



House of Commons  
Defence Committee

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# Defence Equipment 2010

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**Sixth Report of Session 2009–10**

*Report, together with formal minutes, oral and written evidence*

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to be printed 23 February 2010*

## The Defence Committee

The Defence Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Ministry of Defence and its associated public bodies.

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The current staff of the Committee are Mike Hennessy (Clerk), Georgina Holmes-Skelton (Second Clerk), Karen Jackson (Audit Adviser), Judy Goodall (Inquiry Manager), Richard Dawson (Senior Committee Assistant), Christine McGrane (Committee Assistant) and Miguel Boo Fraga (Committee Support Assistant).

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# Contents

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<b>Report</b>	<i>Page</i>
<b>Conclusions and recommendations</b>	<b>3</b>
<b>1 Introduction</b>	<b>11</b>
<b>2 DE&amp;S progress and performance</b>	<b>13</b>
Overall performance	13
Progress on key programmes	15
Short examination of the equipment programme	15
Future Rapid Effect System (FRES)	16
A400M	20
Future Carrier and Joint Strike Fighter	22
Military Afloat Reach and Sustainability (MARS)	25
Type 45	26
Helicopters	29
<b>3 Funding of defence equipment and support</b>	<b>33</b>
The funding gap	33
Cost of delays	35
Defence research spending	38
<b>4 Procurement reform</b>	<b>41</b>
Background to the Gray review	41
DE&S response to the Gray report	41
Balancing the equipment programme	43
Regular Strategic Defence Reviews	43
Ten year rolling budget	45
Scrutiny and transparency of the equipment plan	47
Incremental development	48
Clarifying roles and accountabilities	49
Through Life Capability Management (TLCM)	51
Injecting key skills and tools into DE&S	52
Staff skills	52
Staff rotation	54
Staff numbers	55
Private sector involvement	55
The implementation of Gray's recommendations	57
<b>Formal minutes</b>	<b>60</b>
<b>Witnesses</b>	<b>61</b>
<b>List of written evidence</b>	<b>61</b>

**List of Reports from the Committee during the current Parliament**

# Conclusions and recommendations

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## Overall performance

1. The ability of DE&S to deliver the equipment programme is overshadowed by the existence of a funding gap which the NAO estimates could be as much as £36 billion over the next ten years. The management of this funding gap, in particular the practice of delaying projects already underway, is a major factor in the slippage of time and costs, and makes it difficult objectively to assess the performance of DE&S. It has been suspected for some time that this situation existed. We welcome the public acknowledgement of the issue and the provision of data about the extent of the problem. We accept the NAO's analysis and wish to record our disappointment that it has taken the MoD so long to admit to the problem. The evidence we have received indicates that the MoD's responses to our questions about the funding gap in our Defence Equipment 2009 inquiry were at best confused and unhelpful and at worst deliberately obstructive. (Paragraph 10)

## Progress on key programmes

2. There has clearly been a change of direction with the armoured vehicle strategy, although it is not evident whether this is just a change of priorities and programme name, or whether there has also been a more fundamental shift in strategy. It is also unclear whether the change in direction is purely a result of the funding gap, or whether it is because of a considered analysis that the original concept is no longer appropriate. We have tried on many occasions in the past to elicit details about FRES from the MoD without ever receiving clear answers. We conclude, with regret, that the MoD has none to give. The MoD must provide us with a written statement of its armoured vehicles strategy, together with a schedule of the key events and decisions to be taken in the next year and an indication of the required delivery dates of each part of the programme. (Paragraph 20)
3. With regard to the FRES programme, we received no evidence of any systematic attempt by the MoD to understand the reasons for past mistakes or to consider how they could be avoided in the future. We call upon the MoD to ensure that the lessons of the FRES programme are fully identified, understood and set out in response to this Report, and ask the MoD to provide an explanation as to how it will take heed of these lessons. (Paragraph 21)
4. The delivery schedule of the A400M has been delayed by at least three years because of technical problems and ensuing contract renegotiations. The MoD told us that planning is in place to address the capability gap. While the announcement of an additional C17 is welcome, and will ease the airbridge fragility, it does not answer the question of how the capability gap arising from the delay of 25 A400Ms to replace the remaining C130Ks, which were procured in the 1960s and are already incrementally being withdrawn from service, will be addressed. The MoD should give us sight of its contingency plans, as soon as the way ahead for the A400M programme is decided. (Paragraph 26)

5. It is encouraging that the first A400M flights have taken place, although it remains to be seen whether the project can be put back on course. Negotiations are difficult because of the need to accommodate the demands and different governance arrangements of all seven partner nations. The A400M submission for Main Gate approval did not appear to incorporate the lessons of earlier multi-national projects and we ask the MoD to explain why not. The MoD should provide to us by the end of September 2010 a written evaluation of the lessons learned from the A400M experience which will establish the most effective basis for future collaborative projects. (Paragraph 27)
6. The delay to the Future Carrier schedule has achieved short term savings but bigger long term cost increases. The £674 million cost of delay, which itself omits substantial elements of the true amount, represents over ten per cent of the current estimated total cost of £5.2 billion for the carriers. Such cost increases in order to reschedule the equipment programme are unsustainable in the context of a tightening budget situation and illustrate precisely the reasons why the equipment programme has become out of balance with the budget. (Paragraph 34)
7. The original announcement indicated that the carrier schedule had been delayed in order to bring it into line with the schedule for the Joint Strike Fighters. The Minister for Defence Equipment and Support has now confirmed that the decision was also driven by a need to make short term savings in the equipment programme. We also note that there still appear to be outstanding issues concerning technology transfer for the JSF, which are of key importance to the success of the programme. The MoD should provide us with details of its carrier transition programme when it is complete, highlighting any areas where there is a risk of a capability gap. (Paragraph 35)
8. Although the MARS programme is in danger of overtaking FRES as the longest running programme failing to deliver any equipment, we consider that the MoD is right to take advantage of the current availability on the market of double hulled tankers. The new procurement competition is seeking a less highly specified tanker. We look to the MoD for an assurance that it has assessed any possible loss of capability arising from this reduced specification and has made any necessary alternative provision. The MoD should provide us with a clear programme for the MARS fleet tankers against which we can monitor progress. (Paragraph 38)
9. We expect the MoD in its response to this Report to tell us exactly when HMS Daring will have full PAAMS capability, following all appropriate tests and trials, and to set out the extent to which the lack of this full capability is a liability in terms of the defensive capability of the vessel. (Paragraph 42)
10. We are not convinced by the MoD's explanation that the reduction in the required number of Type 45s from twelve to eight and then eight to six was due to a better understanding of the capabilities of the ship. Any one ship can only be in one place at a time. Whilst new technology may well have provided some better than expected capabilities, the spiralling costs of the ship and the pressure on the equipment programme budget suggest that the reduction in numbers was in fact primarily down to affordability. The misleading explanations provided by the MoD in this case

are another example of the unhelpful nature of MoD responses to our questions. We expect that our successor Committee will in the next Parliament continue to monitor the Type 45 programme until the associated air defence missile system is successfully delivered. (Paragraph 43)

11. The MoD did not send us a copy of its Future Rotary Wing Strategy Statement until after the start of our oral evidence session with the Minister for Defence Equipment and Support, despite having previously briefed the press and circulated the announcement in public. It is unacceptable for a Departmental Select Committee to be the last to receive a Department's announcement. (Paragraph 49)
12. The Merlin upgrade is a complex programme involving changes of use and transfer of aircraft between Services. The success of the programme is dependent on the satisfactory completion and coordination of all of the Defence Lines of Development, not just the technical upgrade of the aircraft. The failure of any part of the programme impacts the capability delivery, as has been shown in the case of shortages of spare parts for Merlins currently in theatre. (Paragraph 50)
13. We remain unconvinced of the financial or operational merits of the Puma Life Extension Programme. We believe that the MoD has underestimated the technical and operational challenges of the Puma programme, and that there is insufficient evidence to support the MoD's assurances of the crashworthiness and the likely delivery dates of the updated aircraft. We ask the MoD to provide further evidence to demonstrate that a full risk assessment has been carried out on the survivability characteristic of the Life Extended Pumas. (Paragraph 51)
14. The cancellation of the Future Medium Helicopter programme will release a significant number of MoD staff and we ask the MoD to provide details of its plans for re-deploying this workforce. In the context of the cancellation of the Future Medium Helicopter and the MoD's decision to purchase Chinooks from the USA, we ask the MoD to explain what steps it plans to take to maintain a UK capability to support and upgrade helicopters, in accordance with the Defence Industrial Strategy. (Paragraph 52)
15. During our Helicopter Capability inquiry we expressed concern that commanders in the field were hampered by a lack of helicopters but the MoD would not accept that its helicopter fleet size was too small. Whilst we now welcome the greater clarity provided on the future helicopter fleet strategy and the recent decision to procure an additional 22 Chinooks, we note that this additional operational capability will be funded from the MoD's core budget and so has necessitated cuts from other parts of the equipment programme. Adding numbers to the fleet is only one aspect of delivering additional capability which also requires adequate manpower, training and support. We understand that having more Chinooks in theatre will require more support helicopters in the fleet and we have not yet seen how these will be provided. It will also stretch an already tight system where there are insufficient pilots and ground crew and a budget for helicopter hours, and we seek assurance from the MoD that all of the Defence Lines of Development for the Chinooks have been properly planned. We believe that the estimated delivery date of 2012 is optimistic

and ask the MoD to provide details of the planned transition arrangements. (Paragraph 53)

### The funding gap

16. The evidence suggests that at the time that MoD witnesses gave evidence to our Defence Equipment 2009 inquiry, the MoD was in the process of taking steps to manage a funding gap of £21 billion. Witness denials at that time of the existence of such a gap now appear disingenuous. The Minister for Defence Equipment and Support told us he could not provide any information about how the gap was reduced to £6 billion, nor the proportion of expenditure which was merely postponed beyond the planning period. When we pressed in writing for further details, the MoD provided little extra information. We reject the MoD's arguments for refusing to disclose the measures it took in order to reduce the funding gap to £6 billion. We cannot fulfil our scrutiny role if the MoD refuses to provide such information about its activities. We note that the Gray report made recommendations about public scrutiny of the equipment programme and we return to this issue in paragraph 87. (Paragraph 58)

### Cost of delays

17. According to the NAO, in recent planning rounds the MoD's strategy for managing its unaffordable equipment plan has been to re-profile expenditure by delaying projects so as to reduce costs in the early years of the plan. However this practice increases overall procurement costs and represents poor value for money. It is clear from NAO data that the 2008–09 re-profiling exercise added £733million to the future costs of the core equipment programme. (Paragraph 64)
18. The Gray report estimates that the 'frictional costs' of delays within the equipment programme are in the range £900m to £2.2 billion a year. Although some of the DE&S witnesses did not accept these estimates, they were unable to provide alternative figures. The MoD is spending hundreds of millions of pounds a year on unproductive activities because it has commissioned more work than it can afford to pay for. It is shocking that the MoD has apparently made no attempt to calculate the extent of such costs and that it has therefore taken decisions to delay projects without understanding the full financial implications. The MoD must develop a system for calculating the full extent of the cost of delays and that such costs are explicitly documented in all future revisions of the equipment plan. The MoD should confirm that the full extent of the cost of delays will be explicitly documented in its annual reports to Parliament of the cost and affordability of the equipment and support programmes against the ten year planning horizon agreed with HM Treasury. (Paragraph 65)

### Defence research spending

19. The research budget appears to be another casualty of the MoD's short term efforts to manage its equipment programme funding gap. We were told that cuts had been made to balance the budget and that such difficult sacrifices were necessary in order



to continue to deliver the highest priority defence capabilities. We believe that spending less on research and technology will make the UK Defence Industrial Base progressively less competitive and will make the Defence Industrial Strategy inoperable. To compromise the future development of defence technology, in order to make proportionately small short term contributions to the management of the equipment programme funding gap, is ill-judged. The research programme cannot be turned on and off at short notice and the benefits can only be realised with a consistent and long term commitment of resources. We are sceptical about the implication that the MoD can balance cuts in its own research budget by making greater use of civil research and ask the MoD to explain its proposals for doing this. (Paragraph 69)

### **Background to the Gray review**

20. We commend the Government for commissioning, and then publishing, the Gray report. In doing so the Government was being refreshingly open. We hope that the MoD will follow this approach on other occasions. (Paragraph 71)

### **DE&S response to the Gray report**

21. The Gray team attempted to establish a basis of agreed facts with the MoD, but, despite the fact that MoD staff provided the data to the review team and were given the opportunity to review early drafts of the report, some key senior individuals in DE&S told us that they did not accept the data presented in the report. Whilst we welcome the willingness of DE&S openly to consider the qualitative recommendations of the Gray report, we are concerned that the lack of agreement within MoD on the extent of the problem forms a poor basis on which to build effective reform. We return to the issue of implementation of Gray's recommendations in paragraph 113. (Paragraph 76)

### **Balancing the equipment programme**

22. The Gray report concluded that the MoD's budget is insufficient to deliver its planned procurement programme, and that there is an accelerating issue of the problems of prior years compounding to produce an increasing rate of delay and cost increase. Witnesses from the MoD and from industry accepted this analysis and the need for urgent action to rebalance the equipment programme. (Paragraph 82)
23. We welcome the commitment from MoD ministers to establish regular Strategic Defence Reviews in order to maintain an up-to-date strategic context for the equipment programme. There is a risk that more frequent SDRs could undermine the longer term planning of the equipment programme and the MoD must establish ways to manage this inevitable tension. We note the concerns of industry representatives that the next SDR and the next version of the Defence Industrial Strategy will be focused too narrowly on procurement reform, and urge the MoD to ensure that wider capability and industrial issues are also addressed, so as to ensure that industry can make the necessary long term commitments to technology, skills and resources. We would welcome more information on the extent to which the

industry partnering proposals set out in Chapter 6 of the Defence Acquisition Strategy have already been developed, and the anticipated scope of their contribution to achieving greater value for money in defence. We also request an explanation as to how the partnership arrangements will be reconciled with the commitment given in the Green Paper for greater transparency. Our successor Committee may wish to return to this issue and to consider the implications of such industry partnerships for the future role of Parliamentary scrutiny. (Paragraph 83)

24. We accept that there are wider constraints which limit the Government's ability to make a firm ten year commitment with regard to the MoD's budget. We consider, however, that the fact that other Government departments would demand the same treatment would be not be a reason for the Government to resist it. The scale and nature of MoD contracts is quantitatively and qualitatively different from other Government procurement. It is clear that greater financial stability could help to control and reduce the hundreds of millions of pounds of unproductive costs which are incurred annually to keep the equipment programme spend within each year's budget. We welcome the proposal to introduce a ten year planning time-frame for equipment expenditure but we doubt that the proposed ten year planning horizon will provide sufficient certainty to stabilise the equipment programme. We recommend that our successor Committee returns to this issue when further details about HM Treasury's agreement with the MoD are made available. (Paragraph 86)
25. The MoD told us that it had asked the NAO to audit its assessment of affordability of the equipment programme. We welcome this and seek an assurance from the MoD that the NAO will be given access to all of the relevant technical and commercial data necessary to do this job properly. DE&S has accepted that its cost estimating has been poor and such independent scrutiny will be necessary to provide evidence that the new iteration of the equipment programme resulting from the SDR is closely matched to available resources. (Paragraph 89)
26. Whilst we also welcome the commitment by the MoD that it will annually share its assessment of affordability with us, we note that this falls well short of the Gray report's recommendation that the annual audited assessment should be made public. Transparency is not a practice which has traditionally been embraced by the MoD. Although the MoD has identified increased transparency as one of the commitments in its strategy for acquisition reform, it has provided no details of any concrete steps or milestones for realising that ambition. We ask the MoD to provide us with a description of the specific measures it plans to take in order to ensure greater transparency. We also ask the MoD for an undertaking that it will provide our successor Committee with accurate and complete responses to its requests for information. (Paragraph 90)
27. The Gray report proposes that development risk, and hence time and cost overruns, could be reduced by introducing equipment into service with an initial operating capability which could then be upgraded. Industry witnesses agreed that acquisition could be faster, provide better value for money and greater export potential if this approach were to be taken, provided that steps were taken to ensure that the engineering industry skill base was maintained. We recommend that the MoD provide us with an evaluation of the scope for using an incremental approach, setting

out the steps it will take to overcome the obstacles to this approach which were outlined in the Gray report. (Paragraph 93)

### Clarifying roles and accountabilities

28. One of the three key areas of weakness identified by the Gray report was the lack of clarity and leadership from those in charge of the MoD, which resulted in poor decision making processes and an inability properly to keep the equipment programme under control. The Gray report concluded that, even if the equipment programme were to be brought back into balance by the next SDR, poor leadership and decision-making processes would soon cause old problems to return and the programme again to become unbalanced. We note that the Defence Acquisition Strategy includes a number of specific actions to improve leadership and decision-making and the MoD should provide us with a progress report on these activities. (Paragraph 97)
29. The Gray report recommended that the MoD's aspirations for Through Life Capability Management (TLCM) be reappraised. Witnesses from industry and the MoD were unanimous that TLCM was the right way to proceed, in order to support the making of sound decisions. However, evidence from the Gray review and from industry indicates that the MoD's TLCM approach is incomplete and over-ambitious. We note that both the Gray report and the NAO identified a lack of financial tools and data as significant factors affecting the implementation of TLCM. We ask the MoD to provide a report setting out the progress it has made in addressing these issues, and in particular the progress made on the specific activities described in the relevant section of the Defence Acquisition Strategy. (Paragraph 100)

### Injecting key skills and tools into DE&S

30. Over the years we have highlighted the need for key skills in acquisition and procurement, and have received reassurances from the MoD that appropriate training programmes were in place. However, we are unconvinced that DE&S has a properly effective strategy for the training and education of its staff, and believe that it has failed to prioritise this issue. Project leaders in DE&S must have an understanding of all of the military, technological, industrial and political issues which impact on their projects. What is required is not only the provision of appropriate training, but also a longer-term commitment to career management which is organised to suit efficient acquisition, not just military needs, and a recognition that key project staff have to be released from time to time to attend proper education and training. The MoD should provide an update on the progress it has made with regard to the actions described in the Defence Acquisition Strategy to achieve the necessary levels of staff skills. (Paragraph 112)

### The implementation of Gray's recommendations

31. It is quite clear that some senior individuals in DE&S do not accept the need for radical reform, and that they are only reluctantly involved in the reform process.

Whilst it might be possible to write a good reform strategy in isolation, it would clearly not be possible to implement it without united commitment from the leadership within DE&S. With the publication of the Gray report, the MoD has come clean about the extent of its problems with the equipment programme, but the Department will have to work hard to persuade people that it will not return to business as usual. (Paragraph 117)

32. The MoD's Defence Strategy for Acquisition Reform explicitly accepts Gray's broad analysis of the difficulties faced by the Department with regard to defence acquisition, and includes a summary of objectives and key actions which it intends to take to address those difficulties. Some of the key actions correspond with recommendations we have made in this Report, although we await the further details which we have requested on a number of points. We expect the MoD to make a statement to the House by summer 2010, updating it on progress with acquisition reform. We hope that the NAO will report on acquisition reform progress as part of its Major Projects Report 2010, and we recommend that our successor Committee returns to this issue later in 2010. (Paragraph 118)

# 1 Introduction

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1. Over the past few years we have carried out regular inquiries into defence procurement. In our *Defence Equipment 2009* Report, published on 10 February 2009, we undertook to monitor a number of issues relating to the progress and performance of the Defence Equipment and Support (DE&S) organisation with the Ministry of Defence (MoD) and the funding of defence equipment and support.<sup>1</sup> We announced our Defence Equipment 2010 inquiry on 22 July 2009, and set out the following terms of reference:

The Defence Committee is undertaking an inquiry to examine aspects of the MoD's Defence Equipment programme. It expects to follow up areas of weakness and poor performance identified in its last Report, *Defence Equipment 2009* (HC 107), which was published earlier this Session. The Committee intends to focus on armoured vehicles and the future of the FRES (Future Rapid Effect System) programme, strategic air-lift and maritime capability.

2. Our inquiry also took into account *The Review of Acquisition for the Secretary of State for Defence* ("The Gray report") which was published on 15 October 2009.<sup>2</sup> In December 2008, the then Secretary of State for Defence, Rt Hon John Hutton MP, commissioned Bernard Gray to assess what steps the Department was making to reform its procurement process and to suggest further recommendations for how that process could be improved. The Gray report concluded that "the MoD has a substantially overheated equipment programme, with too many types of equipment being ordered for too large a range of tasks at too high a specification" and that "this programme is unaffordable on any likely projection of future budgets".<sup>3</sup>

3. Some of the key findings of the Gray report were endorsed in the National Audit Office's (NAO) *Ministry of Defence: Major Projects Report 2009*, published on 15 December 2009.<sup>4</sup> The Comptroller and Auditor General, Amyas Morse, gave evidence to us last year in our Defence Equipment 2009 inquiry, in his previous role of Defence Commercial Director. In the NAO press release accompanying the *Major Projects Report 2009*, he said that "The Ministry of Defence has a multi-billion pound budgetary black hole which it is trying to fix with a 'save now, pay later' approach. This gives a misleadingly negative picture of how well some of the major projects in the MoD are managed, represents poor value for money and heightens the risk that the equipment our Armed Forces require will not be available when it is needed or in the quantities promised."<sup>5</sup> We subsequently received the MoD's Green Paper, *Adaptability and Partnership: Issues for the Strategic Defence Review*, and its *Defence Strategy for Acquisition Reform*.<sup>6</sup> These documents, and the Gray report, noted that

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1 Defence Committee, Third Report of Session 2008–09, *Defence Equipment 2009*, HC 107

2 *Review of Acquisition for the Secretary of State for Defence: An independent report by Bernard Gray, "The Gray report"*, October 2009

3 *The Gray report*, p 6

4 National Audit Office, *Ministry of Defence: The Major Projects Report 2009*, 15 December 2009, HC 85

5 NAO, *Review of Acquisition for the Secretary of State for Defence: An independent report by Bernard Gray, "The Gray report"*, October 2009, pp 5–6

6 Ministry of Defence, *Adaptability and Partnership: Issues for the Strategic Defence Review*, Cm 7794, February 2010 and *The Defence Strategy for Acquisition Reform*, Cm 7796, February 2010

a high proportion by number of equipment projects are delivered to cost and on time, and that the UK's allies are in general complimentary about the procurement reforms already implemented.<sup>7</sup>

4. The Committee held four oral evidence sessions with the following witnesses:

- General Sir Kevin O'Donoghue, Chief of Defence Materiel; Dr Andrew Tyler, Chief Operating Officer (DE&S); and Guy Lester, Director Capability Resources and Scrutiny (MoD) (1 December 2009).
- Industry representatives—Sir Brian Burrridge, Vice President Strategic Marketing, Finmeccanica UK Ltd; Ian Godden, Secretary to the Defence Industries Council and Chairman of ADS Group Ltd; Ian King, Chief Executive BAE Systems plc; and Dr Sandy Wilson, President and Managing Director, General Dynamics UK Ltd; (8 December 2009).
- Quentin Davies MP, Under Secretary of State and Minister for Defence Equipment and Support; General Sir Kevin O'Donoghue, Chief of Defence Materiel; and Vice Admiral Paul Lambert, Deputy Chief of Staff, Capability (15 December 2009).
- Bernard Gray and Iain Evans (LEK Consulting); followed by Lord Drayson, Minister for Strategic Defence Acquisition Reform and Sir Bill Jeffrey KCB, Permanent Under Secretary MoD (12 January 2010).

5. We are grateful to all of those who contributed to our inquiry, including our specialist advisers.

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7 Ministry of Defence, *The Defence Strategy for Acquisition Reform*, Cm 7796, February 2010, p 6 and p 26

## 2 DE&S progress and performance

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### Overall performance

6. In this Chapter, we consider the structure and performance of defence procurement. DE&S was formed on 1 April 2007 following the merger of the Defence Procurement Agency (DPA) and the Defence Logistics Organisation (DLO). The aim of the merger was to create a new integrated procurement and support organisation. DE&S is headed by General Sir Kevin O'Donoghue, Chief of Defence Materiel (CDM), who, together with other senior colleagues, gave oral evidence in this inquiry. A year ago, in our Report *Defence Equipment 2009*, we concluded that “some 20 months after the merger DE&S appears to have made good progress and is considered to be heading in the right direction”.<sup>8</sup> However we also identified concerns that the equipment programme was under-funded and that this was contributing to slippage in time and costs.<sup>9</sup> During last year's inquiry, MoD witnesses were unwilling publicly to agree that this was the case.

