			£13m
Wolfhound <sup>5</sup> 100+           Husky         315+           Coyote         75+           Talisman         FLS           Support Vehicle         B-Class support vehicles           Armour enhancements         Ambulance modifications           Ambulance modifications         £12m	Support & Specialist	Panther																	
Husky         315+           Coyote         75+           Talisman         PLS           Support Vehicle         Support Vehicles           B-Class support vehicles         Armour enhancements           Armour enhancements         £12m	Vehicles	Wolfhound <sup>5</sup>	100+																
Coyote Talisman F Talisman E Value Support Vehicle B-Class support vehicles Armour enhancements Ambulance modifications E 12a		Husky	315+																
Tailsman EPLS Support Vehicle B-Class support vehicles Armour enhancements Ambulance modifications		Coyote	75+																
EPLS Support Vehicle B-Class support vehicles Armour enhancements Ambulance modifications		Talisman																	
Support Vehicle B-Class support vehicles Armour enhancements Ambulance modifications		EPLS																	
B-Class support vehicles Armour enhancements Ambulance modifications		Support Vehicle																	
Armour enhancements Ambulance modifications		B-Class support vehicles														£1m	£0m	£2m	£4m
Ambulance modifications	Upgrades not	Armour enhancements												£8m					
Operation (Value)	attributable by platform	Ambulance modifications					£12m												
Orassilled Vellicies	Classified Vehicles																		

Approved expenditure on Armoured and Protected Mobility Vehicles through the Urgent Operational Requirements process (millions)

Figure 6

Total		£21m	£92m	£127m		£431m	£1,327m			£737m			£44m	£67m	£2,226m £620m
2011	Q1 Q2							£10m £12m £2m			£1m £6m	£2m		£2m	UOR Procured Vehicles Upgrades to Core Vehicles
	Q 4								£180m						UOF
2010			£15m			E		£6m	£35m			£7m			
	Q1 Q2	-				£35m		£26m £29m			£10m £98m -£10m				
	<b>8</b>	Н				£16m		4	£170m		ш ш <u>т</u>	£9m			ļ
6(	83			£3m		£6m £27m						£51m £4m			quirement
2009	8							£5m	£46m		<del></del>	£4m			UOR = Urgent Operational Requirement
	ğ						£30m		£34m			£23m			gent Ope
	<b>8</b>			£3m		£78m		£26m 1 £137m		£23m	£122m £171m £67m				UOR = Urg
2008	03			<b>E</b>		ε	ے	£13m							
	1 02			£1m		£43	£5m					 E		m.	
	4 Q	Н	E	E E		Ę		- Gu	8m			La Eagen		£53m	
	3 Q4			m £19m n £32m	800	£33m		im £126m	£188m			£14m £23m			
2007	Q2 Q3			£6m £13m f7m f2m		£5m £41m	£4m	Jm £25m						2m	
	Ω Ω			£12m £6	i	£7m £5 £24m £4	£2m £4	£1(					£24m	£12m	
	Q 0	Н		£1 £1m		£2m £7 £3m	£5m £2	m <sub>O</sub>					£2		
	Q3 C			£9m	l	£10m £2 £1m £3	£29m £								
2006	02		:1m	£13m £9		सं स	T3 mE3	E)							
	ğ		41	3 4	£0m	£Zm	£19m								

CVR(T) = Combat Vehicle Reconnaissance (Tracked) WMIK = Weapons Mounted Installation Kit

Figure 7 IMPACT OF ANNUAL, STRATEGIC DEFENCE & SECURITY REVIEW (SDSR) AND THREE MONTH EXERCISE SAVINGS MEASURES ON EQUIPMENT AREAS