7. During 2008-09, the MoD spent some £5.6 billion on its core equipment programme and delivered equipment valued at £3.1 billion.<sup>10</sup> During 2009, information emerged which confirmed the existence of a significant funding gap, and which suggested that the management of this gap was affecting the ability of DE&S to deliver the equipment programme. This conclusion was confirmed in the *Major Projects Report 2009*, in which the NAO attributed the problems primarily to the MoD's attempts to manage the discrepancy between the costs of its ten year equipment programme and the allocated budget. It reported:

The size of the gap is highly sensitive to the budget growth assumptions used. If the Defence budget remained constant in real terms, and using the Department's forecast for defence inflation of 2.7 per cent, the gap would now be £6 billion over the ten years. If, as is possible given the general economic position, there was no increase in the defence budget in cash terms over the same ten year period, the gap would rise to £36 billion.<sup>11</sup>

The NAO stated that, for 2008-09, “two-thirds of the gross cost increases reported in the Major Projects Report 2009 reflect deliberate decisions to slip projects, taken corporately by the Department as part of a wider package designed to address a gap between estimated funding and the cost of the Defence budget over the next ten years.”<sup>12</sup> It also concluded that there were “encouraging signs of improved performance in managing individual projects” and that the cost increases were not an indication of poor performance of MoD

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8 HC (2008–09) 107, para 10

9 *ibid.*, para 150

10 National Audit Office, *Performance of the Ministry of Defence 2008–09: Briefing for the House of Commons Defence Committee*, October 2009, [www.nao.org.uk](http://www.nao.org.uk)

11 NAO, *The Major Projects Report 2009*, p 4

12 *ibid.*, p 4

staff or industry, but rather that a significant proportion was attributable to the overall management of the programme against the budget available.<sup>13</sup>

8. These comments refer only to the core equipment programme, and not to the MoD's arrangements for supporting operations through the fast-tracked acquisition programme of urgent operational requirements (UORs). UORs were originally funded in total via additional Reserve funds from the Treasury, but changes were announced in November 2007 which meant that the MoD would have to contribute half of any costs which exceeded a total amount agreed with the Treasury to reflect the likelihood that much of the UOR equipment would be incorporated into mainstream planning. We commented on this change, and on the performance of the UOR programme, in our *Defence Equipment 2009 Report*.<sup>14</sup> Whilst we concluded that we were broadly satisfied with the UOR process, we also expressed concern that "the extent of UORs represents at least a partial failure by the MoD to equip adequately its forces for expeditionary operations which were anticipated by the Strategic Defence Review a decade ago".<sup>15</sup> This view was echoed in the Gray report which stated that:

In the face of actual operations, even the most efficient acquisition planning and procurement would leave gaps that would need to be filled urgently. However, given the longevity of current operations, an agile acquisition process would have absorbed more of the extraordinary requirements as they became self-evidently ordinary.<sup>16</sup>

The demands of current operations have also required savings to be made from the core defence budget. One of the two objectives of the short examination of the equipment programme which was conducted in 2008 was to identify savings in the equipment programme so as to provide more support for current operations, and on 15 December 2009, the Secretary of State announced a number of cutbacks in order to make savings to enhance support to personnel on operations in Afghanistan.<sup>17</sup>

9. We review progress on key programmes in the following paragraphs, and return to the issue of the funding gap in Chapter 3. In Chapter 4 we consider other factors relating to performance progress within DE&S, such as skills improvements and the implementation of through life capability management, within the context of procurement reform proposals.

**10. The ability of DE&S to deliver the equipment programme is overshadowed by the existence of a funding gap which the NAO estimates could be as much as £36 billion over the next ten years. The management of this funding gap, in particular the practice of delaying projects already underway, is a major factor in the slippage of time and costs, and makes it difficult objectively to assess the performance of DE&S. It has been suspected for some time that this situation existed. We welcome the public acknowledgement of the issue and the provision of data about the extent of the**

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13 NAO, *The Major Projects Report 2009*, p 7

14 HC (2008–09) 107, paras 27–37

15 *ibid.*, para 37

16 *The Gray report*, p 22

17 HC Deb, 15 December 2009, col 801



**problem. We accept the NAO's analysis and wish to record our disappointment that it has taken the MoD so long to admit to the problem. The evidence we have received indicates that the MoD's responses to our questions about the funding gap in our Defence Equipment 2009 inquiry were at best confused and unhelpful and at worst deliberately obstructive.**

## Progress on key programmes

### *Short examination of the equipment programme*

11. A key event which took place during our Defence Equipment 2009 inquiry was the MoD's short examination of the equipment programme. During the Defence Procurement debate on 19 June 2008, the Minister for the Armed Forces announced that the MoD was "undertaking a short examination of the equipment programme to look at our planning assumptions over the next ten years".<sup>18</sup> The MoD *Annual Report and Accounts 2007–08* set out the objectives of the exercise:

The examination of the equipment programme will focus on two issues above all: bearing down on cost increases to equipment programmes; and rebalancing the equipment programme to better support the frontline. The examination will be focused on identifying potential savings to the equipment programme in order to support the frontline and our people at home better.<sup>19</sup>

12. On 11 December 2008, the then Secretary of State announced the key conclusions from the short examination. These included the allocation of additional resources for UORs, and a number of decisions relating to the equipment programme. The key capabilities referred to in the Statement were the Future Rapid Effect System (FRES); Future Carrier; Military Afloat Reach and Sustainability (MARS); and helicopters. In summary the decisions were:

- i. To restructure the FRES programme, giving priority to the Warrior Capability Sustainment Programme and to the FRES Scout over the FRES Utility Vehicle;
- ii. To delay the in-service date of the two new carriers by one and two years respectively;
- iii. To consider alternative approaches to the MARS fleet auxiliary programme procurement and to defer the fleet tanker element; and
- iv. To spend £70 million from the Reserve to upgrade 12 Lynx Mark 9 helicopters with new engines.

During our Defence Equipment 2009 inquiry, Quentin Davies MP, Minister for Defence Equipment and Support, told us that he considered that the short examination had "achieved its purpose" in relation to both of its objectives.<sup>20</sup> We consider the impact of

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18 HC Deb, 19 June 2008, col 1122

19 Ministry of Defence, *Annual Report and Accounts 2007–08*, HC 850–I, p 135

20 HC (2008–09) 107, Q 298

these decisions in the following paragraphs, together with issues related to other key programmes which have been subject to time or cost overruns.

### **Future Rapid Effect System (FRES)**

13. The FRES vehicle programme has had a long and difficult history, on which we have commented several times over the years. In 1998 the MoD decided that the Army required a fleet of armoured vehicles to fulfil the expeditionary role envisaged in the Strategic Defence Review, and FRES was established to meet this need. Early ‘concept work’ was carried out between 2001 and 2003, and in 2004 the MoD announced a two year Initial Assessment Phase. At this stage the FRES programme was expected to deliver 3,000 vehicles in 16 battlefield roles and would comprise three families of vehicles: Utility, Heavy and Reconnaissance. The MoD planned to deliver the Utility vehicle (FRES UV) first, but the requirement was challenging and the programme was subject to delays. In February 2007 we published our Report *The Army’s requirement for armoured vehicles: the FRES programme*, in which we noted that the expected In-Service Date for the FRES UV had slipped from 2009 to the early part of the next decade and concluded that the MoD’s attempts to meet its medium-weight vehicle requirement had been “a sorry story of indecision, changing requirements and delay”.<sup>21</sup>

14. We continued to monitor FRES progress in our *Defence Equipment 2008* and *Defence Equipment 2009* inquiries. In October 2008 the MoD announced that 700 new armoured vehicles were to be procured to meet urgent operational need, but CDM assured us in November 2008 that there would still be a requirement for FRES and that the MoD “was pretty clear we know what it is”.<sup>22</sup> In December 2008 the MoD announced that despite having awarded provisional preferred bidder status for the FRES UV vehicle to General Dynamics UK only seven months previously, it had been unable to reach agreement with General Dynamics UK on commercial considerations, and, as a consequence of the short examination of the equipment programme, it had decided to withdraw that preferred bidder status, restructure the FRES programme and give priority to the Warrior Capability Sustainment Programme and to FRES Scout over FRES UV. In February 2009, in our *Defence Equipment 2009* Report, we concluded that “the FRES programme has been a fiasco” and that “the FRES Utility Vehicle programme was, from the outset, poorly conceived and managed”.<sup>23</sup> The MoD did not accept our conclusion.<sup>24</sup>

15. By October 2009, the Minister for Defence Equipment and Support was describing the FRES UV programme as “a perfect disaster” and said that “I have now stopped the FRES programme”.<sup>25</sup> The MoD’s written submission to us in November 2009 appeared to contradict this, as it included an account of the next steps to be taken in the FRES Specialist Vehicle programme, a statement that the MoD was now considering the best way to take

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21 Defence Committee, Seventh Report of Session 2006–07, *The Army’s requirement for armoured vehicles: the FRES programme*, HC 159, paras 81 and 93

22 HC (2008–09) 107, para 84

23 *ibid.*, para 95

24 Defence Committee, First Special Report of Session 2008–09, *Defence Equipment 2009: Government response to the Committee’s Third Report of Session 2008–09*, HC 491, p 13

25 Ministry of Defence, Minister for Defence Equipment and Support, speech for Republic of Korea visit, 15 October 2009

the FRES Utility Vehicle procurement forward and a restatement of the objectives of the overall FRES programme.<sup>26</sup> In oral evidence we received different explanations from the MoD as to the current status of FRES. CDM told us that “it is really good news”<sup>27</sup> and that:

What [the Minister] stopped was the FRES Utility Vehicle programme; and he stopped it because the priority changed to FRES Scout. The competition is ongoing. There is a selection process going on at the moment. I would be very disappointed if we do not get FRES Scout out on contract February/March next year.<sup>28</sup>

He explained that the two contenders for the Scout Vehicle competition were vehicles that were in existence and that the MoD was not “designing them from nothing”.<sup>29</sup> He added that “we will need to come back” to FRES UV.<sup>30</sup> CDM strongly refuted the suggestion that FRES was still a fiasco, and stated that “We have turned a corner, as we have in a number of projects”.<sup>31</sup> However, when giving oral evidence two weeks later alongside the Minister, he accepted that FRES was “buried”.<sup>32</sup>

16. The explanation given by Dr Andrew Tyler, Chief Operating Officer, DE&S, was that:

We have stopped the FRES programme as it was previously conceived. We have restructured, we have recast it now into a set of individual vehicle projects, the first one of which is the Scout project; and it is still bearing the tag “FRES” because that is its provenance in terms of its requirement; and we are still sustaining this crucial factor that the vehicles need to be able to operate with each other and indeed operate with the other legacy vehicles, and indeed operate with dismounted soldiers. That system (the “S” of FRES) remains a very important thing. We need all of our assets on the battlefield to be able to talk to each other and work together. In that sense the system part of FRES lives on.<sup>33</sup>

With regard to lessons learned, Dr Tyler said that:

When we look back in the rear view mirror now and think about why it was that FRES was not successful in getting to where it needed to be in the time, is because we were overemphasising the nature of this sort of system, of trying to bring all these vehicles together. What we have done subsequently is said “We must not lose sight of that but we must also recognise that what we are trying to do is to deliver individual families of vehicles to meet particular needs of the Army”.<sup>34</sup>

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26 Ev 100

27 Q 113

28 Q 111

29 Q 117

30 Q 114

31 Q 127

32 Q 524

33 Q 125

34 Q 121

17. The explanation of the Minister for Defence Equipment and Support was that “the FRES programme is dead”.<sup>35</sup> He said that the original programme was “too idealised a vision” which had taken “a very long time to agree on specification” and that it “was very difficult to procure anything”.<sup>36</sup> He accepted that there had been mistakes, saying that “I think [FRES] was a sad and sorry story and we have changed, and I take full responsibility for that. We have changed the strategy entirely in this matter”.<sup>37</sup> He explained the strategy which he now intended to adopt:

So what I want to do, and what we are doing in this particular case, is not to go in for these idealised solutions but, wherever possible, to try to find something that is in this world which either can be obtained and has been tried and tested or can be modified slightly in a clearly defined way and will meet a large proportion of our requirements. Whether it is 70% or 80% or 95% you can always argue about, but I prefer to go with something that is concrete and actually exists than some sort of image of something which might be totally ideal.<sup>38</sup>

The Minister told us that he intended to ask the Army Board to propose another name for the programme, since FRES related to a concept which no longer existed.<sup>39</sup> He said that “the degree of commonality is not practical because we will be procuring quite different vehicles from different manufacturers and so that concept is not valid, it is dead”.<sup>40</sup> He added that the MoD would still be procuring a Utility Vehicle and that his objective was to have it in service in 2018.<sup>41</sup> He summarised the main elements of the new vehicle programme as follows:

We have three major core armoured vehicle programmes at the moment apart from the vehicles procured to Afghanistan, and they are the Warrior upgrade [and] the reconnaissance vehicle ... I hope contracts for both of those will be signed within the next two or three months ... and then there will be the Utility Vehicle which we will be procuring over a longer timescale. We will find some name to encompass and encapsulate those three vehicles.<sup>42</sup>

18. Dr Sandy Wilson, President and Managing Director, General Dynamics UK Ltd, suggested that such an approach would have been better from the outset, saying that:

I think if FRES had been procured earlier with either the specification that existed or some lesser specification, then it would have been perfectly possible to get into service a protected manoeuvre vehicle that would have given the Army all of the capability that it currently needs in Afghanistan, plus additional capacity for contingent operations.

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35 Q 514

36 *ibid.*

37 *ibid.*

38 *ibid.*

39 Q 515

40 Q 523

41 Q 517

42 Q 526

The sticking plaster of a solution which was adopted is to procure what are called protected mobility vehicles rather than protected manoeuvre vehicles, which have limited off-road capability, and that then gives you problems in your tactics as to where you can go to avoid some of the threats, such as IEDs, that you are constantly going to find embedded at the tracks and roads and places that these vehicles can go.<sup>43</sup>

19. With regard to the spend to-date on FRES, and the outcomes of this spending, a follow-up written submission from the MoD stated that:

The total spend on the FRES programme to 30 October 2009 was £189m (inclusive of non-recoverable VAT). The total spend on the FRES programme to 30 October 2009 was £189m (inclusive of non-recoverable VAT). None of this money. The knowledge gained has refined our understanding of the requirement; reduced technical risk; and up-skilled the project team with specialist management and integration. This all continues to have a direct or indirect benefit to the FRES programme as it moves forward.<sup>44</sup>

Vice Admiral Lambert, Deputy Chief of Defence Staff (Capability), said that one programme board would deal with all of these vehicles, as well as with vehicles procured under UORs. He explained that “We will have to look at what point another vehicle ought to come in and replace those vehicles important to UORs or whether we can run the UORs and have a replacement vehicle a little bit later. So that is all looked after in the same programme board.”<sup>45</sup>

**20. There has clearly been a change of direction with the armoured vehicle strategy, although it is not evident whether this is just a change of priorities and programme name, or whether there has also been a more fundamental shift in strategy. It is also unclear whether the change in direction is purely a result of the funding gap, or whether it is because of a considered analysis that the original concept is no longer appropriate. We have tried on many occasions in the past to elicit details about FRES from the MoD without ever receiving clear answers. We conclude, with regret, that the MoD has none to give. The MoD must provide us with a written statement of its armoured vehicles strategy, together with a schedule of the key events and decisions to be taken in the next year and an indication of the required delivery dates of each part of the programme.**

**21. With regard to the FRES programme, we received no evidence of any systematic attempt by the MoD to understand the reasons for past mistakes or to consider how they could be avoided in the future. We call upon the MoD to ensure that the lessons of the FRES programme are fully identified, understood and set out in response to this Report, and ask the MoD to provide an explanation as to how it will take heed of these lessons.**

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43 Q 322

44 Ev 113

45 Q 531

## A400M

22. The A400M military transport aeroplane is another programme which has been subject to significant time slippage. The A400M is a collaborative programme involving seven European nations (Germany, France, Turkey, Spain, Belgium, Luxembourg and the UK). The A400M was selected to meet the requirement to lift armoured fighting vehicles and to move large single items such as attack helicopters and some Royal Engineers' equipment and is intended to replace the remaining Hercules C-130K fleet. The programme has been subject to delays because of the complexity of the project and technical problems, which we commented on a year ago in our *Defence Equipment 2009* Report, stating that "It is extremely serious that the A400M transport programme, which is to provide much needed new tactical and strategic airlift for our Armed Forces, is now running two years late and further delays cannot be ruled out".<sup>46</sup> CDM told us that he did not think that the time lost could now be made up.<sup>47</sup>

23. The NAO *Major Projects Report 2009* commented that:

The contractor, Airbus Military, has already acknowledged that it underestimated the complexity of the project and its technical aspects, and these have caused the programme to slip its introduction into service. The cost escalation related to the slippage is predominately driven by Inflation, Exchange Rates and associated cost of capital changes, although the specific breakdown of these factors is currently commercially sensitive. In July 2009, the seven partner nations re-stated their commitment to establish a satisfactory way ahead for the project, and intensive work is continuing between partner nations and Airbus Military.<sup>48</sup>

The MoD *Annual Report and Accounts 2008–09* noted that the MoD was "concerned by delays to the A400M programme" and that "a number of options are being considered as a contingency to mitigate any potential capability gaps that may arise". CDM told us that "The air bridge, which is absolutely vital to Afghanistan, is surviving. I would still describe it as fragile. It is still my highest logistic risk, but it is surviving. What we cannot do is any of the other contingent operations which we should be able to do without using aircraft from that strategic bridge."<sup>49</sup> With regard to the capability gap, he said that the contract for Future Strategic Tanker Aircraft had been signed, and the option of procuring one or possibly two C17s was being considered.<sup>50</sup> CDM added that these would not be suitable long term alternatives to the A400M:

C17s are very expensive; they give you a certain capability. In very simple terms, an A400M carries twice what a C130 will carry and a C17 carries twice what an A400M will carry. The A400M is going to be a good aircraft when it comes into service; it is going to be invaluable. The C130, perhaps, is right at the bottom, tactical end of the

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46 HC (2008–09) 107, para 20

47 Q 162

48 NAO, *The Major Projects Report 2009*, para 1.8

49 Q 166

50 Q 163

market. The C17 is very expensive, very competent, very capable, at the strategic end of the market, and there is a gap in the middle.<sup>51</sup>

On 15 December 2009, the Secretary of State announced that:

There will be an additional C17 aircraft to strengthen the airbridge, and improvements to defensive aids suites and support arrangements for the Hercules C130J fleet so that we can maximise their deployability and use.<sup>52</sup>

24. The A400M made its first flight on 11 December 2009. The Minister for Defence Equipment and Support told us that he had witnessed the flight and had attended a ministerial meeting of the partner nations to discuss the way forward and future negotiations regarding the delivery schedule and contract with the manufacturer, EADS (Airbus Military). He explained that:

I remain committed to trying everything possible to save this particular programme. I think it would be a great aircraft. I think it meets our requirements extraordinarily neatly, and my own instinct ... is that the technical problems of this aircraft can be resolved. Whether we can resolve the commercial and financial issues satisfactorily in the timescale required I do not know and I cannot really express a view on that today.<sup>53</sup>

The Minister told us that the partner nations had agreed a joint letter to be sent to EADS, asking for a response by 31 December 2009.<sup>54</sup> With regard to the expected In-Service date of the A400M, the Minister said that there was likely to be about three years' delay compared to the original schedule and that deliveries were likely to start in 2014.<sup>55</sup> He added that "If and when we can renegotiate this contract ... there will be a precise delivery schedule in the contract ... and there will be liquidated damages if that new delivery schedule is not reached".<sup>56</sup>

25. The MoD *Annual Report and Accounts 2008/09* highlights issues relating to collaborative programmes as a factor contributing to shortfalls in procurement performance:

Whether it is major US projects where the UK is a minor partner, or European projects where the motives for collaboration can vary considerably, the UK is less able to influence outcomes compared with projects entirely within our control.<sup>57</sup>

CDM told us that "The lesson I draw from [the A400M project] is collective projects are essential. If you do not collaborate with partners, then you will not get the kit you want because the production numbers are so small. ... if you have got seven or eight partners,

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51 Q 169

52 HC Deb, 15 December 2009, col 802

53 Q 533

54 *ibid.*

55 Q 534

56 *ibid.*

57 Ministry of Defence, *Annual Report and Accounts 2008–09*, HC 467–I, p 107

they have all got a view ... It is very difficult to cope with that. My preference would be a bilateral product which others could join. That would be my lesson.”<sup>58</sup> He added that he would be able to provide further details about that conclusion in “about six months”, after the completion of current commercial discussions.<sup>59</sup>

**26. The delivery schedule of the A400M has been delayed by at least three years because of technical problems and ensuing contract renegotiations. The MoD told us that planning is in place to address the capability gap. While the announcement of an additional C17 is welcome, and will ease the airbridge fragility, it does not answer the question of how the capability gap arising from the delay of 25 A400Ms to replace the remaining C130Ks, which were procured in the 1960s and are already incrementally being withdrawn from service, will be addressed. The MoD should give us sight of its contingency plans, as soon as the way ahead for the A400M programme is decided.**

**27. It is encouraging that the first A400M flights have taken place, although it remains to be seen whether the project can be put back on course. Negotiations are difficult because of the need to accommodate the demands and different governance arrangements of all seven partner nations. The A400M submission for Main Gate approval did not appear to incorporate the lessons of earlier multi-national projects and we ask the MoD to explain why not. The MoD should provide to us by the end of September 2010 a written evaluation of the lessons learned from the A400M experience which will establish the most effective basis for future collaborative projects.**

### ***Future Carrier and Joint Strike Fighter***

28. We examined the progress of the Future Carrier programme in our Report *Future Carrier and Joint Combat Aircraft Programmes* which was published in December 2005,<sup>60</sup> and in our *Defence Equipment 2008* and *Defence Equipment 2009* Reports. During the Defence Equipment 2009 inquiry, we heard that, only six months after awarding contracts to build the carriers and announcing in-service dates in May 2008, the MoD decided to delay the entry into service of the first carrier by one year and the second by two years. In our Report we called on the MoD to provide a more robust estimate of the cost of this delay and noted that whilst the delay might achieve some short-term savings, the longer-term costs were likely to be substantially increased. We also questioned how the delays would be managed, and how the existing capability would be extended.<sup>61</sup>

29. The Written Ministerial Statement of 11 December 2008 which announced the delays stated that “We have concluded that there is scope for bringing more closely into line the introduction of the joint combat aircraft and the aircraft carrier. This is likely to mean delaying the in-service date of the new carriers by one to two years.”<sup>62</sup> In oral evidence to us in December 2008, the Minister for Defence Equipment and Support appeared to suggest

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58 Q 157

59 Q 159

60 Defence Committee, Second Report of Session 2005–06, *Future Carrier and Joint Combat Aircraft Programmes*, HC 554

61 HC (2008–09) 107, paras 112–117

62 HC Deb, 11 December 2008, col 67WS



that in fact the key reason for the delay was the need to make short-term savings, stating that “...this was an opportunity ... to re-profile our spending plans in a way which involved no defence costs, but simply made the delivery date of the carriers rather more rational”.<sup>63</sup> He said that there would be no loss to the defence capability and described the delay as “a kind of free hit”.<sup>64</sup> The Minister confirmed this reasoning in his oral evidence to us in December 2009:

We needed to make some savings in the future—we needed to find some money, we needed to find some room—and looking at the defence capability costs of any of the alternatives which were before me, they all had costs, they all had unforeseen features. It occurred to me immediately ... that we could delay the carriers without a loss of capability because the aircraft that we were going to use on the carriers would not be available.<sup>65</sup>

30. The NAO *Major Projects Report 2009* provided the following information about the costs of the Future Carrier delay:

The Queen Elizabeth Class aircraft carriers were subject to an Equipment Examination decision which has increased the overall forecast cost of the project by £674 million.... The primary aim was to constrain expenditure on the project during the four years commencing 2009–10 by slowing the rate of production. The Department expects this slowdown to yield a total reduction in spending of £450 million in the years 2013–14. After this time costs are forecast to increase by £1,124 million. The net increase in costs of £674 million comprises £300 million of direct costs (for example, extending the design and engineering team by two years) and £374 million additional inflation due to the extended programme.<sup>66</sup>

The Minister for Defence Equipment and Support confirmed these figures, saying that:

When you push things forward it always involves a cost and I do not dispute that and do not deny that. It is a substantial cost, £674 million is over ten per cent of the cost of the two carriers, which is about £5.2 billion.<sup>67</sup>

31. CDM confirmed to us that the figure of £674 million did not include the cost of running on the existing carrier capability.<sup>68</sup> According to NAO data, it also did not include the £234 million cost of additional capital charges.<sup>69</sup> We were told that there was an offsetting saving of not operating the new carriers during those years, although the older carriers were more expensive to operate in efficiency terms in some respects<sup>70</sup> and that the cost of refitting *HMS Illustrious* was not included because it would anyway have been

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63 HC (2008–09) 107, Q 308

64 *ibid.*, Q 309

65 Q 552

66 NAO, *The Major Projects Report 2009*, para 2.5

67 Q 434

68 Q 172

69 NAO, *The Major Projects Report 2009*, para 2.6

70 Qq 172–173

refitted on the original timetable.<sup>71</sup> The MoD written submission stated that “Although costs have increased on the programme as a result of the Equipment Examination decision and other economic factors, these additional costs will be managed by the Department. In conjunction with the ACA [Aircraft Carrier Alliance] we continue to work hard to drive down costs in order to agree the Final Target Cost for the Carriers in 2010.”<sup>72</sup> MoD witnesses were unable to provide further explanation as to how they would manage these costs, other than to say that “That is one of the pressures we have to take into account in our planning process, along with all the other fluctuations in the programme.”<sup>73</sup>

32. CDM gave us an assurance that the Future Carrier and the Joint Strike Fighter (JSF) programmes were now aligned in terms of timing.<sup>74</sup> He said that three OT&E (Operational Test and Evaluation) JSFs had been ordered and would be delivered into the test programme in 2012, at which stage UK pilots would participate with US pilots in an integrated test programme in the USA.<sup>75</sup> CDM told us that “up to 150” JSFs would be procured, but that a decision on the exact number would not have to be made until 2015<sup>76</sup> and that after that “they will come off quickly”.<sup>77</sup> A further issue affecting the JSF programme is technology transfer, which would provide the UK with operational sovereignty. In our *Defence Equipment 2009* Report we noted that the MoD considered that the technology relating to the programme was being transferred on schedule. However, recent newspaper reports have suggested that US officials have ruled out the technology transfer of source codes on the JSF, even to close allies such as the UK.<sup>78</sup>

33. When asked whether the MoD was confident that the existing carriers and aircraft would be capable of operating until the new carriers were available, Vice Admiral Lambert told us that “The aircraft are capable of flying, operating until at least the end of the next decade”.<sup>79</sup> However he was unable to provide the same degree of assurance for the carriers, stating that “The carrier programme: we are still looking at the fine detail of that”<sup>80</sup> and that “At the moment I cannot say whether there is a gap or not; it is still part of work we are undertaking”.<sup>81</sup> He explained that:

It is the first time we have looked at all the lines of development for both the current carrier programme and the future carrier programme, and within that there is a complicated programme of transition between different aircraft, different ships, and

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71 Q 175

72 Ev 98

73 Q 176

74 Q 178

75 Qq 187–189

76 Q 179

77 Q 180

78 RAeS Journal, *Aerospace*, January 2010, p 8

79 Q 557

80 Q 558

81 Q 561

until we have completed that work I would not like to say that I can guarantee there would be no gap.<sup>82</sup>

The Minister wrote to us later in the day after Admiral Lambert had given this evidence and stated that:

At this morning's session of the Committee, Admiral Lambert surprised the Committee—and indeed myself—by suggesting that there might be a gap in our Carrier Strike capability before the entry into service of HMS Queen Elizabeth.

I am now formally writing to you to let you know that Admiral Lambert has discovered that there was an error in the paper that he saw yesterday and which prompted his remark, which was made in good faith and conscientiously in order to ensure that he concealed nothing from the Committee.

In fact studies have revealed that there could be an insufficient number of all-weather pilots training to fly the JSF at the moment of transition, but having identified this risk we shall be taking steps to mitigate it.

**34. The delay to the Future Carrier schedule has achieved short term savings but bigger long term cost increases. The £674 million cost of delay, which itself omits substantial elements of the true amount, represents over ten per cent of the current estimated total cost of £5.2 billion for the carriers. Such cost increases in order to reschedule the equipment programme are unsustainable in the context of a tightening budget situation and illustrate precisely the reasons why the equipment programme has become out of balance with the budget.**

**35. The original announcement indicated that the carrier schedule had been delayed in order to bring it into line with the schedule for the Joint Strike Fighters. The Minister for Defence Equipment and Support has now confirmed that the decision was also driven by a need to make short term savings in the equipment programme. We also note that there still appear to be outstanding issues concerning technology transfer for the JSF, which are of key importance to the success of the programme. The MoD should provide us with details of its carrier transition programme when it is complete, highlighting any areas where there is a risk of a capability gap.**

### ***Military Afloat Reach and Sustainability (MARS)***

36. The MARS system is intended to provide afloat logistic support to UK and allied maritime task groups at sea and their amphibious components operating ashore. The initial focus was on the double-hulled Fleet Tankers which were urgently required to comply with International Maritime Organisation environmental standards. However, this was one of the programmes which was delayed as a result of the short examination of the equipment programme.<sup>83</sup> The Minister for Defence Equipment and Support advised us in October 2009 that he had decided to cancel the previous competition in March 2009, and

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82 Q 566

83 HC Deb, 11 December 2008, col 66WS

“to look for a less highly specified solution”.<sup>84</sup> The MoD’s written submission explained that a new competition had recently been approved to deliver the fleet tankers (now known as MARS Tankers) and that the closing date for expressions of interest from industry was 4 December 2009. The Minister for Defence Equipment and Support told us that the approach being taken was to ask industry what it could offer and that he was therefore unable, in advance of commercial discussions, to advise us what the in-service date would be.<sup>85</sup>

37. The International Maritime Organisation and EU legislation ban the operation of single-hulled tankers from 2010 onwards. Although naval auxiliary ships operated and manned by the Royal Fleet Auxiliary are exempt, restrictions imposed for example by individual nations or ports could restrict the movements of single hulled tankers. The MoD explained that it was working closely with Lloyd’s Register and the Maritime Coastguard Agency “to ensure that operation of our single hulled tankers is not impaired whilst working towards achieving full compliance as soon as is practicable”. It also stated that “The risk of continuing to operate single hulled tankers is mitigated by careful programming, operating outside sensitive geographical areas and additional training for the crews.”<sup>86</sup> In oral evidence sessions, we sought further clarification of these risks and the mitigating actions planned by the MoD. CDM told us that “There are some geographic restrictions and some nations do not allow single hulled tankers into their waters, but it is not restricting naval operations.”<sup>87</sup> He added that “What we need to be careful of is what do we do if something does go wrong. ... What happens if a single hulled tanker from some other nation gets holed and internationally there is a block on? ... We have ... a fall-back plan ... we do have two Wave Class double hulled tankers, so they can operate, they can replenish at sea, and we would need to hire in commercially some double hulled tankers.”<sup>88</sup> The Minister for Defence Equipment and Support confirmed this approach.<sup>89</sup>

**38. Although the MARS programme is in danger of overtaking FRES as the longest running programme failing to deliver any equipment, we consider that the MoD is right to take advantage of the current availability on the market of double hulled tankers. The new procurement competition is seeking a less highly specified tanker. We look to the MoD for an assurance that it has assessed any possible loss of capability arising from this reduced specification and has made any necessary alternative provision. The MoD should provide us with a clear programme for the MARS fleet tankers against which we can monitor progress.**

### **Type 45**

39. The first Type 45 Destroyer, HMS Daring, was accepted into service during 2009. The NAO has commented that:

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84 Ev 121

85 Q 589

86 Ev 102

87 Q 201

88 Q 202

89 Q 588

The Type 45 Destroyer will provide a much greater capability compared to the Type 42 it is planned to replace, but has experienced considerable delays of over two years and cost increases of £1.5 billion because of over-optimism about what could be achieved, inappropriate commercial arrangements and poor project management in the early stages.<sup>90</sup>

When the Type 45 project was approved, the MoD planned to buy twelve ships. The MoD explained the rationale for this:

The requirement for 12 Type 45 Destroyers was first set out in the 1998 Strategic Defence Review. The SDR confirmed the need to maintain plans to modernise the destroyer and frigate force, but reduced its size from 35 to 32. The need to meet a broad range of operational demands required a balanced fleet of Destroyers and Frigates, and it was judged that 12 Destroyers would be sufficient to meet this requirement with acceptable military risk against the planning assumptions and policy baseline at that time.<sup>91</sup>

However, the requirement was reduced to eight ships in 2004, and in January 2008, during our *Defence Equipment 2008* inquiry, the MoD told us that six Type 45s had been ordered and that “anything beyond that is subject to the review process now going on.”<sup>92</sup> Guy Lester, Director Capability Resources and Scrutiny, explained the MoD’s reasoning for the reduction from 12 to six ships:

The successive reductions we have had from 12 to eight and then eight to six reflected partly priorities in the programme and partly an understanding of the capabilities of the ship, especially when we fit them with the Co-operative Engagement Capability, the improved networking compared with what was originally envisaged, but the judgement is that with a fleet of six we can protect a medium-scale operation, which is two task groups, and that is what we need to do.<sup>93</sup>

The Gray report suggested that the reduction in numbers was at least partly because of the soaring costs of each ship:

HMS Daring and her sisters will cost £1 billion each, a price so high the UK can only afford 6 ships. This level of expenditure is well beyond any other current navy in the world, barring the US and France. As a result, the export potential is, to say the least, limited. The continued delivery of these ships at this cost may seem bizarre, but it is entirely consistent with each of the single Services’ rational desires to retain as much of the available funding as possible.<sup>94</sup>

40. The Department’s policy requirement to have five ships available for tasking remains unchanged. The NAO suggested that “it will be challenging to meet this requirement with the reduction in the number of destroyers being procured, although the Department

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90 NAO, *Performance of the Ministry of Defence 2008–09*, p 38

91 Ev 114

92 Defence Committee, Tenth Report of Session 2007–08, *Defence Equipment 2008*, HC 295, Q 129

93 Q 207

94 *The Gray report*, pp 20–21

judges that the benefits of new technology, improved efficiency, and optimising the way it supports the destroyers to maximise time ‘at sea’ will mean it will be able to deliver the necessary capabilities with fewer ships”.<sup>95</sup> In response to a question about the implications of one ship being put out of action, Dr Andrew Tyler answered that:

If we are managing to generate five from six, then at any point in time we have got one spare. Clearly if we lost one, then that would leave us only just enough to protect two task groups on that basis but frankly that goes for all of our defence capability. We have to size it to a particular assumption set and if you stress that assumption far enough then we end up with not enough equipment.<sup>96</sup>

He added that he did not believe that this represented “the farthest end of the risk” and that “we have taken a carefully calculated risk and believe that we can live with that perfectly adequately”.<sup>97</sup>

41. The MoD told us that the first of class, *HMS Daring*, will enter service with the Principal Anti-Air Missile System (PAAMS) Sea Viper performance having been tested but before the missile has been fired from a destroyer. The Department plans to fit a number of equipments incrementally on ships after they have come into service, meaning that the full capability of the ship will not be available until the middle of the decade.<sup>98</sup> Dr Tyler explained that there had been some recent set-backs in the programme:

*HMS Daring* has got PAAMS capability today. The process of generating what we would call full operating capability, trialled, verified and tested, is going to take ... a couple of years longer to generate. You might have read reports recently about our final trials firing which was not successful. It is too early for us to come up with the diagnosis for that, but that has been a set back in terms of the generation of the full capability and we are working extremely hard with the other two partner nations in the company to resolve what the problems were with that firing.<sup>99</sup>

**42. We expect the MoD in its response to this Report to tell us exactly when *HMS Daring* will have full PAAMS capability, following all appropriate tests and trials, and to set out the extent to which the lack of this full capability is a liability in terms of the defensive capability of the vessel.**

**43. We are not convinced by the MoD’s explanation that the reduction in the required number of Type 45s from twelve to eight and then eight to six was due to a better understanding of the capabilities of the ship. Any one ship can only be in one place at a time. Whilst new technology may well have provided some better than expected capabilities, the spiralling costs of the ship and the pressure on the equipment programme budget suggest that the reduction in numbers was in fact primarily down to affordability. The misleading explanations provided by the MoD in this case are another example of the unhelpful nature of MoD responses to our questions. We expect**

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95 NAO, *Performance of the Ministry of Defence 2008–09*, p 39

96 Q 215

97 Q 216

98 Ev 100

99 Q 204

**that our successor Committee will in the next Parliament continue to monitor the Type 45 programme until the associated air defence missile system is successfully delivered.**

### **Helicopters**

44. Helicopters are key assets for all of the Armed Forces. In our *Helicopter Capability* Report, published in July 2009, we noted the vital contribution made by helicopters to operational capability and the fact that it was “essential that the fleet should be ‘fit for purpose’, both in terms of quality and quantity”.<sup>100</sup> We concluded that:

The MoD should seize the opportunity to recognise the importance of helicopters to current and contingent operations, and work towards strengthening all aspects of capability: the number of helicopters in the fleet, the support structure that underpins their operation, manning, both in the air and on the ground, and finally, the training for the full spectrum of capabilities described by the review itself.<sup>101</sup>

We had a number of concerns about the information provided in the Government response to our *Helicopter Capability* Report,<sup>102</sup> and followed these up in writing with the MoD.<sup>103</sup> We discussed a number of these issues with CDM in the oral evidence session on 1 December 2009, and the MoD provided a written response to some additional questions which were mainly about the Puma Life Extension Programme.<sup>104</sup>

45. On 15 December 2009, the Secretary of State announced the Future Rotary Wing Strategy, the aim of which was to increase levels of helicopter capability, with priority given to support of operations.<sup>105</sup> Key aspects of this strategy were the procurement of an additional 22 Chinooks; confirmation of the Puma Life Extension Programme; and a reduction in the number of fleet types through cancellation of the Future Medium Helicopter programme and removal of the Sea King fleet by 2016. Vice Admiral Lambert described the objectives of reducing the number of types of helicopters:

The strategy that was announced earlier this morning drives out a class of helicopter, it reduces the number of types of helicopters and it brings us into an era where we can see four main helicopter types going forward with the Chinooks doing the heavy lift, two types of Merlin, one which will be the anti-submarine helicopter and the Mk3 doing the amphibious lift, the Lynx helicopters with the Wildcat and the attack helicopters. As an addition we are moving forward with the Puma to fill a particular niche capability but it reduces helicopter types and we are trying to drive out fleets within fleets.<sup>106</sup>

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100 Defence Committee, Eleventh Report of Session 2008–09, *Helicopter Capability*, HC 434, para 5

101 *ibid.*, para 51

102 Defence Committee, First Special Report of Session 2009–10, *Helicopter Capability: Government response to the Committee's Eleventh Report of Session 2008–09*, HC 381

103 *ibid.*

104 Ev 115

105 HC Deb, 15 December 2009, col 99WS

106 Q 426

46. As a result of the short examination of the equipment programme in 2008, the number of Lynx Wildcat helicopters to be procured was reduced from 80 to 62 and the upgrade of the Merlin Mk 1 helicopters to Mk 2 standard was restricted to 30 out of the fleet of 38. The NAO noted that the MoD expected the reduction in Lynx Wildcat numbers to deliver an overall saving of £194 million in equipment costs over the next ten years, plus an additional reduction in the cost of capital and associated savings from the decrease in the required number of crews and in support costs. It commented that “Although the decision saved 12 per cent of the Lynx Wildcat costs, it represented a 23 per cent reduction in helicopter numbers” and that “the planned number of Lynx Wildcat flying hours has also been reduced by a third”. It has been MoD policy for many years that submissions for budgetary approval should be supported by both military judgement and operational analysis. However, the NAO commented that in this case “The Department did not undertake formal operational analysis on the impact of the reduction; rather it based its assessment on military judgement that the reduced numbers would be sufficient to meet military tasks.”<sup>107</sup> In oral evidence, the Minister for Defence Equipment and Support confirmed that the MoD remained committed to buying 62 Lynx Wildcat, stating that “There is no change in that at all. The Wildcat is on target, on schedule and doing well.”<sup>108</sup>

47. With regard to the reduced scope of the upgrade of the Merlin Mk 1 helicopters, the NAO commented that:

The Equipment Examination resulted in the Department not proceeding with the plan to upgrade the entire fleet of 38 Merlin Mk 1 helicopters. Instead, only 30 will be upgraded. This reduction will avoid £64.7 million of costs.

As a result, the Merlin force will be unable to provide simultaneous anti-submarine protection to more than one naval task force, such as an aircraft carrier or amphibious group, unless supplemented by Merlin helicopters used for training.<sup>109</sup>

The Minister for Defence Equipment and Support said that this assessment by the NAO “sounds correct”, adding that “If we had an anti-submarine threat against two task groups simultaneously I think we would pull out all the stops to get all the helicopters we could out there”.<sup>110</sup> CDM did not believe that there was a risk of creating a fleet within a fleet in order to save up-front costs in the Merlin fleet, saying that:

We have 38 Merlin Mk1s of which we are going to convert 30. We will not then use the other eight for anti-submarine warfare. We have 28 Merlin Mk3s currently flown by the RAF for land use. We will need to modify those so they can operate off amphibious shipping. We will probably need to convert the tail rotors so they fold, certainly the main rotors will need to fold, so we will in effect have one fleet of 58 Merlins, 30 of which will be optimised for anti-submarine warfare and 28 of which will be optimised for amphibious lift. Actually, the helicopters are the same.<sup>111</sup>

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107 NAO, *The Major Projects Report 2009*, pp 25–26

108 Q 407

109 NAO, *The Major Projects Report 2009*, p 27

110 Q 425

111 Q 427



In its *Support to High Intensity Operations* Report, the Public Accounts Committee highlighted the issue of shortages of spare parts for Merlin and Apache helicopters.<sup>112</sup> It stated that “The initial procurements of spares are still being delivered from industry and as a consequence there are some key components in short supply” and that spares shortages had led to short-term cannibalisation of helicopters both in theatre and in the UK.<sup>113</sup>

48. The Puma Life Extension Programme is intended to provide battlefield lift capability for operations alongside Chinook until at least 2022.<sup>114</sup> In our *Helicopter Capability* Report we discussed concerns about this programme, in particular the crashworthiness of the aircraft, and concluded that, given the age and the poor survivability of the Puma, extending its life was not the best option, either operationally or in terms of the use of public money.<sup>115</sup> We discussed these issues further in written correspondence with the MoD.<sup>116</sup> In oral evidence, Dr Tyler told us that the programme was proceeding very well<sup>117</sup> and that it was of low technical risk.<sup>118</sup> CDM said that there was nothing wrong with the Puma aircraft<sup>119</sup> and that the Life Extension Programme was a way of getting helicopters into operation more quickly than buying new ones.<sup>120</sup>

**49. The MoD did not send us a copy of its Future Rotary Wing Strategy Statement until after the start of our oral evidence session with the Minister for Defence Equipment and Support, despite having previously briefed the press and circulated the announcement in public. It is unacceptable for a Departmental Select Committee to be the last to receive a Department’s announcement.**

**50. The Merlin upgrade is a complex programme involving changes of use and transfer of aircraft between Services. The success of the programme is dependent on the satisfactory completion and coordination of all of the Defence Lines of Development, not just the technical upgrade of the aircraft. The failure of any part of the programme impacts the capability delivery, as has been shown in the case of shortages of spare parts for Merlins currently in theatre.**

**51. We remain unconvinced of the financial or operational merits of the Puma Life Extension Programme. We believe that the MoD has underestimated the technical and operational challenges of the Puma programme, and that there is insufficient evidence to support the MoD’s assurances of the crashworthiness and the likely delivery dates of the updated aircraft. We ask the MoD to provide further evidence to demonstrate that a**

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112 Public Accounts Committee, Fifty-Fourth Report of Session 2008–09, *Ministry of Defence: Support to High Intensity Operations*, HC 895

113 *ibid.*, paras 5 and 8

114 HC Deb, 15 December 2009, col 99WS

115 HC (2008–09) 434, para 30

116 Ev 117

117 Q 243

118 Q 244

119 Q 246

120 Q 248

full risk assessment has been carried out on the survivability characteristic of the Life Extended Pumas.

52. The cancellation of the Future Medium Helicopter programme will release a significant number of MoD staff and we ask the MoD to provide details of its plans for re-deploying this workforce. In the context of the cancellation of the Future Medium Helicopter and the MoD's decision to purchase Chinooks from the USA, we ask the MoD to explain what steps it plans to take to maintain a UK capability to support and upgrade helicopters, in accordance with the Defence Industrial Strategy.

53. During our Helicopter Capability inquiry we expressed concern that commanders in the field were hampered by a lack of helicopters but the MoD would not accept that its helicopter fleet size was too small. Whilst we now welcome the greater clarity provided on the future helicopter fleet strategy and the recent decision to procure an additional 22 Chinooks, we note that this additional operational capability will be funded from the MoD's core budget and so has necessitated cuts from other parts of the equipment programme. Adding numbers to the fleet is only one aspect of delivering additional capability which also requires adequate manpower, training and support. We understand that having more Chinooks in theatre will require more support helicopters in the fleet and we have not yet seen how these will be provided. It will also stretch an already tight system where there are insufficient pilots and ground crew and a budget for helicopter hours, and we seek assurance from the MoD that all of the Defence Lines of Development for the Chinooks have been properly planned. We believe that the estimated delivery date of 2012 is optimistic and ask the MoD to provide details of the planned transition arrangements.

## 3 Funding of defence equipment and support

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### The funding gap

54. In our *Defence Equipment 2009* Report we noted that many defence commentators had raised concerns that the equipment plan was underfunded. RUSI Acquisition Focus had reported in *RUSI Defence Systems Spring 2007* that “The equipment plan has been estimated as underfunded by some £15 billion or more over its ten-year period”.<sup>121</sup> In oral evidence last year, CDM told us that he was unable to estimate the size of any funding gap, and described the RUSI figures as “a tad ill-informed”.<sup>122</sup> The Minister for Defence Equipment and Support told us that “the equipment programme is an affordable programme. We have had to make an adjustment about exactly the pace with which we are bringing certain things forward and ...some of the priorities are being increased and others set back a bit”.<sup>123</sup> At a conference in April 2009, he was recorded as saying:

The idea of a defence deficit of £15 billion or £10 billion or £20 billion—think of a number and double it—is fantasy. There is no such deficit. That figure has no relevance to any reality at all and I am the man who ought to know.<sup>124</sup>

55. We returned to these questions during our current inquiry in the light of data published by the NAO which concluded that the defence programme was unaffordable. In Chapter 2, we referred to the NAO’s evaluation that the size of the ten year funding gap was between £6 billion and £36 billion, depending on budget growth assumptions.<sup>125</sup> When asked whether he agreed that the equipment programme was “unaffordable on any likely project of future budgets”, CDM said “Yes, I do”.<sup>126</sup> Guy Lester attempted to quantify the extent of the funding gap for us and stated that:

On the basis of our forecasting, at the start of the 2009 planning round and the equipment examination we assessed that we were about £21 billion over-programmed over ten years.<sup>127</sup>

By the end of that planning round, the beginning of this planning round, we were about £6 billion over-programmed over ten years.<sup>128</sup>

£21 billion became £6 billion because of the action we took in the 2009 planning round and the equipment examination. It was not changing the parameters, it was

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121 RUSI, *Defence Systems Spring 2007*

122 HC (2008–09) 107, Q 189

123 *ibid.*, Q 392

124 *Punching above the Budget: A Prospect Seminar*, 1 April 2009, [www.prospect.org.uk](http://www.prospect.org.uk)

125 NAO, *The Major Projects Report 2009*, p 4

126 Q 69

127 Q 72

128 Q 73

just doing what our planning rounds always do, which is balancing the books and prioritising.<sup>129</sup>

56. In terms of whether real savings had been achieved or whether programmes or expenditure had merely been delayed beyond the ten-year horizon of the equipment plan, the Minister for Defence Equipment and Support said that:

We have undoubtedly pushed some things beyond the ten-year mark and we have taken some things out altogether. What you are asking is the breakdown of those two things and I cannot give you off the top of my head exactly the breakdown between those two categories, I am afraid.<sup>130</sup>

In a follow-up memorandum, the MoD advised us that around 40% of the £15 billion reduction was achieved by deferral of expenditure beyond the ten year planning horizon of the programme.<sup>131</sup> Vice Admiral Lambert acknowledged that the tactic of delaying projects beyond the planning period had been used on occasions:

In the past with a ten-year programme there has been a temptation to push things just beyond the ten-year point so that you do not have to worry about them until the following year when they will creep into the programme, so we have started to look at a 20-year plan. It is something that was suggested by Mr Gray and we are in the early stages of doing that to make sure that we try not to be tempted to push things just beyond the bit that everybody is concentrating upon.<sup>132</sup>

57. When asked what changes had been made to reduce the funding gap from £21 billion to £6 billion, the Minister for Defence Equipment and Support judged that he could not provide us with any further information without jeopardising the MoD's ability to manage its equipment programme. He said that "we do not normally go into the details of what we have in the ten-year forward programme ... otherwise I shall create a precedent which will probably be very bad for a lot of us".<sup>133</sup> He went on to say that:

I do not want to go through that programme with you because we manage this programme on an active basis and we change things quite frequently in the long term programme, and it damages our commercial position with the industry if they know too precisely what exactly it is at any one time we are planning to buy and when we are planning to buy it.<sup>134</sup>

We wrote to the MoD to ask for an explanation of how the savings had been achieved. The MoD's reply confirmed that whilst the aircraft carrier delay had saved £450 million in the first four years, it had added £674 million over the ten year planning period of the equipment programme. It identified only one specific substantial saving of £2.6 billion,

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129 Q 75

130 Q 454

131 Ev 125

132 Q 454

133 Q 444

134 Q 450

which was achieved by delaying the FRES UV programme, and no explanation of any other significant savings, other than to state that:

A further approximate £7.8 billion was removed through other programme changes in the Equipment Examination. The 2009 Planning Round delivered a further £3.3 billion of reductions to the 10-year equipment programme.<sup>135</sup>

**58. The evidence suggests that at the time that MoD witnesses gave evidence to our Defence Equipment 2009 inquiry, the MoD was in the process of taking steps to manage a funding gap of £21 billion. Witness denials at that time of the existence of such a gap now appear disingenuous. The Minister for Defence Equipment and Support told us he could not provide any information about how the gap was reduced to £6 billion, nor the proportion of expenditure which was merely postponed beyond the planning period. When we pressed in writing for further details, the MoD provided little extra information. We reject the MoD's arguments for refusing to disclose the measures it took in order to reduce the funding gap to £6 billion. We cannot fulfil our scrutiny role if the MoD refuses to provide such information about its activities. We note that the Gray report made recommendations about public scrutiny of the equipment programme and we return to this issue in paragraph 87.**

### Cost of delays

59. The NAO *Major Projects Report 2009* noted that the MoD's strategy for managing the funding gap has been to make changes which made the equipment plan affordable in the early years, but increased the overall costs in the long term. It concluded that this approach represented poor value for money:

In recent planning rounds, the Department concentrated its efforts on ensuring that the Equipment Programme was affordable in the early years, and on creating room in the budget for improvements in capability that were relevant to current operations. Since any radical changes in planned Defence capability would fall to be made in a Strategic Defence Review, the Department chose to make savings by re-profiling expenditure on existing projects and reducing the numbers of equipment being acquired on others. These decisions were necessary to ensure that the programme was affordable in the next few years, but they increased the overall procurement costs and represent poor value for money on the specific projects affected.<sup>136</sup>

60. The Minister for Defence Equipment and Support accepted that delaying programmes introduced additional costs, saying that "When you push things forward it always involves a cost and I do not dispute that".<sup>137</sup> He stated that it was "a necessary thing to do" and "a good deal better ... than cancelling a major defence programme".<sup>138</sup> He suggested that this approach was a normal financial discipline, saying that "Every family, every business in the

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135 Ev 121

136 NAO, *The Major Projects Report 2009*, p 4

137 Q 434

138 Q 435

country has to live under financial disciplines, and if you put off purchasing something when you do purchase it it may cost more; that is a fact of life".<sup>139</sup> The NAO *Major Projects Report 2009* questioned this rationale. It acknowledged that Government departments frequently made prioritisation decisions to defer projects which were not yet underway, if insufficient funding was immediately available. It commented that, whilst the deferred projects might then be subject to cost inflation, in terms of the overall portfolio of projects the effects were generally compensatory. However, it went on to point out that:

This logic does not apply to cost management by deferring a project by 'slow down' once it is underway. This will typically drive substantial real cost increases into the project. This has been the case with some of the recent decisions taken by the Department, most notably on the Queen Elizabeth Class aircraft carriers.<sup>140</sup>

CDM explained that it was sometimes necessary for the MoD to pay industry to do the job over a longer period of time in order to maintain core skills.<sup>141</sup> This appears to be the case for example in the delay of the Future Carrier programme where an undertaking was provided "to provide stability for the core shipyard workforce".<sup>142</sup>

61. The NAO estimated that in 2008–09 there was "a net increase in costs of £733 million in year as a result of the Department's decision to slip the introduction into service of projects for short-term affordability reasons".<sup>143</sup> The Nimrod Review described some of the human costs of delays and the risks of running on existing capability for longer than had been intended, stating that if there had not been delays in the Nimrod replacement programme, "XV230 would probably no longer have been flying in September 2006, because it would have reached its Out-of-Service Date and already been scrapped, or stripped for conversion."<sup>144</sup>

62. The Gray report set out some of the practical consequences of using delays to manage the funding gap and made its own estimates of the costs of systematic delays:

The result is that programmes take significantly longer than originally estimated, because the Department cannot afford to build them at the originally planned rate. They also cost more than they would otherwise because the overhead and working capital costs of keeping teams within industry and the MoD working on programmes for a much longer period soaks up additional cash. The MoD also has to bear significant costs in running on old equipment because the new equipment is not yet ready for service.

Across a large range of programmes, this study found that the average programme overruns by 80% or c.5 years from the time specified at initial approval through to in service dates. The average increase in cost of these programmes is 40% or c.£300m.

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139 Q 436

140 NAO, *The Major Projects Report 2009*, p 5

141 Q 89

142 HC Deb, 11 December 2008, col 67WS

143 NAO, *The Major Projects Report 2009*, p 7

144 Charles Haddon-Cave QC, *The Nimrod Review: An independent review into the broader issues surrounding the loss of the RAF Nimrod MR2 Aircraft XV230 in Afghanistan in 2006*, "The Nimrod Review", 28 October 2009, p 12

This study also estimates that the ‘frictional costs’ to the Department of this systematic delay are in the range £900m–£2.2bn pa.<sup>145</sup>

The process for arriving at these estimates is described in a nine page appendix to the Gray report.<sup>146</sup> The review team arrived at the figures by adding together the extra procurement costs for MoD; extra procurement costs for industry; capability gap costs (such as procuring additional equipment under UORs); run-on equipment costs; and MoD intramural costs. In some cases the team had to make estimates since MoD did not hold sufficient data for more accurate analysis and its calculations were based on a number of assumptions, some of which some MoD witnesses challenged. For example, Dr Andrew Tyler disputed the inclusion of costs for overcoming technical issues in the category ‘unproductive project costs’, saying that “Overcoming technical issues is what we do. We are buying technically very complex pieces of equipment, and a lot of DE&S is focussed on solving technical issues.”<sup>147</sup> He added that “My personal view is that it is a number which has been somewhat exaggerated for the sake of effect, and I think that is unfortunate.”<sup>148</sup> Guy Lester told us that he disagreed with Gray’s estimates of frictional costs, saying that “intuitively, it is an implausibly large figure”.<sup>149</sup> In response to an oral question, the Minister for Defence Equipment and Support dismissed Gray’s estimate of frictional costs, stating that:

Of course I noticed that rather startling figure when I read the Gray report myself. The right hon. Gentleman ... will also have noticed that there is no evidential basis for that statement anywhere ... The very fact that the figure ranges between £1 billion and more than £2 billion shows, I think, how imprecise that statement inevitably is.<sup>150</sup>

63. Bernard Gray explained to us the methodology which his review team had used, and said that:

We have put the first estimate that anybody has ever tried to put on the table to try and capture the costs of the delay in the system because it is only when you measure things that people start paying attention to them. I am sure that it would repay further work to try and refine this and we would be interested to participate in a debate which did that ... The key point is that, whatever the precise number is, it is a large number of hundreds of millions of pounds at the least which is going to non-productive work inside the Ministry of Defence as a result of the way they organise themselves.<sup>151</sup>

Lord Drayson, Minister for Strategic Defence Acquisition Reform, told us that he accepted Gray’s analysis of frictional costs, saying that “The Gray report does say that this is not an

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145 *The Gray report*, p 7

146 *ibid.*, Appendix G

147 Q 80

148 *ibid.*

149 Q 79

150 HC Deb, 2 November 2009, col 566

151 Q 642

exact science ... but the point that it makes is a very fair point and I do recognise it and I do accept it.”<sup>152</sup>

64. According to the NAO, in recent planning rounds the MoD’s strategy for managing its unaffordable equipment plan has been to re-profile expenditure by delaying projects so as to reduce costs in the early years of the plan. However this practice increases overall procurement costs and represents poor value for money. It is clear from NAO data that the 2008–09 re-profiling exercise added £733million to the future costs of the core equipment programme.

65. The Gray report estimates that the ‘frictional costs’ of delays within the equipment programme are in the range £900 million to £2.2 billion a year. Although some of the DE&S witnesses did not accept these estimates, they were unable to provide alternative figures. The MoD is spending hundreds of millions of pounds a year on unproductive activities because it has commissioned more work than it can afford to pay for. It is shocking that the MoD has apparently made no attempt to calculate the extent of such costs and that it has therefore taken decisions to delay projects without understanding the full financial implications. The MoD must develop a system for calculating the full extent of the cost of delays and that such costs are explicitly documented in all future revisions of the equipment plan. The MoD should confirm that the full extent of the cost of delays will be explicitly documented in its annual reports to Parliament of the cost and affordability of the equipment and support programmes against the ten year planning horizon agreed with HM Treasury.

## Defence research spending

66. The research and technology budget has fallen from £540 million in 2007–08 to £471 million in 2009–10 and will decrease further in 2010–11 to £439 million.<sup>153</sup> Fifteen years ago, in 1994/95, MoD research expenditure was £665 million, which equates to £947 million in 2008/09 terms.<sup>154</sup> In our *Defence Equipment 2009* Report, we pointed out that the UK’s future military capability depended on the investment made today in research and development and the military advantage achieved at any one time depended on the research and development investment made over the previous 25 years. We expressed our concern then that defence research spending had been cut,<sup>155</sup> and there are no signs that the situation is improving. We also drew attention to this issue in our *MoD Winter Supplementary Estimate 2009–10 Report*.<sup>156</sup> The Defence Industries Council published a report, *Securing Britain’s Future and Prosperity*, in September 2009, which highlighted the cut in defence research funding as a key issue facing the industry:

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152 Q 713

153 HC Deb, 12 March 2009, col 615W and HC Deb, 11 November 2009, col 404W

154 Ev 95, These figures are estimates provided by the MoD for this inquiry, whereas the figures in the previous sentence represent the science/innovation/technology top level budget which accounts for “the majority of research expenditure”.

155 HC (2008–09) 107, para 162

156 Defence Committee, Second Report of Session 2009–10, *MoD Winter Supplementary Estimate 2009–10*, HC 150



... investment in research and technology in the UK has been declining recently and a reaffirmation of a commitment to funding in this area is critical to the future of the sector. Without a strategic approach the UK will lose key capabilities.

There are, however, serious budgetary pressures. The Defence Industrial Strategy acknowledged that total UK research and technology funding had fallen as a proportion of GDP from 2.3 per cent in 1981 to 1.9 per cent in 2005. It is a matter of great concern that research investment has fallen back even further since 2005, whilst that of our competitors continues to increase.<sup>157</sup>

67. The MoD *Annual Report and Accounts 2008–09* stated that a review of programmes had resulted in “funds being reprioritised into activities better aligned to Defence’s strategic needs”.<sup>158</sup> In its written submission to us, the MoD explained that the research activities reduced or stopped as a result of strategic reprioritisation were “Maritime, Land and Air domains, Weapons, C4ISTAR, ballistic missile defence and climate research” and that the main areas which had expanded were “counter terrorism and support to operations”.<sup>159</sup> Industry witnesses explained some of the implications of the cuts in the research budget. Ian King, Chief Executive BAE Systems plc, commented on the apparent lack of strategic planning, saying that “In the absence of a Strategic Defence Review cutting back on R&D at this stage does seem to be putting the cart before the horse. You really need to have a plan. There is a long cycle for this activity. We are not talking about huge amounts of money that the MoD spends on R&D and it is precipitous to do it before we have got a clear Strategic Defence Review.”<sup>160</sup> He identified three areas of concern, saying that:

One is it is one of the few things that has been analytically proven is that spending on research and technology six to seven years from now means a direct link to the quality and nature of our defence products and equipment. We are storing ourselves up a problem. Who knows who and what we will be fighting in seven years’ time ... Two, it is totally contrary to the beliefs of most political parties that we are seeking to rebalance the economy and create a high value, high technology industrial base out of the pieces that remain in this country.<sup>161</sup>

His third point was that a cut in R&D spending sent out bad signals to those considering whether or not to invest in the UK defence industry.<sup>162</sup>

68. The Gray report suggested that the research budget cuts were another consequence of the MoD’s “squeeze on short-term cash expenditure” and its efforts “to manage an over large programme”. It stated that this approach to managing its resources:

... reduces funds available for technology demonstration or risk-reduction activities which might reduce risk in new procurements. It depresses spend in areas such as

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157 *Securing Britain’s Future and Prosperity*, Defence Industries Council, September 2009, pp 10–11

158 Ministry of Defence, *Annual Report and Accounts 2008–09*, HC 467–I, p 4

159 Ev 94

160 Q 382

161 Qq 387–388

162 Q 388

research and technology, where by their nature, budgets tend to be committed less far ahead, and so are vulnerable to a cash squeeze.<sup>163</sup>

CDM did not disagree with this reasoning. He told us that there had been reductions in total research and technology spending and that “I think that is a pity but, there we are, we have to balance the budget.”<sup>164</sup> He added that “I hope we do not cut any more in future years.”<sup>165</sup> The Minister for Defence Equipment and Support said that “We cannot buy everything we would like to buy in any given year... so we have to make these difficult decisions and these difficult sacrifices, and we have to decide that we are only keeping what is the highest priority in terms of defence capability.”<sup>166</sup> He added that “We have come down to this level of around £450 million ... and my hope is that we do not get too much below that. That is certainly my hope and intention.”<sup>167</sup> Tom McKane, Director General Strategy, MoD, told us that the volume of spend on civil research was growing rapidly and becoming more significant than defence research, and that the MoD needed to find ways of using that research to improve its capability in a more agile way than at present.<sup>168</sup>

**69. The research budget appears to be another casualty of the MoD’s short term efforts to manage its equipment programme funding gap. We were told that cuts had been made to balance the budget and that such difficult sacrifices were necessary in order to continue to deliver the highest priority defence capabilities. We believe that spending less on research and technology will make the UK Defence industrial base progressively less competitive and will make the Defence Industrial Strategy inoperable. To compromise the future development of defence technology, in order to make proportionately small short term contributions to the management of the equipment programme funding gap, is ill-judged. The research programme cannot be turned on and off at short notice and the benefits can only be realised with a consistent and long term commitment of resources. We are sceptical about the implication that the MoD can balance cuts in its own research budget by making greater use of civil research and ask the MoD to explain its proposals for doing this.**

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163 *The Gray report*, p 7

164 Q 107

165 Q 110

166 Q 510

167 Q 511

168 Uncorrected transcript of oral evidence taken before the Defence Committee on 9 February 2010, HC (2009–10) 223-i, Q 104

## 4 Procurement reform

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### Background to the Gray review

70. In December 2008, the then Defence Secretary, Rt Hon John Hutton MP, commissioned Bernard Gray to assess what steps the MoD was taking to reform its procurement process and to suggest further recommendations for how that process could be improved. Gray's report was published on 15 October 2009 and concluded that:

The Department's commitment to improvement in acquisition is genuine and progress in some areas has been significant. Nonetheless, the Ministry of Defence has a substantially overheated equipment programme, with too many types of equipment being ordered for too large a range of tasks at too high a specification. This programme is unaffordable on any likely projection of future budgets.<sup>169</sup>

Bernard Gray told us that he believed that the problems had existed over a long period of time. He explained that over the past 40 or so years, Defence Reviews had been used to bring the programme back under control and that the problems which had developed since the 1998 Strategic Defence Reviews were "just the most recent example of a systemic problem".<sup>170</sup> Industry witnesses to our inquiry welcomed the Gray report, saying that "it rightly identifies the imbalance that exists between the programme and the budgets and the need to address that issue".<sup>171</sup>

**71. We commend the Government for commissioning, and then publishing, the Gray report. In doing so the Government was being refreshingly open. We hope that the MoD will follow this approach on other occasions.**

### DE&S response to the Gray report

72. The Secretary of State announced the publication of the Gray report on 15 October 2009, and at the same time listed a number of actions which the MoD intended to take in response to the report. The MoD published its acquisition reform strategy, *The Defence Strategy for Acquisition Reform*, on 3 February 2010.<sup>172</sup> We discuss those actions and the reform strategy in paragraph 113. In the following paragraphs, we review some of the evidence which we heard from DE&S witnesses, with regard to their reactions to the report.

73. The Gray report noted that it had "worked to establish a basis of agreed facts with the Department" in a number of areas relating to the equipment programme and the levels of time slips and cost overruns.<sup>173</sup> It provided the following assessment of the extent to which the equipment programme was now 'overheated':

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<sup>169</sup> *The Gray report*, p 6

<sup>170</sup> Q 638

<sup>171</sup> Q 261

<sup>172</sup> Ministry of Defence, *The Defence Strategy for Acquisition Reform*, Cm 7796, February 2010

<sup>173</sup> *The Gray report*, p 56

From a possible universe of around 150 programmes for which significant data exist, a floating sample of just over 40 where the data are the most complete have been the focus of attention to try to establish patterns.

The overall picture may be familiar, but it does not look pretty. On average, these programmes cost 40% more than they were originally expected to, and are delivered 80% later than first estimates predicted. In sum, this could be expected to add up to a cost overrun of approximately £35 billion, and an average overrun of nearly 5 years.<sup>174</sup>

74. Some DE&S witnesses did not accept the quantitative data in the Gray report. CDM said that “there is not a lot of evidence” for the figures,<sup>175</sup> Guy Lester said that DE&S disagreed with some of the assumptions behind the figures<sup>176</sup> and Dr Andrew Tyler said that Gray’s figures were based on generalisations from a very small sample of projects.<sup>177</sup> However, DE&S witnesses broadly supported Gray’s qualitative analysis. CDM told us that he accepted the equipment programme was overheated.<sup>178</sup> Guy Lester said that “we totally accept the analysis in Bernard Gray’s report, which is that all sorts of things of things ... are dependent on having a more balanced programme than we have at the moment”.<sup>179</sup> Dr Andrew Tyler agreed, saying that “qualitatively I think we would agree with the vast majority of Bernard Gray’s conclusions; once or twice I have described them as ‘glimpses of the bleeding obvious’”.<sup>180</sup> The Minister for Defence Equipment and Support appeared to be less convinced. He told us that “Some of his judgements I found persuasive, some of his judgements I found less persuasive; some of his recommendations I thought attractive, some of his recommendations I thought less attractive”.<sup>181</sup>

75. Bernard Gray described to us the process which his review team had used to collect and analyse MoD data, to discuss draft conclusions with MoD staff and to agree subsequent presentation of the data in the report. He said that:

As far as we are concerned, any questions we were asked, any issues that were raised, were answered in that process, which was substantially complete by early July and, to our knowledge, the people who are in charge of numbers inside of Abbey Wood and in MoD Main Building are in agreement with us about our numbers.<sup>182</sup>

Bernard Gray said that there did not appear to be a “wholly singular view” within the MoD as to whether the equipment programme was unaffordable:

There are a substantial number of people, and I believe that includes the Secretary of State and Lord Drayson, for example, who accept the analysis in this report and are

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174 *The Gray report*, p 16

175 Q 2

176 Q 72

177 Q 64

178 Q 2

179 Q 76

180 Q 81

181 Q 486

182 Q 609

intending to do something about it. There are other people, some of whom came and talked to you, who appear, as far as I can tell, to think that there is not a problem, so I do not think there is a single view inside the Ministry of Defence.<sup>183</sup>

Lord Drayson told us that CDM, and the whole ministerial team were all agreed with regard to the importance of implementing Gray's recommendations "with full vigour" and that there was "clear ministerial focus around the reform process".<sup>184</sup>

**76. The Gray team attempted to establish a basis of agreed facts with the MoD, but, despite the fact that MoD staff provided the data to the review team and were given the opportunity to review early drafts of the report, some key senior individuals in DE&S told us that they did not accept the data presented in the report. Whilst we welcome the willingness of DE&S openly to consider the qualitative recommendations of the Gray report, we are concerned that the lack of agreement within MoD on the extent of the problem forms a poor basis on which to build effective reform. We return to the issue of implementation of Gray's recommendations in paragraph 113.**

77. The Gray report included a summary of around 50 specific recommendations and related these to three main areas of concern:

- i. balancing the equipment programme and keeping it in balance;
- ii. providing better leadership and separating and clarifying roles and accountabilities between the MoD Centre and DE&S; and
- iii. injecting key skills and tools into DE&S, possibly through a partnership with a private sector programme management organisation.<sup>185</sup>

We consider each of these issues in turn in the following paragraphs.

## Balancing the equipment programme

78. We discussed the issue of the funding gap in Chapter 3 and referred there to the conclusion in the Gray report that the equipment programme was significantly out of balance with funding projections. In this section, we review Gray's analysis as to why the programme became out of balance, and his recommendations for reform. Bernard Gray told us that he used the phrase 'out of balance' to mean that "the proposed equipment acquisition by the MoD is substantially in excess of any likely projected future funding", meaning that either there was substantial under-funding or excessive demand.<sup>186</sup>

## Regular Strategic Defence Reviews

79. The Gray report suggested that a key reason why the equipment programme had become out of balance was because the full cost implications had not been fully spelled out

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183 Q 636

184 Q 686

185 *The Gray report*, pp 7–8

186 Qq 604–605

at the time of the 1998 Strategic Defence Review. At that time, the partial cost estimates for some significant components had “pointed to significant, and unaffordable, bulges in equipment spending beyond the formal 10-year planning horizons of the MoD”, but the view had been taken by all concerned “that some kind of ‘bow wave’ had existed within the equipment programme for a long time, and that its effects had always in the end been smoothed out”. It concluded that “with the benefit of hindsight it now seems clear that the very existence of this bow wave is itself a significant contributor to the problems that have plagued defence procurement over a long period” and that:

In reality the bow wave allows the MoD to maintain a position that a whole variety of defence capabilities are in the process of being procured. This feels reassuring to the country about the size and scope of Britain’s Armed Forces, but behind this comforting thought is the cold fact that the budget does not exist, and has arguably not existed since the end of the Second World War, to support this level of ambition.

The policies of successive governments, and a lack of political will to present to the electorate the unpleasant reality of the position, has been a significant force behind this double-think.<sup>187</sup>

The Gray report commented that “there is worrying evidence that the problems are not just an endemic burden, but that they are an accelerating problem” and that “the problems of prior years are compounding with the problems of current years to produce an increasing rate of delay and cost increase”. It also suggested that it was not possible to be precise about the time at which problems would “start to compound at a catastrophic rate”, but that “it does not feel very far away”.<sup>188</sup>

80. The Gray report stated that “Some military planners have argued that efforts to update their detailed plans have been hampered by the lack of a new strategic framework in which to set their ideas” and that “In corporate life, no enterprise should persist with a 12 year old strategy without at least re-evaluating it fully on a regular basis”. It recommended that “a Strategic Defence Review process be conducted on a regular 4 or at the most 5-year basis” and that this “should be enshrined in legislation to ensure that incoming governments did not try too easily to slip out of any difficult examinations of these issues”.<sup>189</sup> The Secretary of State has accepted this recommendation.<sup>190</sup>

81. Industry witnesses welcomed the proposal to conduct regular SDRs, but also expressed concern that the scope of the SDR would have an overly narrow focus, pointing out the importance of maintaining an up-to-date Defence Industrial Strategy to enable industry to make the necessary long term commitments to technology, skills and resources to provide the required defence equipment. Ian Godden, Secretary to the Defence Industries Council and Chairman of ADS Group Ltd, said that “there is a fear that ... the next Strategic Defence Review and Defence Industrial Strategy will simply focus on procurement reform and not deal with the other very important strategic matters about capability, operational

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187 *The Gray report*, p 23

188 *ibid.*, p 20

189 *ibid.*, pp 22–23

190 HC Deb, 15 October 2009, col 34WS

sovereignty and the need for an industrial base, and that this becomes the focal point and wrongly so.”<sup>191</sup> Ian King agreed, saying that “We are concerned that the Green Paper will be done in the absence of looking at what the industry provides as part of the Defence Review”.<sup>192</sup> Industry witnesses also expressed concern about the impact of the inevitable period of uncertainty on small and medium sized enterprises (SMEs) in the defence industry. Dr Sandy Wilson pointed out that:

Very few SMEs are sitting with fat order books with several years of sales that allow them to weather any reduction in order output by a principal customer such as MoD. Therefore, the SDR really ought to be conducted on a timescale which does not have a terribly deleterious effect on their business. One fears that when we get into the purdah that is always associated with an SDR there will be some fallout, especially in the SME community, and it will cascade down through the primes, the mid-tier and finally hit hardest those who are least able to cope.<sup>193</sup>

**82. The Gray report concluded that the MoD’s budget is insufficient to deliver its planned procurement programme, and that there is an accelerating issue of the problems of prior years compounding to produce an increasing rate of delay and cost increase. Witnesses from the MoD and from industry accepted this analysis and the need for urgent action to rebalance the equipment programme.**

**83. We welcome the commitment from MoD ministers to establish regular Strategic Defence Reviews in order to maintain an up-to-date strategic context for the equipment programme. There is a risk that more frequent SDRs could undermine the longer term planning of the equipment programme and the MoD must establish ways to manage this inevitable tension. We note the concerns of industry representatives that the next SDR and the next version of the Defence Industrial Strategy will be focused too narrowly on procurement reform, and urge the MoD to ensure that wider capability and industrial issues are also addressed, so as to ensure that industry can make the necessary long term commitments to technology, skills and resources. We would welcome more information on the extent to which the industry partnering proposals set out in Chapter 6 of the Defence Acquisition Strategy have already been developed, and the anticipated scope of their contribution to achieving greater value for money in defence. We also request an explanation as to how the partnership arrangements will be reconciled with the commitment given in the Green Paper for greater transparency. Our successor Committee may wish to return to this issue and to consider the implications of such industry partnerships for the future role of Parliamentary scrutiny.**

### ***Ten year rolling budget***

**84. The Gray report recommended that “the MoD’s budgeting should be moved from the current short-term cycles to a ten-year rolling budget”. It stated that:**

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191 Q 341

192 Q 355

193 Q 358

The deal across government should be that the MoD's programme should be brought into a genuine and transparent long-term balance, reported to Parliament and externally audited, and in return the MoD should be funded on a long-term basis that allows it to manage effectively.<sup>194</sup>

The Secretary of State did not commit to the proposal of a ten-year rolling budget for the MoD, but announced that the equipment programme would be planned to a longer time frame “with a ten year indicative planning horizon for equipment spending with Treasury”.<sup>195</sup> Bernard Gray acknowledged that there were constraints on what government could commit to,<sup>196</sup> but described the ten year indicative planning horizon as “a sort of promise with one's fingers crossed”<sup>197</sup> and said that he would have preferred to go further.<sup>198</sup> Lord Drayson agreed, saying that “Certainly it is not the same as a legally binding commitment, but I think it is important progress”. Sir Bill Jeffrey suggested that it would not be realistic to expect Treasury to make a more absolute commitment but that the provisional agreement on a ten year indicative planning horizon was nevertheless “a real step forward”.<sup>199</sup> Lord Drayson explained the benefits of creating a ten year framework:

... it is about giving the Ministry of Defence the ability to take decisions in terms of the flexibility of spending between projects such that they can cope with the reality of the nature of defence—the enemy changes its tactics, technology changes, inflation may change—but at the same time having the confidence that it can do that within an overall planning envelope for the equipment plan as a whole, which is acceptable. That is not the way it is done at the moment, it is done by Treasury approval on specific projects ...<sup>200</sup>

Lord Drayson said that an agreement had been reached in principle with the Treasury, and that more details would be published with the strategy for acquisition reform.<sup>201</sup>

85. Industry witnesses supported the proposal to have a longer term budget framework. Ian Godden said that industry's view was that a longer term planning commitment was “long overdue”. However he pointed out that if, the budget commitment was to be set at a time of depressed economic conditions, “you get into an argument about whether the cyclical nature of the economy and the needs of the nation have been cemented in at the wrong time”. He explained that:

We would assume a ten-year plan is then refreshed quite regularly as most ten-year plans can never survive the ten years. The idea of an SDR every five years and a DIS as a follow-through to that is a sensible thing to do with a ten-year programme where

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194 *The Gray report*, p 26

195 Written Ministerial Statement, 15 October 2009, col 35WS

196 Q 681

197 Q 680

198 Q 679

199 Q 698

200 Q 701

201 Q 703



you can make decisions about bringing things in and out of it and have to adjust, as all corporations do, to changing circumstances.”<sup>202</sup>

Sir Brian Burrige, Vice President Strategic Marketing, Finmeccanica UK Ltd agreed, explaining that “There needs to be a much clearer view of what proportion of national wealth is a government willing to commit to defence and security.”<sup>203</sup>

**86. We accept that there are wider constraints which limit the Government’s ability to make a firm ten year commitment with regard to the MoD’s budget. We consider, however, that the fact that other Government departments would demand the same treatment would be not be a reason for the Government to resist it. The scale and nature of MoD contracts is quantitatively and qualitatively different from other Government procurement. It is clear that greater financial stability could help to control and reduce the hundreds of millions of pounds of unproductive costs which are incurred annually to keep the equipment programme spend within each year’s budget. We welcome the proposal to introduce a ten year planning time-frame for equipment expenditure but we doubt that the proposed ten year planning horizon will provide sufficient certainty to stabilise the equipment programme. We recommend that our successor Committee returns to this issue when further details about HM Treasury’s agreement with the MoD are made available.**

### ***Scrutiny and transparency of the equipment plan***

87. The Gray report recommended that the costings in the equipment programme and the veracity of the estimates be subject to independent audit by a major accounting firm; and the audit report published. The MoD advised us that the NAO had agreed in principle to conduct such audits, starting with the SDR, and that it was now developing a proposed approach.<sup>204</sup>

88. Lord Drayson described the proposed increased transparency about the equipment programme as “a critical component of a reform package”, saying that:

Clearly, it has to be done within the constraints of national security and, in some cases, relating to commercial confidentiality, but the more that we can have transparency about the acquisition process, the more effective I believe it will be.

The MoD’s acquisition reform progress report listed one of its eight commitments as “Establish a ten-year planning horizon and increase transparency”, and recorded the status of this task as “On Track. Ministers, HMT and Cabinet Office have agreed that MoD will annually share its assessment of affordability with the HCDC”. However, it listed no activities to provide wider public scrutiny, nor any other measures to increase transparency.<sup>205</sup>

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202 Q 366

203 Q 370

204 Ev 118

205 *ibid.*

89. The MoD told us that it had asked the NAO to audit its assessment of affordability of the equipment programme. We welcome this and seek an assurance from the MoD that the NAO will be given access to all of the relevant technical and commercial data necessary to do this job properly. DE&S has accepted that its cost estimating has been poor and such independent scrutiny will be necessary to provide evidence that the new iteration of the equipment programme resulting from the SDR is closely matched to available resources.

90. Whilst we also welcome the commitment by the MoD that it will annually share its assessment of affordability with us, we note that this falls well short of the Gray report's recommendation that the annual audited assessment should be made public. Transparency is not a practice which has traditionally been embraced by the MoD. Although the MoD has identified increased transparency as one of the commitments in its strategy for acquisition reform, it has provided no details of any concrete steps or milestones for realising that ambition. We ask the MoD to provide us with a description of the specific measures it plans to take in order to ensure greater transparency. We also ask the MoD for an undertaking that it will provide our successor Committee with accurate and complete responses to its requests for information.

### *Incremental development*

91. The Gray report suggested that one of the benefits of a balanced equipment programme would be to facilitate the use of “sensible processes such as ‘spiral development’ and ‘technology insertion’ which were heavily discouraged by the current overheated programme”. It proposed that:

Development risk (and hence cost overrun/delay) could be reduced by introducing equipment into service, with space allocated within it to introduce more sophisticated technologies later, and to learn from using the equipment rather than trying to guess at all ends before the first of type is ever fielded. But bitter experience shows that any restraint shown in this way will be punished by the loss of uncommitted budget to some other more immediate requirement at a later date. ‘Bid High Spec, Bid Full Spec’, seems to be the encouraged behaviour, however much technical risk that this imposes.<sup>206</sup>

92. Industry witnesses agreed that benefits could result from an incremental development approach. Dr Sandy Wilson said that:

we could do a lot more to deliver earlier an initial capability which could then be onward developed through a spiral development process. This has a tremendous advantage of eliminating, or at least reducing, vast swathes of risk that go in the greater the complexity of your target. This leads to faster acquisition, probably better value for money and automatically even improves exportability of the product at the end of the day.<sup>207</sup>

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<sup>206</sup> *The Gray report*, p 32

<sup>207</sup> Q 267

Sir Brian Burridge described the example of Typhoon which had come into service with very basic operational capacity and then been upgraded.<sup>208</sup> Witnesses said that it would not necessarily be appropriate for all platforms or across all technologies; saying “there could be no 80% solution for body armour for example”, but that there were other areas such as armoured vehicles and communication systems which were appropriate.<sup>209</sup> Sir Brian Burridge explained that “the ability to do spiral development does depend on the nation’s ability to maintain the skill base in its engineering industry. ... just doing support availability contracts on a support basis does not necessarily preserve the highly skilled aspects of systems engineering, of design engineering and of development engineering. These are very important aspects in being able to do spiral development.”<sup>210</sup>

**93. The Gray report proposes that development risk, and hence time and cost overruns, could be reduced by introducing equipment into service with an initial operating capability which could then be upgraded. Industry witnesses agreed that acquisition could be faster, provide better value for money and greater export potential if this approach were to be taken, provided that steps were taken to ensure that the engineering industry skill base was maintained. We recommend that the MoD provide us with an evaluation of the scope for using an incremental approach, setting out the steps it will take to overcome the obstacles to this approach which were outlined in the Gray report.**

### Clarifying roles and accountabilities

94. The second group of recommendations in the Gray report related to ways of improving MoD leadership and decision-making processes in order to ensure that the equipment programme stayed in balance. With regard to the planning of defence capability, the Gray report identified a number of underlying factors driving the unaffordability of the equipment procurement and support programmes and other problems with the current planning and financial control processes. It stated that, whilst cutting back programmes might bring the equipment programme back into balance, there were “serious and deep-rooted behavioural and organisational issues that will drive again towards unaffordability”. In oral evidence, Bernard Gray described the MoD’s decision-making processes for keeping the equipment programme under control as “dysfunctional”,<sup>211</sup> and said that:

...the behaviour of putting things in the programme and slowing everything down is endemic and it is expensive and they do not, systematically at least, understand how much that actually costs them.<sup>212</sup>

95. The Gray report made a number of recommendations to improve leadership, decision-making and accountability, one of which was the formation of an Executive Committee of the Defence Board. The Executive Committee would be chaired by the Permanent

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208 Q 270

209 Q 317

210 Q 331

211 Q 637

212 Q 639

Secretary and would be accountable for an affordable Equipment Programme. Bernard Gray explained that:

...the attempt to make the Permanent Secretary legally responsible to Parliament for a balanced programme ... is an effort on our part to force him to say no to people who want things in the Department that the Department cannot afford ...<sup>213</sup>

With regard to improving the performance of equipment and support delivery, the Gray report recommended that the original Smart Acquisition principle of a clear distinction existing between customer and project deliverer should be reasserted, and that a real customer-supplier relationship should be created between the capability sponsor (MoD centre) and project delivery (DE&S).<sup>214</sup> It also recommended that aspects of the approval process be revised to improve decision-making<sup>215</sup> and that further cost reductions within in-service support be pursued and the aspirations of through life capability management (TLCM) be reappraised.<sup>216</sup>

96. Industry witnesses agreed that there was room for improvement in the MoD's decision making processes. Ian Godden told us that "decision-making between Armed Forces and procurement, or customer, for industry is very often too lengthy, is quite often unclear or unstrategic, and therefore gets reversed or can have a period of uncertainty created around it, and that aspect of the decision-making and the clarity of decision-making and direction is something that we believe does need to be tackled."<sup>217</sup> Sir Brian Burridge described a tendency for "tribal rivalry" among the individual Services which led to a lack of strategic thinking, a tendency to generate complexity in decision-making and a failure to recognise time was cost; and he pointed out that "these behaviours which either leave decisions tenuous or unmade have a cost to them".<sup>218</sup> The MoD advised us that it had already implemented Gray's recommendation to create a Defence Board Executive Committee, and that the first meeting had taken place in November 2009. It also stated that other proposals were being developed to improve project initiation and control and to "sharpen" relationships.<sup>219</sup>

**97. One of the three key areas of weakness identified by the Gray report was the lack of clarity and leadership from those in charge of the MoD, which resulted in poor decision making processes and an inability properly to keep the equipment programme under control. The Gray report concluded that, even if the equipment programme were to be brought back into balance by the next SDR, poor leadership and decision-making processes would soon cause old problems to return and the programme again to become unbalanced. We note that the Defence Acquisition Strategy includes a number of specific actions to improve leadership and decision-making and the MoD should provide us with a progress report on these activities.**

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213 Q 638

214 *The Gray report*, p 160

215 *ibid.*, p 162

216 *ibid.*, p 164

217 Q 263

218 Q 265

219 Ev 119

### **Through Life Capability Management (TLCM)**

98. TLCM seeks to harmonise and maximise defence output by ensuring that all areas of defence activity that have an impact on one another are considered together. It aims to ensure that capability delivery is viewed at a more strategic level rather than just the delivery of individual new equipment projects or individual in-service capabilities. The Gray report noted that:

A large number of factors exist from relatively early in a project's lifecycle that later lead to delay and increased costs. This includes the failure of the Department to consider whole life costs on a regular basis ... These effectively hide true costs and store up problems for later in a projects life ...<sup>220</sup>

However, the report described TLCM as “fearsomely complex” and “fraught with potential pitfalls in practice”. The key problems it identified were a lack of financial data and financial management skills available to members of Programme Boards; the tendency for TLCM to blur lines of accountability (made worse by rapid rotation of staff through posts); and an environment within the MoD which did not support the concept of increasing short-term spending to gain economies in the longer-term. It recommended that “TLCM should be considerably simplified, and financial modelling tools should be imported along with the staff capable of using them to allow the system to make choices.” The NAO *Major Projects Report 2009* made a similar assessment.<sup>221</sup>

99. Industry witnesses supported the use of TLCM and were of the view that its aims were achievable, but that DE&S was aiming too high too soon, for example by trying to trade across lines of development.<sup>222</sup> CDM told us that creating DE&S as an entity had made TLCM easier to deliver, but that “It is not easy; it needs working at. ... but the prize is well worth seizing for Through Life Capability Management and I do not agree that it is as complex as Bernard Gray suggests.”<sup>223</sup> Vice Admiral Lambert said that “I think that Bernard Gray highlighted a real risk that we can, or could, over complicate these issues ... in response to Bernard Gray, I would say that we are aware of the risks and we are trying to manage them”.<sup>224</sup> The Minister for Defence Equipment and Support agreed.<sup>225</sup>

**100. The Gray report recommended that the MoD's aspirations for Through Life Capability Management (TLCM) be reappraised. Witnesses from industry and the MoD were unanimous that TLCM was the right way to proceed, in order to support the making of sound decisions. However, evidence from the Gray review and from industry indicates that the MoD's TLCM approach is incomplete and over-ambitious. We note that both the Gray report and the NAO identified a lack of financial tools and data as significant factors affecting the implementation of TLCM. We ask the MoD to provide a report setting out the progress it has made in addressing these issues, and in**

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220 *The Gray report*, p 159

221 NAO, *The Major Projects Report 2009*, pp 28–30

222 Qq 272 and 274

223 Q 4

224 Q 488

225 Q 487

**particular the progress made on the specific activities described in the relevant section of the Defence Acquisition Strategy.**

### **Injecting key skills and tools into DE&S**

101. The third group of recommendations in the Gray report related to the need to improve skills within DE&S, and ways in which the necessary skills improvements might be achieved via some form of private sector partnership. The report concluded that DE&S “needs significantly greater skills and tools in a number of areas if it is to be able to deliver effectively on a better-balanced programme”. It specifically identified a need for a greater level of resources and skills in programme and project management, finance, cost estimating, engineering and contracting, and for better project management and management information systems.<sup>226</sup> It added that the skills shortages were “exacerbated by the current rotation system for military personnel and civil servants, which has created a situation where mobility is prized/required and tenure is short”.<sup>227</sup> The Gray report identified a lack of continuity of staff in positions of responsibility as a “key concern” and commented that this contributed to a lack of accountability for project performance over the long-term; an increased reporting/briefing burden; a loss of context and knowledge; and a loss of working relationships. It compared the tenure in post for 30 team leaders of large projects being managed by DE&S with that in 2003 and concluded that the tenure of project leaders had decreased significantly over the past five years.<sup>228</sup>

### **Staff skills**

102. CDM told us that he accepted that there was a shortfall of relevant skills in DE&S.<sup>229</sup> He accepted that cost estimation needed to be improved and cost estimation tools used more widely across the Department, saying that the equipment programme was overheated partly because of inadequate cost estimation and partly because “our aspirations are always much greater than the money we have available”.<sup>230</sup> He explained that DE&S was seeking to improve its skills in four main areas: cost assurance (including cost forecasting, cost engineering and cost certification); technical assurance; financial skills; and complex programme management.<sup>231</sup> However, he added that “as far as project management is concerned, DE&S is the best in government, and I am not too sure we are not the best across industry as well”.<sup>232</sup> He said that “I have in my organisation 700 people with project management qualifications, external civilian project management qualifications. That is a pretty good record.”<sup>233</sup>

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226 *The Gray report*, p 7

227 *ibid.*, p 179

228 *ibid.*, pp 183–184

229 Q 7

230 Q 13

231 Ev 113

232 Q 16

233 Q 499

103. Bernard Gray told us that he had discovered that half of the management accounting jobs in the Finance Department of DE&S were not filled by qualified accountants, and that the explanation of the Finance Director had been that he was unable to pay sufficient salary to attract qualified accountants into those jobs.<sup>234</sup> Sir Bill Jeffrey said that it was always going to be hard to compete with the outside world, but that “the trend in recent years had certainly been towards the professionalisation of the finance function right across the MoD.”<sup>235</sup>

104. Industry witnesses told us that they believed there was a shortfall in skills within DE&S, and that this was part of a wider skills problem. Ian Godden said that:

There is a shortage ... of skill-base in programme management, systems engineering and equivalent, and you can see that across many industries in the West ... it is not just a UK problem. Overall there is a shortage of high skill in that area, but the skill level within DE&S and equivalent is lower than you would expect and is lower than necessary.<sup>236</sup>

He added that:

As I survey the four sectors I am involved in—civil aviation, defence, civil aerospace and security ... the demands on that type of skill are increasing over time, and with the civil nuclear coming into that equation quite dramatically, there is a real risk of a further skill drain out of the traditional defence sector, particularly because ... [people] are beginning to fear that the security, space and civil nuclear are much better future careers for them because it has got growth, it has got expectations of more money, it has got more research etc and there is therefore a belief that defence has got this risk of being stuck in a box and not going anywhere.<sup>237</sup>

Dr Sandy Wilson agreed, saying that:

It is not just an MoD versus defence industry issue. In fact as we progress into the reinvigoration of nuclear energy in this country, we are going to find a whole gamut of technologists being required across a much wider industrial landscape than we currently have in defence, and they are the same skills—systems engineering, complex contracting ..., programme management. ... As other industries come up in importance that is going to be a greater problem, and it speaks to us having to have a skills strategy that feeds all of those industries over the next ten to 20 years.<sup>238</sup>

105. Ian King agreed that there was a salary differential between industry and MoD but denied that MoD trained staff would necessarily move to better paid jobs in industry.<sup>239</sup> Sir Brian Burr ridge suggested that acquisition reform over the years had changed the skills needs within the MoD away from contract writing skills towards a more commercial

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234 Q 647

235 Q 720

236 Q 280

237 Q 291

238 Q 281

239 Q 288

approach. He said that “the challenge for the MoD is to get the commercial experience; the challenge for industry is to understand the user better”.<sup>240</sup> Ian King pointed to the need for a long term commitment to training, saying that “You ... have to put in training schemes, you need a skills strategy and there has to be a commitment to meet these training schemes, because there is not a surfeit of these types of people with these skills sets.... It is a really long-term commitment.”<sup>241</sup> He also said that this long-term commitment would need to underpinned by “a proper SDR which then determines the Defence Industrial Strategy and that allows us to invest, because it takes a long time to train these people.”<sup>242</sup> He told us that there were already joint training schemes available both to the MoD and to industry.<sup>243</sup> Sir Brian Burridge added that:

Following the creation of the Defence Academy and real focus on acquisition skills, I think it has moved a long way since the days when it was the Royal Military College of Science focusing purely on weapon technology. I think there is some very good management training available. No doubt it is proving difficult for the MoD to release people. We release people and it is difficult for us as well but you have to make that investment.<sup>244</sup>

106. The skills required by project and programme managers in the defence industry are particularly specific which means that they are not interchangeable with those in other industries. In a review of education in defence systems engineering, the Defence Engineering Group (1991–2004) at University College London have commented that:

... the delivery of an education in defence systems engineering presents a difficult challenge. Defence systems engineers must have not only a sound knowledge of a broad range of engineering, analytical, management and military topics relevant to their equipment projects, but also an overarching understanding of how these topics and their multiple interactions affect the acquisition process.<sup>245</sup>

### **Staff rotation**

107. CDM did not accept that there was too much staff rotation. He told us that he did not perceive a problem with regard to the movement of staff,<sup>246</sup> he did not believe it had increased,<sup>247</sup> and that he did not recognise the figures on staff rotation quoted in the Gray report.<sup>248</sup> He explained that “The reason the military are there is to bring current operational experience, and it is less important that they stay there forever. Civil servants are the continuity, they actually produce that deep continuity and the understanding of

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240 Q 290

241 Q 283

242 Q 295

243 Q 345

244 *ibid.*

245 *Conquering Complexity: Lessons for defence systems acquisition*, The Defence Engineering Group, 2005, p 285

246 Q 29

247 Q 24

248 Q 27



business.”<sup>249</sup> He said that some staff had been moved away from the project teams they were originally on to work on UORs<sup>250</sup> and Dr Tyler suggested that there appeared to be more changes than had occurred in reality because of changes in job titles and project team boundaries which had resulted from recent organisational restructuring.<sup>251</sup> Sir Bill Jeffrey told us that he had seen some analysis that the staffing arrangements were steadier than Gray had suggested, but added that “we probably need more continuity than we have even now”.<sup>252</sup> Lord Drayson described some of the ways in which he planned to reduce staff rotation:

I feel this is an issue which we need to look at very carefully indeed. I have asked the chiefs of the Services to take very seriously the idea that they should be flexible in their career planning within the Services to ensure that those people posted into defence procurement, particularly into major IPTs [integrated project teams], are posted with sufficient flexibility that they can make sure that they are able to effectively carry out that role.<sup>253</sup>

### **Staff numbers**

108. As part of the PACE (Performance, Agility, Confidence and Efficiency) programme launched by DE&S in March 2008 to transform DE&S into a more effective organisation, DE&S staff numbers have been reducing from around 27,000 in 2007–08 to a target of 20,000 by 2012. In our *Defence Equipment 2009* Report, we expressed some concern that DE&S was pushing ahead with this streamlining programme, given that procurement performance had declined in 2007–08.<sup>254</sup> CDM confirmed to us that reductions in staff numbers were still planned, saying that “I believe that DE&S can come down to a figure of 20,000—we are at about 22,000 now; but ... we must spend money on re-skilling and up-skilling if we are to get down to those sorts of numbers.”<sup>255</sup> He explained that one of the consequences of the programme was that some of the work previously done by DE&S was being outsourced to industry.<sup>256</sup>

### **Private sector involvement**

109. The Gray report suggested that the best way to provide the necessary injection of skills and tools into DE&S would be “through a partnership with a private sector programme management organisation, of the type operating in civil engineering and other complex engineering fields”. It stated that “The suggested route to achieve this is through a Government-owned, Contractor-operated (Go-Co) entity”, but that “At the very minimum it [DE&S] should become a Trading Fund”.<sup>257</sup> Bernard Gray told us that the

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249 Q 17

250 Q 56

251 *ibid.*

252 Q 718

253 Q 717

254 HC (2008–09) 107, para 71

255 Q 6

256 Q 496

257 *The Gray report*, pp 12–13

review team had considered five principle types of business model: next-steps agency, trading fund, outright privatisation, Go-Co, and leaving DE&S as it is.<sup>258</sup> He said that the team's central assumption had been that the Go-Co would be the best operating model, but that further work was necessary in order fully to understand the implications.<sup>259</sup> With regard to the trading fund option he said that:

A trading fund would have the advantage of ensuring that there was clarity between the requirements community and the head office on the one hand and DE&S, as deliverer of the programme, on the other. ...the trading fund would give some management freedom of action to the trading fund chief executive, but not as much as a Go-Co would, so it would be a step in the right direction, in my view, but maybe not far enough.<sup>260</sup>

110. Ian Godden described the Go-Co proposal as “a mechanism to get an electric shock through the system”, but said that it was industry's view that it would not be a “very practical” answer.<sup>261</sup> Ian King explained the issues:

If we are talking about some Go-Co, so you are talking about this fantastic organisation that has got all these commercial, these programme management, these financial skills as specialist to the area, all of which we debated earlier and which are in short supply, where is this going to come from? What benefit are we going to have from putting somebody between industry and the MoD when, if you look at the real things which are showing progress, the real things which are showing value, these availability contracts, these partnering structures, if we think of how the munitions programme is now structured, the terms of business around naval, that is the way forward rather than putting some artificial interface in the way.<sup>262</sup>

With regard to the creation of a Trading Fund, Sir Brian Burridge said that:

It will take a long time to create a trading fund out of the structure that they have already, and it does provide the one advantage, necessity even, that a Go-Co does not. Under a Go-Co structure I was hard pressed to understand how, say, the Permanent Under Secretary as the Accounting Officer would exercise his accountability because so much of decision-making would potentially be outside his purview and I think he would have a very difficult time justifying a programme, say, in ten years' time that was run under a Go-Co arrangement.<sup>263</sup>

111. Lord Drayson said that he had rejected the Go-Co option because he believed it vital that the military were fully involved in the process of defence acquisition, and that defence acquisition should not be seen as a semi-detached activity from defence. He explained that “Therefore, I believe that what we should do, and what we are doing, is implement the changes to get the advantages that you would get from a Go-Co structure: common project

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258 Q 673

259 Q 666

260 Q 673

261 Q 332

262 Q 335

263 Q 343

management tools, improved skills, a clear project management charging structure between the people responsible for the projects and the people who are the customers for the project.”<sup>264</sup> He added that the trading fund option was still “on the table”, but that it would also have “some of those disadvantages in terms of putting it slightly at arm’s length.”<sup>265</sup>

**112. Over the years we have highlighted the need for key skills in acquisition and procurement, and have received reassurances from the MoD that appropriate training programmes were in place. However, we are unconvinced that DE&S has a properly effective strategy for the training and education of its staff, and believe that it has failed to prioritise this issue. Project leaders in DE&S must have an understanding of all of the military, technological, industrial and political issues which impact on their projects. What is required is not only the provision of appropriate training, but also a longer-term commitment to career management which is organised to suit efficient acquisition, not just military needs, and a recognition that key project staff have to be released from time to time to attend proper education and training. The MoD should provide an update on the progress it has made with regard to the actions described in the Defence Acquisition Strategy to achieve the necessary levels of staff skills.**

### **The implementation of Gray’s recommendations**

113. On 15 October 2009, following the publication of the Gray report, the Secretary of State and Lord Drayson announced that they would take the following steps:<sup>266</sup>

- i. A Green Paper to be published early in the New Year; a Strategic Defence Review to be undertaken immediately after the General Election; and the Government to examine legislative frameworks to require a Strategic Defence Review to be conducted early in the term of each new Parliament.
- ii. Equipment programme to be brought into balance with future requirements and likely availability of resources.
- iii. Equipment expenditure to be planned to a longer time-frame, with a ten year indicative planning horizon for equipment spending with the Treasury. This planning horizon to be published, along with an annual assessment of the affordability of the equipment programme.
- iv. Board-level governance to be strengthened within the MoD by the formation of a new sub-committee, chaired by the Permanent Secretary as Accounting Officer.
- v. Methods of costing projects in the equipment plan to be improved; better techniques to be applied more consistently; investment decisions to be based on the most reliable forecasts; management of risk across the programme to be improved.

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264 Q 744

265 Q 745

266 HC Deb, 15 October 2009, col 34WS

- vi. Stronger controls to be introduced with regard to the entry of new projects and changes to existing projects in the equipment programme.
- vii. The business relationship between MoD Head Office, DE&S, and the Service Commands to be ‘sharpened’ by clarifying roles and responsibilities and providing greater visibility of project management costs in DE&S to the Capability Sponsor.
- viii. Improvement of key skills (including cost forecasting and programme management) in DE&S and MoD Head Office to be accelerated.

114. The Secretary of State and Lord Drayson rejected Bernard Gray’s suggestion of establishing DE&S as a Government-Owned Contractor-Operator entity. They announced that they intended to publish a wider, more detailed Strategy for Acquisition Reform in the New Year. The MoD press release stated that Mr Gray would work with the MoD on the development of the strategy, although we later discovered that Mr Gray chose to leave the MoD at the beginning of December 2009. We asked the MoD in December 2009 to provide us with a progress report regarding the development of its acquisition strategy. Its initial response merely stated that the strategy was progressing and gave no new information,<sup>267</sup> but in January 2010 it provided a one-page paper describing a few specific actions and their current status.<sup>268</sup> The MoD published its acquisition reform strategy, *The Defence Strategy for Acquisition Reform*, on 3 February 2010.<sup>269</sup>

115. Industry witnesses expressed some concern that the Gray recommendations, whilst welcomed by Ministers, would not be translated into effective action. Ian Godden told us that there was a fear in industry that Gray would live as a document and would not have “the sharp implementation associated with it”, and that “perhaps [the Gray report] misses the people, leadership and implementation issues in addressing how this is going to become, not a change programme, but a reform programme, and that is, I think, the worry.”<sup>270</sup>

116. Witnesses from DE&S referred to changes which were already being implemented within the MoD in response to Gray.<sup>271</sup> However, the Minister for Defence Equipment and Support made it clear that he was not involved with Lord Drayson’s acquisition reform work, so it was unclear to what extent any changes within DE&S were being coordinated with the development of the strategy for acquisition reform.<sup>272</sup> The Minister for Defence Equipment and Support also made it clear that he did not agree with all of the conclusions of the Gray report.<sup>273</sup> Lord Drayson said that he was “optimistic” that the acquisition reform process would be effective,<sup>274</sup> saying that:

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267 Ev 112

268 Ev 118

269 Ministry of Defence, *The Defence Strategy for Acquisition Reform*, Cm 7796, February 2010

270 Q 304

271 Q 61

272 Qq 505–506

273 Q 486

274 Q 687

We are, I think, fortunate in that we have clear ministerial focus around the reform process. This is my job to make sure it has happened and I am very, very clear, in part because of my previous experience of having done the MinDES ministerial role. I know that for this to be successful it has to have the buy-in of MinDES and CDM.

**117. It is quite clear that some senior individuals in DE&S do not accept the need for radical reform, and that they are only reluctantly involved in the reform process. Whilst it might be possible to write a good reform strategy in isolation, it would clearly not be possible to implement it without united commitment from the leadership within DE&S. With the publication of the Gray report, the MoD has come clean about the extent of its problems with the equipment programme, but the Department will have to work hard to persuade people that it will not return to business as usual.**

**118. The MoD's Defence Strategy for Acquisition Reform explicitly accepts Gray's broad analysis of the difficulties faced by the Department with regard to defence acquisition, and includes a summary of objectives and key actions which it intends to take to address those difficulties. Some of the key actions correspond with recommendations we have made in this Report, although we await the further details which we have requested on a number of points. We expect the MoD to make a statement to the House by summer 2010, updating it on progress with acquisition reform. We hope that the NAO will report on acquisition reform progress as part of its *Major Projects Report 2010*, and we recommend that our successor Committee returns to this issue later in 2010.**

# Formal minutes

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**TUESDAY 23 FEBRUARY 2010**

Members present:

Mr James Arbuthnot, in the Chair

Mr David Crausby  
Linda Gilroy  
Mr David Hamilton  
Mr Mike Hancock

Mr Adam Holloway  
Mr Brian Jenkins  
Robert Key  
Mrs Madeleine Moon

Draft Report (*Defence Equipment 2010*), proposed by the Chairman, brought up and read.

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

Paragraphs 1 to 118 read and agreed to.

*Resolved*, That the Report be the Sixth Report of the Committee to the House.

*Ordered*, That the Chairman 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 printing with the Report, together with written evidence reported and ordered to be published on 1 and 8 December.

[Adjourned till Tuesday 9 March at 10.00 am

## Witnesses

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### Tuesday 1 December 2009

Page

**General Sir Kevin O'Donoghue KCB CBE**, Chief of Defence Materiel, **Dr Andrew Tyler**, Chief Operating Officer, Defence Equipment and Support, and **Mr Guy Lester**, Director Equipment Resources, Ministry of Defence

Ev 1

### Tuesday 8 December 2009

**Sir Brian Burridge KCB CBE ADC**, Vice President Strategic Marketing, Finmeccanica UK Ltd, **Mr Ian Godden**, Secretary to the Defence Industries Council and Chairman of ADS Group Ltd, **Mr Ian King**, Chief Executive of BAE Systems plc, and **Dr Sandy Wilson**, President and Managing Director, General Dynamics UK Ltd

Ev 25

### Tuesday 15 December 2009

**Mr Quentin Davies MP**, Minister for Defence Equipment and Support, **General Sir Kevin O'Donoghue KCB CBE**, Chief of Defence Materiel, and **Vice Admiral Paul Lambert**, Deputy Chief of Staff (Capability), Ministry of Defence

Ev 45

### Tuesday 12 January 2010

**Mr Bernard Gray**, author of *Review of Acquisition for the Secretary of State for Defence*, and **Mr Iain Evans**, Chairman, LEK Consulting

Ev 70

**Rt Hon Lord Drayson**, a Member of the House of Lords, Minister of State for Strategic Defence Acquisition Reform and **Sir Bill Jeffrey KCB**, Permanent Under Secretary, Ministry of Defence

Ev 82

## List of written evidence

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1	Ministry of Defence	Ev 93, 112, 113, 115, 118 121, 124
2	International Society for Human Rights, (British Working Group)	Ev 107
3	The Boeing Company	Ev 108
4	ADS (Advancing UK AeroSpace, Defence and Security industries)	Ev 110, 120

# List of Reports from the Committee during the current Parliament

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

## Session 2009–10

First Report	The work of the Committee 2008–09	HC 119
Second Report	MoD Winter Supplementary Estimate	HC 150
Third Report	National security and resilience	HC 149
Fourth Report	Readiness and recuperation of the Armed Forces: looking towards the Strategic Defence Review	HC 53
Fifth Report	Ministry of Defence Annual Report and Accounts 2008–09	HC 52

## Session 2008–09

First Report	Winter Supplementary Estimates 2008–09	HC 52 <sup>A</sup>
Second Report	The work of the Committee 2007–08	HC 106
Third Report	Defence Equipment 2009	HC 107 (HC 491)
Fourth Report	Spring Supplementary Estimate 2008–09	HC 301 <sup>B</sup>
Fifth Report	Ministry of Defence Annual Report and Accounts 2007–08	HC 214 (HC 534)
Sixth Report	The UK's Defence contribution to the UK's national security and resilience	HC 121
Seventh Report	Defence Support Group	HC 120 (HC 984)
Eighth Report	Service Complaints Commissioner for the Armed Forces: the first year	HC 277 (HC 985)
Ninth Report	Ministry of Defence Main Estimates	HC 773 (HC 986)
Tenth Report	Russia: a new confrontation?	HC 276 (HC 987)
Eleventh Report	Helicopter capability	HC 434 (HC 381)
Twelfth Report	Scrutiny of Arms Export Controls (2009): UK Strategic Export Controls Annual Report 2007, Quarterly Reports for 2008, licensing policy and review of export control legislation	HC 178 (Cm 7698)

<sup>A</sup> Government response published as a Memorandum in the Committee's Fourth Report (HC 301)

<sup>B</sup> Government response published as a Memorandum in the Committee's Ninth Report (HC 773)

## Session 2007–08

First Report	UK land operations in Iraq 2007	HC 110 (HC 352)
Second Report	Costs of operations in Iraq and Afghanistan: Winter Supplementary Estimate 2007–08	HC 138 <sup>A</sup>
Third Report	UK/US Defence Trade Cooperation Treaty	HC 107 (HC 375)
Fourth Report	The Iran hostages incident: the lessons learned	HC 181 (HC 399)
Fifth Report	Ministry of Defence Annual Report and Accounts 2006–07	HC 61 (HC 468)



Sixth Report	The work of the Committee in 2007	HC 274
Seventh Report	Medical care for the Armed Forces	HC 327 (HC 500)
Eighth Report	Operational costs in Afghanistan and Iraq: Spring Supplementary Estimate 2007–08	HC 400 <sup>B</sup>
Ninth Report	The future of NATO and European defence	HC 111 (HC 660)
Tenth Report	Defence Equipment 2008	HC 295 (HC 555)
Eleventh Report	Ministry of Defence Main Estimates 2008–09	HC 885 (HC 1072)
Twelfth Report	Scrutiny of Arms Export controls (2008): UK Strategic Export Controls Annual Report 2006, Quarterly Reports for 2007, licensing policy and review of export control legislation	HC 254
Thirteen Report	The contribution of Unmanned Aerial Vehicles to ISTAR capability	HC 535 (HC 1087)
Fourteenth Report	Recruiting and retaining Armed Forces personnel	HC 424 (HC 1074)
Fifteenth Report	UK operations in Iraq and the Gulf	HC 982 (HC 1073)

<sup>A</sup> Government response published as Memorandum in the Committee's Eighth Report (HC 400)

<sup>B</sup> Government response published as Memorandum in the Committee's Eleventh Report (HC 885)

#### Session 2006–07

First Report	Defence Procurement 2006	HC 56 (HC 318)
Second Report	Ministry of Defence Annual Report and Accounts 2005–06	HC 57 (HC 376)
Third Report	Costs of operations in Iraq and Afghanistan: Winter Supplementary Estimate 2006–07	HC 129 (HC 317)
Fourth Report	The Future of the UK's Strategic Nuclear Deterrent: the Manufacturing and Skills Base	HC 59 (HC 304)
Fifth Report	The work of the Committee in 2005 and 2006	HC 233 (HC 344)
Sixth Report	The Defence Industrial Strategy: update	HC 177 (HC 481)
Seventh Report	The Army's requirement for armoured vehicles: the FRES programme	HC 159 (HC 511)
Eighth Report	The work of the Defence Science and Technology Laboratory and the funding of defence research	HC 84 (HC 512)
Ninth Report	The Future of the UK's Strategic Nuclear Deterrent: the White Paper	HC 225-I and -II (HC 551)
Tenth Report	Cost of military operations: Spring Supplementary Estimate 2006–07	HC 379 (HC 558)
Eleventh Report	Strategic Lift	HC 462 (HC1025)
Twelfth Report	Ministry of Defence Main Estimates 2007–08	HC 835 (HC 1026)
Thirteenth Report	UK operations in Afghanistan	HC 408 (HC 1024)
Fourteenth Report	Strategic Export Controls: 2007 Review	HC 117 (Cm 7260)
Fifteenth Report	The work of Defence Estates	HC 535 (HC 109)

#### Session 2005–06

First Report	Armed Forces Bill	HC 747 (HC 1021)
Second Report	Future Carrier and Joint Combat Aircraft Programmes	HC 554 (HC 926)
Third Report	Delivering Front Line Capability to the RAF	HC 557 (HC 1000)

Fourth Report	Costs of peace-keeping in Iraq and Afghanistan: Spring Supplementary Estimate 2005–06	HC 980 ( <i>HC 1136</i> )
Fifth Report	The UK deployment to Afghanistan	HC 558 ( <i>HC 1211</i> )
Sixth Report	Ministry of Defence Annual Report and Accounts 2004–05	HC 822 ( <i>HC 1293</i> )
Seventh Report	The Defence Industrial Strategy	HC 824 ( <i>HC 1488</i> )
Eighth Report	The Future of the UK's Strategic Nuclear Deterrent: the Strategic Context	HC 986 ( <i>HC 1558</i> )
Ninth Report	Ministry of Defence Main Estimates 2006–07	HC 1366 ( <i>HC 1601</i> )
Tenth Report	The work of the Met Office	HC 823 ( <i>HC 1602</i> )
Eleventh Report	Educating Service Children	HC 1054 ( <i>HC 58</i> )
Twelfth Report	Strategic Export Controls: Annual Report for 2004, Quarterly Reports for 2005, Licensing Policy and Parliamentary Scrutiny	HC 873 ( <i>Cm 6954</i> )
Thirteenth Report	UK Operations in Iraq	HC 1241 ( <i>HC 1603</i> )
Fourteenth Report	Armed Forces Bill: proposal for a Service Complaints Commissioner	HC 1711 ( <i>HC 180</i> )

# Oral evidence

## Taken before the Defence Committee on Tuesday 1 December 2009

Members present:

Mr James Arbuthnot, in the Chair

Mr David Crausby  
Linda Gilroy  
Mr David Hamilton

Mr Bernard Jenkin  
Mr Brian Jenkins  
Mrs Madeleine Moon

*Witnesses:* **General Sir Kevin O'Donoghue**, Chief of Defence Materiel, **Dr Andrew Tyler**, Chief Operating Officer (DE&S) and **Mr Guy Lester**, Director Equipment Resources, Ministry of Defence, gave evidence.

**Q1 Chairman:** Good morning and welcome to this the first evidence session on our Defence Equipment Inquiry. Chief of Defence Materiel, you have been before us before but would you like to introduce your team, please?

**General Sir Kevin O'Donoghue:** Thank you very much: Dr Andrew Tyler, who is the Chief Operating Officer from Defence Equipment and Support; and Mr Guy Lester who is Director Equipment Resources from DCDS Capability's area in the Main Building.

**Q2 Chairman:** Thank you very much and welcome. It has been a very eventful year in defence equipment issues. One of the things that has happened has been the production of the Bernard Gray Review of Acquisition, produced at the request of the previous secretary of state, with the assistance of a team from people within the Ministry of Defence. I think it would be right to divide that review into the analysis that it does of the problems with defence procurement which have gone on for many years now, and the solutions it proposes to those problems. Dealing first with the analysis of the problems that it proposes—and I would be grateful if you could keep this to a few sentences and a few concepts—do you, by and large, accept the analysis of the problems?

**General Sir Kevin O'Donoghue:** I accept that he identified two areas where we need to do better. One is that the programme *is* overheated; I accept that. I do not agree with his figures and—as Quentin Davies said in Top Day after the report was produced—there is not a lot of evidence for the actual figures. I accept the equipment programme is overheated; and I accept that we need to do better, although I am very happy to come back and talk about what we are doing much better, project initiation and how we get projects into the programme. As far as his analysis is concerned, that is where I sit.

**Q3 Chairman:** The analysis was quite detailed as to how some of the problems leading to this overheating arise. Would you not accept the details of those problems, the analysis of those problems?

**General Sir Kevin O'Donoghue:** I do not accept the maths, no. There is very little evidence in the report for the maths. I turn to Dr Tyler who could give you some examples of where perhaps that evidence is thin.

**Q4 Chairman:** Through Life Capability Management he describes as “fearsomely complex”. Would you agree with that?

**General Sir Kevin O'Donoghue:** No, I do not. It is new. You will recall, and we have discussed this in this Committee before, some time ago we had Through Life Equipment Management which Peter Spencer and I were struggling with. Putting DE&S together as one organisation has made Through Life Equipment Management much easier to deliver. This is Through Life Capability Management which is of course pan-department, not just DE&S. It is not easy; it needs working at. If it was easy we would have done it many years ago, but the prize is well worth seizing for Through Life Capability Management and I do not agree that it is as complex as Bernard Gray suggests.

**Q5 Chairman:** The suggestion exists in his report on page 125 that since the merger of the DLO and Abbey Wood there has been a serious deterioration in time slippage and in cost slippage. Would you accept that?

**General Sir Kevin O'Donoghue:** No, I do not. Cost slippage, as I think you will see—I believe the NAO will report shortly in the MPR—is more to do with conscious programme decisions, or collaboration with our partners, or foreign exchange, than problems with the project teams. There is time slippage, I accept that: A400M, for example, is the biggest time slippage. No, I do not accept that it has got worse; in fact we have turned the corner. Since the Tyler/O'Donoghue team kicked off with DE&S 18 months ago I think we have turned the corner and we are beginning to see really quite a lot of progress. Astute has sailed and there are MRA4s heading in December 10 to the RAF. You perhaps do not know that the first Chinook Mk3 was taken over by the RAF this morning. I think we have got a good tale to tell. I do not accept what is in Bernard Gray's report, although I do accept the broad analysis.

**Q6 Chairman:** I see. Staff reductions: are you going to be making significantly greater staff reductions than have already been achieved?

**General Sir Kevin O'Donoghue:** I have always said, and I think I said to this Committee last year, I believe that DE&S can come down to a figure of 20,000—we are at about 22,000 now; but there is a proviso, a caveat, that we must spend money on re-skilling and up-skilling if we are to get down to those sorts of numbers. I believe that is the right number of people within DE&S, but they need to be in the right place and they need to have the right competences and, therefore, we are going to have to spend money on re-skilling and up-skilling.

**Q7 Chairman:** That is a part of the Bernard Gray review that you would accept, that there is a shortage of the relevant skills?

**General Sir Kevin O'Donoghue:** I do and I could explain the areas where I do think there is a shortage of relevant skills, if you wished?

**Q8 Chairman:** Yes, please.

**General Sir Kevin O'Donoghue:** I think there are four main areas.<sup>1</sup> One is in cost estimating, which I do accept we are not that good at it and I divide that into three areas, initial cost estimation, parametric costing. If you look at some of our equipment projects which have out-turned with cost growth, when the parametric costing has been done after the event they have cost about what they should have done. The second area is cost engineering, getting involved with the contract lawyers and the contract officers from big companies. The third area, under cost assurance, is cost validation after the contract is signed. I am short of people with those cost estimation skills and we are currently recruiting people to increase the size of our cost estimation service. I have got about 300 of them; I need about 420 of them.

**Dr Tyler:** We should also add that there are some areas of engineering discipline—

**General Sir Kevin O'Donoghue:** There are other areas but just on cost assurance.

**Q9 Chairman:** Do you think you have the right financial tools to do that cost assuring consistently used across the Department?

**General Sir Kevin O'Donoghue:** No. No, they are not. I would agree again that the cost estimation tools we need to push right across the Department.

**Q10 Chairman:** That is another area in which you accept the detail of the Bernard Gray report?

**General Sir Kevin O'Donoghue:** Indeed. What I said I did not accept was his maths and the something between £1–2½ billion adrift, which is what I think he says.

**Q11 Chairman:** Okay, so it is just the maths that you do not accept?

**General Sir Kevin O'Donoghue:** I do not agree with his maths, no.

**Q12 Chairman:** As for the analysis of the problems, leaving aside the maths, do you accept the general thrust of the analysis of the problems?

**General Sir Kevin O'Donoghue:** As I have said, I accept that we have an overheated programme; and I accept we are not good at project initiation. Part of that is cost estimation; part of it is financial accounting, which is the second area; part of it qualified engineers, both project engineers and programme engineers; and a part of it is technical assurance, which we are not good at. What we are very good at doing is assuring a process. What we are not good at doing—and there are some quite good examples—is being absolutely clear in our mind before Main Gate is agreed that the project is doable.

**Q13 Chairman:** Do you accept that the programme is overheated because of the matters identified by Bernard Gray?

**General Sir Kevin O'Donoghue:** It is partly overheated because of cost estimation—I would accept that. It is partly overheated because our aspirations are always much greater than the money we have available.

**Q14 Chairman:** That is explained by Bernard Gray?

**General Sir Kevin O'Donoghue:** Yes.

**Q15 Mr Jenkin:** I am glad to hear you are tackling the people issue. It is said that there are more people in the helicopters IPT than work for Finmeccanica Westland in Yeovil. I do not know whether that is true, but you would agree—

**General Sir Kevin O'Donoghue:** No I do not agree. I am sorry!

**Q16 Mr Jenkin:** It is one of those apocryphal things that floats around—I am glad you have corrected it! Numbers of people who are regularly moving through your organisation, moving in and moving out, are no match for industry people who are permanently fixed in their companies and see people in IPTs come and go. Are you addressing that problem?

**General Sir Kevin O'Donoghue:** No, I do not actually agree with you. I think that, as far as project management is concerned, DE&S is the best in government, and I am not too sure we are not the best across industry as well.

**Q17 Mr Jenkin:** “Best in government”, I was going to say that might not be a very good comparative! Surely somebody who is fixed in Finmeccanica Westland for 20 years is going to know the ropes better than people who are two or three years in the helicopters IPT and then move on to something else, which is typical with military people?

**General Sir Kevin O'Donoghue:** The reason the military are there is to bring current operational experience, and it is less important that they stay there forever. Civil servants are the continuity, they actually produce that deep continuity and the understanding of the business. There are some

<sup>1</sup> Ev 113

outstandingly good military project team leaders and they tend to stay two or three years. This is not a constant flowing structure.

**Q18 Mr Jenkin:** Is the fact that people leave your organisation and then go and work for industry a cause for concern? Does that create a conflict of interest?

**General Sir Kevin O'Donoghue:** It depends what level they are at. It is a cause for concern if they are really good people; that would give me cause for concern.

**Q19 Mr Jenkin:** Are your people not looking across the table thinking, "I might want a job with this company in five years' time, I'd better be nice to them"?

**General Sir Kevin O'Donoghue:** We have got the checks and balances in to make sure that does not happen.

**Dr Tyler:** We do not have a large flow-out of good staff, or staff period, into industry. Actually when we do very often it is to our advantage because, as you know very well, industry is an integral part of our enterprise—we rely on them utterly for delivery—and in many cases when they do go into industry they take a lot of knowledge about the way that we operate as a customer, and their close experience of our user. They take that into industry and that can be very useful to us; as can the opposite, where we have people from industry coming into the MoD. But there is no great flux of this going on day in/day out. There is a lot more stability than I think your question is intimating within all of the areas in DE&S. If you take the helicopters operating centre just as a "for example", yes, you would find some turnover of military staff, but as CDM has said that is bringing frontline operational experience into the operating centre which needs to be kept very, very current. If you looked in the Civil Service population, which would be something like 75% of the helicopters operating centre, you will find specialists there who have spent either all or very large amounts of their career in the helicopters area. It is important that we also complement that with a certain flux between the different operating centres. One of the reasons for that is, quite often we are pioneering a business model, a commercial model in one part of the business when, if it is proved successful, we then want to pervade that over into other areas of the business; and the best way to do that is to have some level of staff movement to bring those ideas and apply them in different areas of the business.

**Mr Jenkin:** I am sorry, Chairman, I should put in record I have an interest on the Register, an unremunerated interest, that Finmeccanica supported a charitable event I was involved with. I apologise for not mentioning that before, but I do not think they will thank me for asking those questions.

**Q20 Chairman:** How many people are involved in buying helicopters?

**Dr Tyler:** I think that operating centre is about 800 or 900 staff, from memory, but we can confirm that number to you precisely.<sup>2</sup>

**Q21 Chairman:** That would be helpful. Thank you. When you are downsizing from 22,000 to 20,000 how can you be sure that you will lose the right people?

**General Sir Kevin O'Donoghue:** I would like to call it "rightsizing" rather than "downsizing".

**Q22 Chairman:** Down is not necessarily wrong?

**General Sir Kevin O'Donoghue:** No. To get to the right size, and we are going through this exercise at the moment, I am absolutely clear that professionalism and safety must be paramount: professionalism in the way that we work, and safety right across all the disciplines. We are moving people around out of the corporate centre into the operating centres. There is a process in place. You cannot always guarantee that you do not lose some of the people you would rather not lose. People are free agents, they can move if they wish to; but I think our process is a reasonable one.

**Q23 Chairman:** Are you not likely to lose the most enterprising?

**General Sir Kevin O'Donoghue:** Possibly. I would just perhaps put on record that I think we have in our Civil Service a really loyal staff. If you look at some of the men and women in my organisation who will appear and say, "We've worked until 10 or 11 at night. We've worked seven days a week for the last four weeks and look what we've delivered in the way of equipment or support to the frontline. We're proud of it". I think while we can engender that sort of attitude, that behaviour, we will keep the better people. There is this great focus in DE&S—and great focus right across the MoD—of support to the frontline, and that is what keeps people in, they know they are doing a good job.

**Q24 Chairman:** You are talking about moving people around, the analysis in the Bernard Gray review about the rotation of staff in positions of responsibility suggests that that rotation has become greater and more frequent, and that it has an adverse effect on project performance. What would you say about that?

**General Sir Kevin O'Donoghue:** I do not think it has become any greater at all. That is perhaps another fact I do not necessarily agree with him over. The military do move but as I have said, and as Dr Tyler has said, we need the military to bring back recent operational experience. I need young men and women from the three Services to be in my organisation and say, "I wouldn't buy that if I were you. We don't fight like that any more". That is what I need them for, so they need current operational experience. The continuity, as I have said, is provided by my team leaders and deputy team

<sup>2</sup> Ev 113

leaders who we tend now to post in to a milestone. It might be to achieve Initial Gate; it might be to achieve Main Gate, depending upon the timescales.

**Q25 Chairman:** Okay, so you do not agree. What is it exactly that you do not agree with him on?

**General Sir Kevin O'Donoghue:** I do not think we move people too fast.

**Q26 Chairman:** He says that in 2003 the average number of people who were in position for between one and two years was 31%. Is that something you would disagree with him on?

**General Sir Kevin O'Donoghue:** I do not recognise the figure. Which year was that?

**Q27 Chairman:** That was in 2003. In 2009 he says it was 23%. Would you disagree with that?

**General Sir Kevin O'Donoghue:** I do not recognise those figures, I am afraid.

**Q28 Chairman:** These figures were produced after an exhaustive review with assistance from your Department. Did he invent them?

**General Sir Kevin O'Donoghue:** I do not know. I do not know the answer to that.

**Mr Jenkin:** Could you write to us?

**Q29 Chairman:** Why do you not know?

**General Sir Kevin O'Donoghue:** Because I have not done the maths. I have not considered it a problem. I do not react to every review that is done unless I can perceive a problem. I do not perceive a problem in the movement of staff and so I have not done the percentages.

**Q30 Chairman:** So you disagree with his maths, not because you think it is wrong but because you have not done the maths yourself?

**General Sir Kevin O'Donoghue:** No, I disagree with his financial maths, as I made clear. I disagree with his between one and a bit and two and a bit billion adrift; that is what I disagree with. There is no evidence in the report to substantiate that that I have found.

**Q31 Chairman:** When you say "there is no evidence in the report", have you read the supporting paragraphs of those conclusions?

**General Sir Kevin O'Donoghue:** I have read the report.

**Q32 Chairman:** Have you cross-examined the people who were involved in the production of that report to say, "Why did you get these figures wrong?"

**General Sir Kevin O'Donoghue:** If I may, let me just pass over to—

**Q33 Chairman:** No, not at the moment. I would like to ask you why you disagree with his maths, without apparently having done the maths yourself?

**General Sir Kevin O'Donoghue:** Because there is no evidence to show what he means by "£1 billion or £2.5 billion adrift"—no evidence at all.

**Q34 Chairman:** Have you asked him about this?

**General Sir Kevin O'Donoghue:** No.

**Q35 Chairman:** He is working in your Department still, is he not?

**General Sir Kevin O'Donoghue:** He is part of the DARP process, yes.

**Q36 Chairman:** Have you had the opportunity to ask him about it?

**General Sir Kevin O'Donoghue:** No, not that particular figure because I do not believe that it is detrimental, the movement. Whatever the percentage of movement is, I do not believe it is detrimental to the way my organisation works.

**Q37 Chairman:** Is that because you do not want to believe it?

**General Sir Kevin O'Donoghue:** No, I do not believe it is detrimental to the way my Department works.

**Q38 Chairman:** But you have not asked him about it?

**General Sir Kevin O'Donoghue:** No, not that specific question. We have had a lot of discussion about the areas I was talking about earlier.

**Q39 Chairman:** Have you told him you disagree with it?

**General Sir Kevin O'Donoghue:** No.

**Q40 Chairman:** Why not?

**General Sir Kevin O'Donoghue:** Because it is a very thick report. I could go through and agree with that phrase and disagree with that phrase.

**Q41 Chairman:** But it is the key thing you are telling me you disagree with?

**General Sir Kevin O'Donoghue:** No, it is not. What I disagree with him significantly about is the mathematical figures on finances.

**Q42 Chairman:** But you have not told him you disagree with him then?

**General Sir Kevin O'Donoghue:** Oh, yes. I have told him I disagree with him. Yes, of course I have. I have not told him I specifically disagree with the figure you just produced on percentages, which I think was 21%.

**Q43 Chairman:** No, I would not have expected you to have told him that. You did not actually disagree with that; you said you just did not recognise it?

**General Sir Kevin O'Donoghue:** Precisely.

**Q44 Chairman:** What about this £35 billion adrift, 80%, those figures? Have you told him you disagree with that?

**General Sir Kevin O'Donoghue:** I personally have been part of a meeting where those figures have been discussed, yes.

**Q45 Mr Jenkins:** I tend to have a lot of sympathy with regard to the Gray report, Sir Kevin. Having sat on the PAC for a number of years I recognise that the

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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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National Audit Office are to me the more regular producers of reports with regard to defence. I can go back eight or nine years and see the sort of slippage we make, the time slippage and the financial slippage, and I understand the reasons why. Is it possible to ask the National Audit Office to come up with a snapshot of 20, 15, 10, five years ago and today and see the overrun as a percentage of the total cost and the time slippage as a percentage of the project times etc, so we can actually nail down and prove once and for all that there is no great dip or rise, but it is a constant problem we have had to endure for a number of years because of the very nature of this beast? Could we do that and get it as a set of tables?

**General Sir Kevin O'Donoghue:** I am sure we could.

**Q46 Mr Jenkins:** Would you do it?

**General Sir Kevin O'Donoghue:** I am not sure I can task the NAO. I am not sure that is within my gift. I think the Public Accounts Committee would be the Committee to task them.

**Q47 Mr Jenkins:** The National Audit Office does regulate and produce the accounts for the MoD, and the Permanent Secretary signs them off?

**General Sir Kevin O'Donoghue:** Yes.

**Q48 Mr Jenkins:** So is it within his gift?

**General Sir Kevin O'Donoghue:** I do not know. I am sorry, I am not sure that it is within our gift to task the auditors.

**Mr Lester:** I think we could ask them the question. We do not formally task them though. They work for the PAC.

**Q49 Mr Jenkins:** Would it be of any interest, do you think, to a public debate on the Gray report if we got those figures?

**General Sir Kevin O'Donoghue:** Yes. I agree your premise, and we have had this debate last year and the year before that the equipment programme has been overheated for many years. I agree with that.

**Q50 Mr Jenkins:** Like the figure about the IPT leaders, for many years we have said, "If you can find me a project which started off and has run for three years or longer with the same project leader in charge, I'll buy you a drink".

**General Sir Kevin O'Donoghue:** Okay, you are on!

**Q51 Mr Jenkins:** Because they are moved regularly and the rationale and the reason why they are moved is because of their career, they get promotion or they move up etc., but those who are a bit cynical say when you actually tackle them and say "Who did this", they say, "I don't know I wasn't in charge of the project then". What are the percentages of the projects you actually finish which start out with the original team leadership?

**General Sir Kevin O'Donoghue:** I would think very few start and finish. Very few of the big projects, the UORs, yes, but if you have got a project running eight or nine years I suspect that you are right; I suspect very few start and finish with the same team

leader. Actually, that is not necessarily a bad thing. Sometimes, get it to Initial Gate, get a fresh pair of eyes; get it to Main Gate, get a fresh pair of eyes; get it through its first in-service phase. I do not think it is necessarily a bad thing; which is why, in answer to the Chairman, I do not believe 21% of turnover is a problem.

**Q52 Chairman:** It is one thing to say that it may be a good thing to have a high turnover; it is a wholly different thing to say that Bernard Gray's analysis of whether there has been a high turnover is wrong.

**General Sir Kevin O'Donoghue:** No, I said I did not recognise it.

**Q53 Chairman:** You said, when I put the figures to you, that you did not recognise those figures because you had not done the maths?

**General Sir Kevin O'Donoghue:** Indeed.

**Q54 Chairman:** But you said also beforehand that you did not think that there had been a higher turnover of IPT staff. Is that because you had not done the maths?

**General Sir Kevin O'Donoghue:** No. I genuinely do not know. The first figure you quote is 2003, that is in the DPA days, and I have not done those maths.

**Q55 Chairman:** No. I was just using that as an example as to how his figures might have been correct, but you have not done that maths?

**General Sir Kevin O'Donoghue:** No, I have not done that maths.

**Q56 Chairman:** Generally speaking, you have to accept I think, do you not, that there has been a higher turnover of staff in these IPTs, unless you can suggest that there is some refuting maths and refuting analysis?

**General Sir Kevin O'Donoghue:** Maybe. Bear in mind that 850 people at the moment in Dr Tyler's area are working on UORs. They have moved away from the project teams they were originally on to work on UORs; this is in 2009. I just do not recognise the figure, and I do not believe it is a problem.

**Dr Tyler:** The issue is surely one of materiality is it not, as to whether this is a trend in numbers which is now giving rise to some downturn in performance; and I do not think that cause and effect link is proven at all. Part of the reason why I think there is some difficulty in producing these numbers is because—as we have settled DE&S down over the last three years, taking it from being fit for purpose in April 2007 to the state we are now—we have been doing quite a lot of restructuring within operating centres, and quite a few of the job titles and the project team boundaries have been changing. Sometimes when these rather core statistics are generated confusion can come in because somebody's job title has changed between one job and another but, in essence, their role and responsibility has remained much the same. That is a confusion we have had quite recently in another piece of work that is being done.

**Q57 Mr Jenkins:** I agree—that is exactly the point I am trying to get to now with regard to the make-up of the team. If you get a specialist come in, he might go in and out of a team and move along teams because experience is needed in each team. It is not the make-up of the team that I am asking you to defend now, it is: who would you consider to be the leadership in that team? How consistent, how permanent is the leadership of the team? At which stage do you move the leadership of the team? If you feel happy you get to Gate One, or Main Gate, you can actually move the leadership on then because they have done their task, they have completed their route? Having signed off at that stage, they have completed their task. How many leaders have changed before they complete their task? Do we keep records of this sort of nature? Could you do a survey and say in these 20 projects this is okay and that is okay?

**General Sir Kevin O'Donoghue:** We could certainly do it for at least 20 projects. If you would like me to do it for these 20 I can certainly do it.<sup>3</sup> The 20 in the—

**Q58 Mr Jenkins:** Any 20, and say, “These are the ones we have had over this time, the leadership is there but the team might be different underneath”.

**General Sir Kevin O'Donoghue:** Why do I not do it on the MPR list of projects?

**Q59 Chairman:** Hold on, CDM. Can I just say, the Secretary of State last week told us that your Department was going to produce a response to the Bernard Gray review.

**General Sir Kevin O'Donoghue:** It is.

**Q60 Chairman:** Will that response provide an analysis of where you disagree with the figures in the Bernard Gray report?

**General Sir Kevin O'Donoghue:** I do not know, but I will certainly take that question back. Lord Drayson, of course, is leading on this response.

**Q61 Chairman:** Yes, we will ask him these questions, or some of these questions.

**Dr Tyler:** I think what we have been trying to do is we have been trying to concentrate on the positives on which there are a lot in the Bernard Gray report. The Secretary of State set out in the House the eight point plan which we are now rigorously and vigorously pursuing. What we have been doing is—rather than descending into an argument over numbers and statistical treatment of numbers and so on, which I have to say would be very easy to do in this particular case—we have been concentrating on the positives and taking those forward. I think that is a much more constructive territory for the Department to be in than having a war of numbers.

**Q62 Mr Jenkin:** Chairman, I sense that there is frustration at the way the Bernard Gray report has been presented and greeted; and I suggest if that is your view that you do need to debunk some of the

things that Bernard Gray has picked up. In this question of team leader turnover he is comparing the tenure in post of 30 leaders of large projects, and in 2003 4% were in post for less than a year, and in 2009 37% were in post for less than a year. Just putting my old venture capital hat on, I would say that that is cause for concern or it requires explanation. I think we require an explanation?

**General Sir Kevin O'Donoghue:** You are talking about 30 projects here; we are currently running at 900 plus projects.

**Q63 Mr Jenkin:** Okay. Is this completely unrepresentative? What would be the representative sample? I think it needs an explanation—it needs fleshing out—if you are simply to dismiss it as something of no concern. I am afraid I think we need an explanation.

**General Sir Kevin O'Donoghue:** I will certainly take that back.

**Dr Tyler:** We have got something a little under 2,000 projects that we are running at any point in time. If we took the total population and expressed numbers on that basis you would find that the vast majority of the 2,000 projects have the same project team leader from start to finish because a lot of them are quite small.

**Q64 Mr Jenkin:** What you are implying is that Bernard Gray is completely out of order producing numbers of this nature.

**Dr Tyler:** What he has done is picked a very small sample of projects, as he has done several times throughout his report, and then generalised from the specific to the small number of projects.

**Mr Jenkin:** I think if that is what you feel we do need to know that, but we need your figures to compare with his figures; and I think the public needs that in order to be able to make a proper judgment.

**Q65 Chairman:** He has picked a small number of large projects?

**Dr Tyler:** Yes, that is correct.

**Q66 Chairman:** If you have a small project the chances are it will be quicker?

**Dr Tyler:** Yes, correct.

**Q67 Chairman:** The chances are somebody will stay in post for the four months or whatever it might take to get it through?

**Dr Tyler:** Yes.

**Q68 Mr Jenkin:** But 4% and 37% is quite a dramatic change, and when things change I like explanations?

**Dr Tyler:** We can take this one away and we can go and look into the specifics of it.

**General Sir Kevin O'Donoghue:** I do not know the answer but I will take it away and have a look at it.

**Q69 Mr Jenkin:** I am afraid it is more about Bernard Gray! Bernard Gray actually said that the equipment programme is “unaffordable on any likely projection of future budgets”, do you agree?

**General Sir Kevin O'Donoghue:** Yes, I do.

<sup>3</sup> Ev 113



**Q70 Mr Jenkin:** How unaffordable?

**General Sir Kevin O'Donoghue:** I do not know. I would need to turn to Guy on my right who is in the programme staff. Before I do, this is the whole point of planning rounds. Our aspirations are always much greater than the budget. Given an unlimited budget I have no doubt we could spend it. The whole point of planning rounds is to make sure that that list of aspirations is put into the proper priority order for the time and for the contingent or current operations and money is spent accordingly. That is what a planning round does. The aspirations traditionally have been higher than the budget.

**Q71 Mr Jenkin:** It must be measurable even if only vaguely, but the reluctance of anybody in the Government to put a figure on it suggests a shyness about the implications of this number, particularly if its trending upwards rather than downwards. Is it trending upwards?

**General Sir Kevin O'Donoghue:** I do not know. I do not know; I need help.

**Mr Lester:** To be fair to CDM, this is more my patch than his. It makes me more reluctant to give figures in some ways! At the moment we are in the middle of the 2010 planning round which means we cannot say as of today how unaffordable we are.

**Q72 Mr Jenkin:** What was it last year?

**Mr Lester:** When we went into the equipment examination and then the 2009 planning round— Could I just have a slight aside. One of the areas where we have had a long debate with Bernard Gray is because a lot of his assessments of numbers are to do with assumptions and he has made certain assumptions and sometimes we disagree with his assumptions. Even though his data often came from the Ministry of Defence in the first place and we validated that, he has then made assumptions based on that; and one of the issues is how unaffordable the defence programme is, because it depends on what you assume about how big the future defence budget is. As you know, we have got a Spending Review which takes us up to next year, and beyond then it is just speculation how large the defence budget will be. You can inflate it: depending on what percentage you assume a level defence budget will be growing at, that drives how unaffordable the defence programme is. On the basis of our forecasting, at the start of the 2009 planning round and the equipment examination we assessed that we were about £21 billion over-programmed over 10 years.

**Q73 Mr Jenkin:** £21 billion?

**Mr Lester:** £21 billion over 10 years. By the end of that planning round, the beginning of this planning round, we were about £6 billion over-programmed over 10 years.

**Q74 Mr Jenkin:** So it is a very sensitive figure?

**Mr Lester:** There have been a lot of figures banded about.

**Q75 Mr Jenkin:** How can £21 billion suddenly become £6 billion? These parameters have a very big effect on the outcome.

**Mr Lester:** £21 billion became £6 billion because of the action we took in the 2009 planning round and the equipment examination. It was not changing the parameters, it was just doing what our planning rounds always do, which is balancing the books and prioritising. Every year we look at our programmes and we decide what is the highest priority and what is a lower priority.

**Q76 Mr Jenkin:** Actually you have answered my next question which is: how much more closely balanced are we now? You say it has come from £21 billion—

**Mr Lester:** We are more closely balanced; we will get it more closely balanced still in this planning round. The focus in this planning round is on balancing the next couple of years. In the Defence Review the task there is to look at the more strategic issues which will produce a balanced and affordable programme over the longer term. In that sense we totally accept the analysis in Bernard Gray's report, which is that all sorts of things—whether it is good procurement decisions; whether it is making Through Life Capability Management work properly—are dependent on having a more balanced programme than we have at the moment.

**Q77 Mr Jenkin:** I think this is very positive. I think we are getting numbers we have never had before, Chairman. I can cut my questioning short. Before we leave that subject, can we have the methodology that you use to come up with £21 billion and then £6 billion? Would it not be helpful if all this was in the public domain? What are the assumptions that you have used, and are they the same assumptions in both cases?

**Mr Lester:** Yes. The only assumption which is relevant is that we budget for our programmes based on 50% estimates of the cost of the programme generally, give or take a few exceptions.<sup>4</sup>

**Q78 Mr Jenkin:** I am sorry, I do not know what that means. What do you mean by that?

**Mr Lester:** This is where I am getting outside my comfort zone! There are different ways of costing the equipment programme, depending on how much risk you assume in the costing. The idea of a 50% costing is a programme has a 50% probability of exceeding that costing or coming in at less than that costing. If you take the portfolio of programmes as a whole, if you cost everything at that 50% level then statistically, if you add them all up, that should be how the programmes come out. In practice that does not seem to work brilliantly, which is one of the reasons we have cost pressures in the programme. The theoretical approach, which is sound, does not work so well in practice because some of the major programmes historically tend to come out above that 50% level, and therefore when you add them all up it unbalances the programme. That is how we

<sup>4</sup> Ev 113

cost the programme. We then make assumptions about what a level defence budget in real terms would look like, and there we just use a deflator—for which we use 2.7% a year—and then the figures I quoted are just one line minus the other line.

**Q79 Mr Jenkin:** That is very useful. Thank you very much. Of course, one of the problems you are always grappling with, which Bernard Gray also scrutinises, is the attempt to quantify the costs of the MoD delaying programmes. He puts that at between £0.9 and £2.1 billion a year. Do you recognise those figures?

**Mr Lester:** Because it is rather close to my job I have had discussions with Bernard Gray and his team quite a lot. As Andrew Tyler said, as a Department we decided it is not productive to get into an argument with him about exactly how he has done his numbers, especially since there is not really an argument about some of the data he has used. The issue is his assumptions, but could I just make two points about that. I know how he has done his sums. I disagree with the answer that he has come up with. The two things I would like to say are, first of all: intuitively, it is an implausibly large figure, because in the sample he has used, in the analysis in his report, *the* biggest single example of what he would describe as “bad behaviour” by the MoD is our decision to slip the aircraft carrier by a couple of years. I am not apologising for that because we did it for rational reasons, but that introduced something like £650 million worth of cost growth into the aircraft carrier programme, and that is a public figure, which over 10 years is about £65 million a year. That is *the* largest single example; there is nothing anything like as large as that. If that is the largest example from which he is extrapolating a lot of his analysis then it is quite difficult to see how £65 million, by far the biggest example, can turn into anything like £1–2 billion.

**Dr Tyler:** This has been the issue that we have had from the start. When you look at that number and you consider that that is £1–2 billion on £6 billion of spend, instantly one's commonsense antennae start to twitch and say, “Can that possibly be a credible number to be ‘wasted’”, or frictional costs or whatever the euphemism is for it? When you start to unpack it—and the means by which he has arrived at this number is very complex, and we could spend all morning discussing it which I know would not be what you would wish to do—but for example—

**Q80 Mr Jenkin:** I would love it!

**Dr Tyler:** —half of that number is what he describes as “unproductive projects costs”. Included within that, for example, is overcoming technical issues. Overcoming technical issues is what we do. We are buying technically very complex pieces of equipment, and a lot of DE&S is focussed on solving technical issues. If that is an unproductive project cost, I would like to know how that sort of logic has gone through. He talks about hidden industry costs (the provisions that industry makes within their accounts for losses that they have made on projects that they have not managed to manage adequately,

or that they have underbid in the first place), and he calls that an unproductive project cost which is added to this frictional pile. When you start to unwrap it and see the assumptions he has made, as Mr Lester has said, you see that a lot of the assumptions are racy, to say the least. My personal view is that it is a number which has been somewhat exaggerated for the sake of effect, and I think that is unfortunate.

**Q81 Chairman:** Dr Tyler, can I say why I think this is helpful. I think this is helpful because you are at last discussing the detail of the Bernard Gray report saying, “It is right here and wrong there; that issue is something that can be discussed in public”, and we can finally get the truth as to what is going wrong, if anything, within the Ministry of Defence. That is something that we have been trying to do for decades. That is something, surely, that is not unproductive in terms of questioning the figures; it is something we have got to do in order to come to the right answer?

**Dr Tyler:** I said earlier, I think as a Department we have agreed that the most constructive way to respond to Bernard Gray—which, by the way, qualitatively I think we would agree with the vast majority of Bernard Gray's conclusions; once or twice I have described them as “glimpses of the bleeding obvious”; but there can have been few surprises qualitatively in what he came up with in his report, and I think we would say the same thing. We have been very much on a constructive course here, looking at the areas that he has recommended for improvement; going through those; having lots of detailed discussions about how we would go about implementing his recommendations. One or two of his recommendations I think we have decided that we will not be taking forward, and there have been public statements to that effect; but a lot of the recommendations that he has put on the table we are looking to take forward; and the Secretary of State was quite clear when he made the announcements in the House about the way in which we would be responding to the report. Time is precious; we want to get on with this. We could spend a huge amount of time—indeed if you read my copy of the Bernard Gray report there are scribbles all over the margins where I might disagree with the detail, but it does not seem an entirely constructive thing to be sitting there dismantling details in the report when qualitatively we agree with most of the thrusts of the report.

**Q82 Chairman:** May I do that? May I read your copy of the Bernard Gray report?

**Dr Tyler:** You are welcome to it.

**Chairman:** Thank you. I would like to.

**Q83 Mr Jenkin:** On this question of annual costs of delays, I do not want to trespass on a later question about carriers but how does it work? The decision to delay the carriers by two years, is that taken by you, CDM, or is it taken above your pay grade?

**General Sir Kevin O'Donoghue:** No, it is on recommendations from the Defence Board to Ministers.

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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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**Q84 Mr Jenkin:** In a way, these decisions—they are inevitably very political—it is the politics that has put the cost up?

**General Sir Kevin O'Donoghue:** No. By definition, if you delay something you will finish up with—

**Q85 Mr Jenkin:** I understand that. The point is, the decision not to delay earlier and to save some of this delay cost is a political decision?

**General Sir Kevin O'Donoghue:** I think most of what we do is a political decision.

**Q86 Mr Jenkin:** I am just clarifying that. I think a lot of what Bernard Gray is criticising is not necessarily the performance of your Department, it is the political management.

**General Sir Kevin O'Donoghue:** We are in a democracy.

**Q87 Mr Jenkin:** Yes!

**Mr Lester:** I would not say it is political. In this particular case it was a financial and prioritisation decision, which is what London does. In a sense, it is not the fault of the project if they are told, "Your programme is now going to be delayed by a couple years". It was not a political decision; it was advice from the Department to Ministers saying, "Given the budget, given the pressures and given other priorities, this is what we recommend you do".

**Mr Jenkin:** We have been making reports about the unaffordability of the equipment programme ever since I came on the Committee since 2006, and the Government sort of resisted that conclusion. The Government is now recognising that conclusion, but that resistance ultimately comes from the top, does it not? That is an unfair question. Can I move on to research and development.

**Chairman:** Before you move on, Brian Jenkins.

**Q88 Mr Jenkins:** One of the problems you have got with actually assessing the cost of delay is there are obviously pluses and minuses with any decision taken. In the past we have been in a position where we have had to place orders with companies not because we needed the order but if we did not place the order the company would go out of business and, therefore, we would lose that specialism and lose that sovereign ability to produce that piece of equipment. When we have delayed some of these orders in the past what we have done is impose a burden on the company by saying, "We want to keep you in business, but we don't want to keep you in business too well and want to push it back a year". We have been pushing projects back to the right for decades now in the belief that we must maintain that sovereign ability. Who should pay for it? Should the MoD budget pay for it in the longer term, or should the nation itself pay for it with some sort of special funding?

**General Sir Kevin O'Donoghue:** If it is a military capability that we need—and, if you remember, the Defence Industrial Strategy was all about what military capability will we need in the future; and therefore what industrial capacity will we need in 10, 15, 20 years' time, and how much of it can we get

from overseas and how much of it has to be onshore? To pick up what you were saying, where we decided we have a capability in this country that we must retain in this country for whatever reason—operational sovereignty reasons perhaps—then it is the Department that pays. Whether there is a broader governmental issue or not is a bit above my pay grade; but at the moment, you are absolutely right, we pay.

**Q89 Mr Jenkins:** How do you cost that in the equations of the Gray report?

**General Sir Kevin O'Donoghue:** If you delay something there are two ways you can do it: you can delay it and tell industry that it is just going to have to make people redundant and slow the production rate down; or you can say, "No, we don't want you to make people redundant. We want to maintain those skills and competences that you have got. We don't want people disappearing", and you pay them to do it over a longer period of time. Most industry will have contract workers as well, so the core skills we need to maintain, not necessarily the number of contract workers.

**Dr Tyler:** We do implicitly and explicitly build that into our planning. Quite often the conversations that Mr Lester and I have are around the costing in of that long-term cost to ensure that we have got the capability available to us; and that comes in the form of both costs and benefits which are then costed into the budget every year as part of our normal course of business.

**Q90 Chairman:** When you delay the aircraft carriers, for example, that is £650 million, or is it £700 million?

**Mr Lester:** I think the figure is £654 million.

**Q91 Chairman:** That cost presumably then falls on to the equipment that you would not otherwise be able to buy with that £654 million?

**General Sir Kevin O'Donoghue:** It forms part of the planning process for future years. You are absolutely right, it means that £65 million a year, if it is a straight profile, will fall into the equipment programme in future years.

**Q92 Mr Hamilton:** When you talk in terms of making a saving over the next couple of years because of the delay does that then take into account the added cost when that contract finally does come into fruition, because there will be an increase in the cost because you have delayed it?

**General Sir Kevin O'Donoghue:** Yes.

**Q93 Mr Hamilton:** That takes account of that in each of the years where you are making a saving, so it is a false figure?

**General Sir Kevin O'Donoghue:** It was a saving in the early years, and a cost in later years.

**Dr Tyler:** The cost in the later years exceeded the saving in the early years.

**Q94 Chairman:** In the memorandum that you have produced for this inquiry, page 12, at the bottom of that, "The direct impact of the Equipment Examination re-profiling measure . . . was in the order of £700 million". I know £46 million between friends is not a huge amount of money, certainly not in the Department's terms; but why did you not say in this memorandum "£654 million"?

**General Sir Kevin O'Donoghue:** I am struggling, Chairman, just to find the page. It is not my page 21, I am afraid.

**Q95 Chairman:** It is in the bit about the Queen Elizabeth Class Carrier key events/decisions over the last 12 months and the question is: "What is the cost penalty of rescheduling the aircraft carriers?" Then: "The direct impact of the Equipment Examination re-profiling measure to reprioritise cost in the first four years and to delay each ship by one and two years respectively, was in the order of £700 million". Were you rounding up there?

**General Sir Kevin O'Donoghue:** No, if I remember that was before—

**Dr Tyler:** I think £700 million is a round-up on the number, yes.

**General Sir Kevin O'Donoghue:** I would have to check that.

**Q96 Chairman:** The reason I raise this is, the difference between £700 million and the £654 million that you, Mr Lester, were just talking about is double the pain that you were prepared to take over the Territorial Army training. If you had ferreted around a little, might you not have saved the Government just a little embarrassment?

**General Sir Kevin O'Donoghue:** The difference between £650 million and £700 million is the extra cost which will occur in the later years. It is not a saving this year that could have been used to buy out—

**Q97 Chairman:** I am talking about something different.

**General Sir Kevin O'Donoghue:** I am sorry, I misunderstood you.

**Mr Lester:** The Territorial Army saving was an in-year savings measure, as I understand it. I may possibly have misspoken when I said £654 million; I should have said £674 million. I think it was a rounding issue and we have just rounded the figure up in the memorandum. The aircraft carrier slippage saved about £450 million in the early years, but in the long-term over the cost of the programme there is this cost growth; so there is no offset between an in-year savings measure on the Territorial Army and a long-term cost growth over beyond 10 years.

**Q98 Chairman:** In essence, you are just putting off the pain, are you not?

**Mr Lester:** We rebalanced the programme to higher priorities.

**Q99 Chairman:** By putting off the pain you increase it.

**Dr Tyler:** The exercise that we were conducting was to try and maximise the amount of money that we needed in the first couple of years in order to spend on other higher priority areas. The exercise that we went through is we looked at the CVF programme, which was a mature programme at that point in time, and we said being practical about this and not completely dismembering the programme, what is the minimum we can take it down to which sustains the programme on a credible basis and returns as much money as we possibly can for other higher priority activities in those early years? That is the exercise we went through and it was an iterative process, and Mr Lester and I were both intimately involved in that iterative exercise, to see how far we could bring that down still retaining a credible CVF programme and maximising the amount that we freed up for other priorities.

**Q100 Chairman:** Was not the credibility lost given that you had only just let that contract a few months before?

**Dr Tyler:** We have still got a perfectly credible and deliverable carrier programme on our hands now. Whether or not we made the decision a few months earlier or then, we still would have re-profiled the programme in the way that we did, and we still would have ended up with it costing us more over the duration of the project overall. Simply the increased use of overheads and the price of inflation over that time, there is some fairly basic—

**Q101 Mr Jenkin:** What, by extending the programme for two years?

**Dr Tyler:** Yes, that is right, exactly that. You understand the reasons that you are going to be using the shipyards for two years longer, you have got all the inflationary effects that come with it.

**Q102 Chairman:** We understand it but do you not accept that the entire process looked a little ridiculous?

**General Sir Kevin O'Donoghue:** If I can just go back to the Gray report, I agree with his basic premise that we need a balanced programme.

**Chairman:** Let us get back to a balanced programme in terms of research.

**Q103 Mr Jenkin:** Before we just leave this topic, it would be extremely helpful and is it unreasonable for this Committee to ask for a package of comprehensive numbers on all this with your assumptions so that we, and indeed the public, can see what is going on in your programmes; because at the moment we are, as the Chairman says, inflicting future pain on the defence budget for lack of money in the present budget? That seems to be what is happening and I think we are entitled to know why this is happening and how it can be stopped?

**General Sir Kevin O'Donoghue:** I do not think it is quite as simple as lack of money in the present budget; it is a mismatch between requirement and budget. We can either reduce what we buy—

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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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**Q104 Mr Jenkin:** This is a Sir Humphrey answer!  
**General Sir Kevin O'Donoghue:** No, it is a balancing act; that is what the whole planning round is about. I said some time ago, we could spend any amount of money; we have to spend it on the right priorities.

**Q105 Mr Jenkin:** £65 million per year over 10 years is a hell of a lot of cuts in the Territorial Army, if it was all inflicted on the Territorial Army. It has all got to come from somewhere, has it not?

**General Sir Kevin O'Donoghue:** Yes, essentially it is the equipment programme we are talking about.

**Q106 Mr Jenkin:** On Research and Development, in the Government's response to our last Report the Government said, "... research is essential in delivering battle-winning military capability now and in the future"; but the Defence Industries Council report stated that the Defence Industrial Strategy demonstrated "that those nations which invested most in R&T had an advantage in military capability over their rivals ..." but went on to say that "... UK R&T funding had fallen as a proportion of GDP from 2.3% ... to 1.9%". For example, cutting R&T development on C41STAR is this not rather a serious way of making savings, in that it is very detrimental to what we need in the future?

**General Sir Kevin O'Donoghue:** You are picking up, I think, a newspaper article. There is no cut on SIT spending, on R&T spending, on C41STAR for current operations.

**Q107 Mr Jenkin:** I appreciate for current operations but we talking about future capability here.

**General Sir Kevin O'Donoghue:** I think what the R&D Board has done, and I sit on the R&D Board, is prioritise the R&T spending into 12 key areas, which I could go through if you wish, and just make sure we are spending our R&T money in the areas that are going to give us most effect for our money. I think we are now spending our money much more wisely; that is not to say that there have not been reductions in the total R&T money—there have. I think that is a pity but, there we are, we have to balance the budget.

**Q108 Mr Jenkin:** Afghanistan is the main effort?

**General Sir Kevin O'Donoghue:** Afghanistan is the main effort and that is what we are spending money on and I think we are spending it more wisely.

**Q109 Mr Jenkin:** That means we are effectively funding current operations out of future capability?

**General Sir Kevin O'Donoghue:** No. Take armour for example—and without getting into any classified detail—the only reason that we have been so effective with our armour R&T programme, and what has spun out from it for our vehicles, is because we had a 15-year programme of developing armour, and we have got some of the brightest brains around dealing with it. You cannot suddenly spend money on R&T for current ops. You have to have a

programme; you have to have those competencies and that knowledge; and that is what we have tried to do. Rebalance where we spend our money into 12 key areas and then concentrate on them, and then when you need—

**Q110 Mr Jenkin:** I am sure your decision is rational within the framework, but how much can we carry on cutting overall R&T?

**General Sir Kevin O'Donoghue:** I hope we do not cut any more in future years.

**Q111 Mr Crausby:** Some questions on FRES. Quentin Davies in a speech on the 22 October said about FRES that, "The project was an example of pursuing perfect specification, perfect planning and perfect integration. It turned out to be a perfect disaster". He went on to say, "I will not dwell on a sad story. I have now stopped the FRES programme". So where are we on FRES? Is there no future in our Rapid Effect System?

**General Sir Kevin O'Donoghue:** What he stopped was the FRES Utility Vehicle programme; and he stopped it because the priority changed to FRES Scout. The competition is ongoing. There is a selection process going on at the moment. I would be very disappointed if we do not get FRES Scout out on contract February/March next year.

**Q112 Mr Jenkin:** What is the point of putting the word "FRES" in front of Scout?

**General Sir Kevin O'Donoghue:** It is the Future Rapid Effect System, the Scout bit of it as opposed to the indirect fire bit or the engineer vehicle, but it is a family of vehicles—a Future Rapid Effect System.

**Q113 Mr Crausby:** He seemed to express complete no confidence in what has been a 10-year programme. We have been asking questions for some time and the response we have got is that, "It's all on track. It's all going to continue", but it looks to be in absolute chaos to me.

**General Sir Kevin O'Donoghue:** As I say, it is really good news. The FRES Scout programme will be on contract—and that is the recce vehicle—in January, February, possibly March, spring next year, which is what I think Mr Davies said the last time he spoke about it.

**Q114 Mr Crausby:** What about FRES UV?

**General Sir Kevin O'Donoghue:** We need to come back to that. The priority at the moment was the recce vehicle. We will need to come back to FRES UV because while Mastiff, Ridgback and all the UORs we have been buying for Afghanistan are good—extremely good for Afghanistan—they are not armoured fighting vehicles; they are not good for contingent operations anywhere else; so we will need to come back to it.

**Q115 Mr Crausby:** What about FRES SV?

**General Sir Kevin O'Donoghue:** That is the Scout vehicle—SV. Scout is one of the specialist vehicles in the SV class.

**Q116 Mr Crausby:** So it is just one of the specialist vehicles. How many specialist vehicles will—

**Dr Tyler:** With the SV what we are doing is we are buying essentially two things. We are buying what we call the common based platform which, as its name suggests, is the basic tracked platform which will then be used for a lot of different other types of specialist vehicle in the future. The first of the specialist types of vehicle that we are procuring is the Scout vehicle which is the one with the turret and the gun on it—that was the Army's top priority—and the sensors.

**General Sir Kevin O'Donoghue:** Your comment about it not being a very satisfactory programme was valid. I do not believe it is valid any more and, as I say, will be on contract with the most important variant for the Army at the beginning of next year, in a matter of months.

**Q117 Mr Crausby:** Prior to those comments he said, "Only very sparingly should you invest in new concepts". I got the impression that what he was really talking about was buying off the shelf. This business is just far too risky and far too expensive. To what extent are we going to buy off the shelf?

**General Sir Kevin O'Donoghue:** That is what we believe. The two contenders for the current competition are vehicles that are in existence. We are not designing them from nothing. There are vehicles out there which will meet the requirement. What we are looking at is to see which best meets requirement.

**Q118 Mr Crausby:** Where does that leave the UK manufacturing base? To what extent will they be involved in overhaul and repairing?

**General Sir Kevin O'Donoghue:** Overhaul and repair of course will be done here. Actually much more importantly in my view is the upgrade work that will go on throughout the life of these vehicles. That set of engineering competences which allow you to upgrade complex weapons systems and integrate new systems onto them that is what we must retain in this country.

**Q119 Mr Crausby:** Do we have any idea about timetable?

**General Sir Kevin O'Donoghue:** Yes, it will be on contract in January/February—

**Dr Tyler:**—in early next year. We have received all the bids in now for two major projects: one being the FRES Scout project and the other being the Capability Sustainment Programme for the Warrior vehicle. In both cases we have two bidders; those bids are under assessment at the moment, so obviously there are commercial in confidence issues here. I can assure you that in both cases, the Warrior bidding and also in the case of the SV bidding, all the bids have got a large UK content associated with them.

**Q120 Mr Crausby:** To what extent has the UOR programme really affected all of this? To what extent will it continue to affect this?

**Dr Tyler:** The UOR programme is obviously very specifically focussed at Afghanistan, and therefore everything we are buying under the UOR programme

is for fighting *the* war that we happen to be fighting at the moment in Afghanistan and is optimised for the conditions in Afghanistan. What the SV programme, the FRES Scout programme is all about is about investing in the future. That is not to say that those vehicles once provided—if at that point we are still in Afghanistan—would not have utility in Afghanistan; they might very well do; but what this is about is building the Army's contingent capability for the future and giving them a vehicle that is adaptable, versatile and agile for them to use in the future for whatever conflict.

**Q121 Mr Crausby:** Am I right in saying that the FRES programme has not stopped then?

**Dr Tyler:** No, it has not stopped.

**General Sir Kevin O'Donoghue:** The FRES UV programme was stopped, but the overall FRES programme is continuing.

**Dr Tyler:** The FRES name was used, if you like, as a sort of overall name describing a whole family of different types of vehicles. The reason why they were held under this banner of FRES is because it was important, and remains important, that those vehicles were able to operate very well with each other, communicate with each other and be compatible with each other in all sorts of different ways. As originally conceived, and that concept has not gone away, what we wanted the Army to have was a whole family of assets which were able to work together on the battlefield. When we look back in the rear view mirror now and think about why was it that FRES was not successful in getting to where it needed to be in the time, is because we were overemphasising the nature of this sort of system, of trying to bring all these vehicles together. What we have done subsequently is said, "We must not lose sight of that but we must also recognise that what we are trying to do is to deliver individual families of vehicles to meet particular needs of the Army". So we said, "Right, we'll go back to first principles again. We will say to the Army, 'What is your top priority?'" They made it very, very clear to us that the Scout vehicle, which was part of the FRES family, was their top priority, closely followed by the UV vehicle; so we said, "Right, we'll concentrate our main effort on the Scout vehicle", which is what we have done. We worked very hard with the Army to get the requirement very quickly tied down, and made sure that areas of significant technical risk and so on, or areas that would prevent us from looking in the open market for vehicles that already existed, were excluded. We nailed down the requirement, and since that time we have been driving at very, very high speed to get the project to the state where we will have a competition. We have got the bids back in; we are deep in the assessment of the bids now; and we will hopefully have it on contract early in the new year.

**Q122 Mr Crausby:** Has Quentin Davies changed his mind then?

**Dr Tyler:** No.

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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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**Q123 Mr Crausby:** He sounded pretty clear to me. He says, "It turned out to be a perfect disaster. I will not dwell on a sad story. I have now stopped the FRES programme".

**Dr Tyler:** I can say, he was referring to the FRES programme as we previously conceived it; and you yourselves have described I think only last year the FRES programme as "a fiasco". What we have done is said, "Let's look at the individual constituents of the FRES programme".

**Q124 Mr Crausby:** The MoD's response was that it was not a disaster and we intend to continue.

**Dr Tyler:** I was only describing what you described it as last year. The Minister has clearly made statements recently as you have just quoted to us saying that it was not the best piece of procurement that he had ever seen. I have to say, I would agree with that. I think there are a lot of reasons why the FRES programme, as originally conceived, was unsuccessful. All I am saying now is, concentrating on the positive, we spent the whole of the last year reassembling, realigning that programme to get it on the straight and narrow and concentrate on delivering vehicles that the Army require, and we are within reach of victory now in getting some vehicles on contract early in the next calendar year.

**Q125 Mr Crausby:** He says, "I will not dwell on a sad story". I think he needs to dwell on a sad story. We need to know because it gives me the firm impression in what he says that, "I have now stopped the FRES programme". That needs to be clarified as to exactly where our manufacturing base stands?

**Dr Tyler:** We have stopped the FRES programme as it was previously conceived. We have restructured, we have recast it now into a set of individual vehicle projects, the first one of which is the Scout project; and it is still bearing the tag "FRES" because that is its provenance in terms of its requirement; and we are still sustaining this crucial factor that the vehicles need to be able to operate with each other and indeed operate with the other legacy vehicles, and indeed operate with dismounted soldiers. That system (the "S" of FRES) remains a very important thing. We need all of our assets on the battlefield to be able to talk to each other and work together. In that sense the system part of FRES lives on. The name, frankly, I cannot get excited about. What is important is that we are now focussed on delivery. We have got a project that is very, very close to getting on contract with industry; and we will soon, hopefully, have some Army vehicles on our hands under the programme previously known as FRES.

**Q126 Chairman:** It is still looking like a fiasco, is it not?

**Dr Tyler:** No, far from it. Absolutely not.

**General Sir Kevin O'Donoghue:** Absolutely not.

**Q127 Chairman:** Jolly good, because last year we said it was a fiasco. You said, "No, no, it is not." This year the Minister says it is a fiasco. I say it is a fiasco now. Do you not agree?

**Dr Tyler:** No.

**General Sir Kevin O'Donoghue:** Absolutely not. We have turned the corner, as we have in a number of projects.

**Q128 Chairman:** We are trying to get to the bottom of whether the FRES programme still exists.

**Dr Tyler:** We are assessing two bids at the moment from industry against a detailed specification, bids the paper work for which is inches high, and I have got teams working literally seven days a week assessing those bids in order to get us into a position to be able to award a contract early in the New Year. That sounds like progress to me.

**Q129 Chairman:** Early in the New Year. Does that run the risk of falling into the General Election?

**Dr Tyler:** There is always a risk, but we are working to a programme which would deliver us a contract award before we got into the General Election period, and I do not know what the timing of the General Election is specifically going to be.

**Q130 Mr Crausby:** It is one thing to keep buying vehicles—I think we all accept that—it is another thing to have a Future Rapid Effects programme that was supposed to be planned and integrated over a period of years. It seems to me that all of that has completely collapsed.

**Dr Tyler:** I think it is very important that we deliver some vehicles, and the criticism that I think has been levelled at FRES by yourselves and others in the past has been that FRES was not delivering anything. Now it is on the verge of delivering something and I have said several times that what is really important is that we do not lose the "S" of FRES, the system piece of it, and that we have put instructions within our organisation to make absolutely certain that when we buy, first of all, the first of the Specialist Vehicles, the Scout vehicle, and then, subsequently, the other variants of the specialist vehicles, when we buy the Utility Vehicle, that we are buying vehicles that can operate together, communicate with each other and work together on the battlefield along with the legacy vehicles and also with a dismounted soldier and ISTAR assets and all the other things that we have to link together in the battlefield. We have not lost the essence of FRES, which was to have an overall systems view of it—that has not been lost.

**Q131 Chairman:** But, according to the Ministry of Defence, for the last 20 years this programme has been on the verge of delivering something and some of the people who have borne the consequences of no delivery have been defence industry. Is there any thought of the Ministry of Defence compensating defence industry for the money that they have had to spend themselves on what the Minister now describes as a perfect disaster?

**Dr Tyler:** I think you will find that the key industries who have been involved in this over an extended period of time are involved in the current bidding for

the Scout project and, therefore, they have got a potentially very large prize there, in industrial terms, if they are the successful winners of the competition.

**Q132 Chairman:** So they do not learn from experience.

**Dr Tyler:** I do not understand that question.

**Q133 Chairman:** They have been trying to get some contract out of this for the last 20 years. Not a lot has happened.

**General Sir Kevin O'Donoghue:** One of them will get a contract in the first months of next year, subject, as you say, to the General Election.

**Q134 Chairman:** But there is no thought, then, of compensating defence industry for what the Minister himself has described as a perfect disaster.

**General Sir Kevin O'Donoghue:** No.

**Dr Tyler:** I think that, of a number of different parties, industry also has been one of the contributing architects to the problems that we have had with FRES in the past, along with the MoD, along with the acquisition part of the MoD, along with the centre, along with the Army.

**Q135 Chairman:** Is the Ministry of Defence paying for the costs of bidding into this new contract?

**Dr Tyler:** No, we never do.

**Q136 Mrs Moon:** Can I get it clear in my head. How much does this perfect disaster actually cost?

**Dr Tyler:** I do not think that is a question that you can put a number on in that way. We can say what we have spent. If I take an example as being the Utility Vehicle programme (and I do not have the precise number here but we can let you have it), we have spent tens of millions of pounds on the activity that led up to the abortive Utility Vehicle competition this time last year, which was one of the reasons, I think, that prompted your description of the programme as a fiasco last year. However, that is absolutely not wasted money. There might be some aspect of it that one can point to and say that might have been nugatory spend, but actually the vast majority of it went in looking at the overall system approach that we were taking to FRES, and we are using all of that, as we speak now, in the competition. It has also given us a very firm basis of the requirement for a Utility Vehicle, so that when priorities permit in the planning round we will be able to very rapidly get a Utility Vehicle specified and get the bidding underway for it. So an awful lot of the money that we spent previously has provided value, which we are using today and will continue to be using in the future.

**Q137 Mrs Moon:** How many tens of millions has this learning curve cost: 10, 20, 30, 50, 80 million? What are we talking about? Give me some global figures here.

**Dr Tyler:** I could not give you a precise number now, but we are at the upper range of your estimate.

**Q138 Chairman:** The suggestion last year was £150 million.

**Dr Tyler:** For the UV programme, I think. I was going to say 140, but it is of that order.

**Q139 Mrs Moon:** It would have been £140 million for the UV vehicle out of which we have learnt, what, 10 million worth of lessons?

**Dr Tyler:** I think the vast majority of the money that we have spent on the UV vehicle—and bear in mind that that was in the context of the overall FRES programme (and back to the point about the system, the “S” of FRES being very important)—has been spent in understanding a system of systems, that will be all of the vehicles that will sit within the FRES programme going forward. I would say the vast majority of that has not been nugatory spend.

**Q140 Chairman:** You said “a system of systems for the FRES programme”. The Minister, when he says, “I have now stopped the FRES programme”, was wrong about that.

**Dr Tyler:** No, he did not say, “I have given up on a systems of systems approach to the future Army vehicles.” He said, whatever his wording was, “I have dismantled the FRES programme as you would have conceived it previously.”

**Q141 Chairman:** He will confirm all this when he comes before us, will he?

**Dr Tyler:** I expect so, yes.

**Q142 Mr Jenkins:** Dr Tyler, I have not got the figures to hand, but some of the figures I have heard in the past and seen in the past with regard to different elements of this FRES programme—I am not saying what we have gained an advantage of—up until now, with a vehicle turning off the production line, we must have spent something like a billion pounds on this programme?

**Dr Tyler:** I do not recognise the number of a billion pounds.

**Q143 Mr Jenkins:** Could you come up with a figure that you do recognise?

**Dr Tyler:** We can give you numbers. We can give you a written number of what we have spent on the programme previously known as FRES in the past.<sup>5</sup>

**Q144 Mr Jenkins:** Bearing in mind the four-wheel drive, the electric motors, the whole lot.

**Dr Tyler:** Some of the underpinning technology as well, which, of course, is extremely pertinent.

**Q145 Mr Jenkins:** Procedures, trials, et cetera.

**Dr Tyler:** Yes.

**Q146 Mr Jenkins:** Can you give us the complete package and we will see how much short of a billion pounds it comes to?



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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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**Dr Tyler:** We will provide you with the numbers for that, but you should also recognise that a huge amount of that has been building for the future, and the fact that we have been able to get the Scout competition running so quickly and specified and the requirement settled, and so on, is a testament to how much investment we have made in the FRES programme in the past.

**Q147 Mr Jenkins:** In the credit column there will be other things.

**Dr Tyler:** Yes, we will present it like that.

**Q148 Mr Jenkins:** If you would do that please, I would be very grateful.

**Dr Tyler:** We will do that for you.

**Q149 Chairman:** Is the LPPV programme part of the Scout.

**Dr Tyler:** No, that is completely separate.

**Q150 Linda Gilroy:** Understanding FRES—what it was, what it is and what it will be—is a bit like wrestling with jelly for somebody who is not an Army vehicle anorak. I found your reference to the “S” bit being the focal point, the system, helpful up to a point, but I still do not understand what the difference is going to be in the “S”, the system bit of it, say, by 2015. What was the original concept and how does the concept that you are now bringing online look different from how it was originally?

**Dr Tyler:** The system philosophy has not changed. The system philosophy is about, instead of us having a whole bunch of individual vehicles which are bought completely independently of each other and do not have commonality in terms of the way they communicate, for example, in different communication systems, in different vehicles, do not have commonality in the way that key equipments on the vehicles are used, like sighting systems and other sorts of electronic systems, which then reduces things like the training burden for individual troops and allows the vehicles to operate and transfer data between each other, all of those sort of things are the things that sit under this overall label of the system, the system of systems.

**Q151 Linda Gilroy:** How will it look different with the present direction of travel in 2015 from how it was originally envisaged to look? What is the capability that we are now buying?

**Dr Tyler:** What we are buying is a set of Army vehicles which, when you lay them out in the car park in years to come, will be interoperable. They will be able to talk each other, they will be able to work together on the battlefield to deliver an overall capability rather than just being a miscellaneous set of Army vehicles.

**Q152 Linda Gilroy:** But not as well as they would have done, as originally envisaged, or in a different way.

**Dr Tyler:** I think better. One of the mistakes, perhaps, that I would point to with FRES is that it sat in its own little bubble. It was thinking very much

about its interoperability within the vehicles that were going to come out of the FRES programme itself, it was thinking less about how are those vehicles going to then operate with the legacy vehicles, some of which will be around for some time to come, how much are they going to be able to operate with things like the ISTAR assets—unmanned air systems, and so on, that at the time that FRES was originally conceived was all relatively new stuff that has come on enormously since we have been in Afghanistan—how much is it going to be able to communicate with the dismounted soldiers? All of those things are the things that, I think, we have added now into the programme previously known as FRES to keep the systems principle running very strongly in the programme, and within our organisational construct we have set up the organisation so that that system of systems activity is now running across the whole of land systems and not just for a specific family of new vehicles.

**Q153 Chairman:** Dr Tyler, was not the original concept of FRES, not a collection of vehicles, but a system such as you describe? Is it not something that you are now going back to as opposed to coming to for the first time?

**Dr Tyler:** I do not think we have changed our philosophy at all.

**Q154 Chairman:** The point I am making is that the reason it was not called a “family of vehicles” but was called a Future Rapid Effect System was that right from the beginning of the concept it involved, surely, all the ISTAR assets and everything else that you are now talking about.

**Dr Tyler:** As I say, I am not trying to suggest that we had not thought about any of this before, but organisationally and in terms of the way the requirement had been established and in terms of the way we are managing the budget lines, FRES was largely being treated within a bubble, and now it is not being treated within a bubble. It is very much an integral part of the Land Systems programme overall.

**Chairman:** I was really making a different point, but let us now turn to a different programme that is not entirely your fault.

**Q155 Mr Jenkin:** Can we remember when the A400M was first put into the programme? Was this mid 1990s, early 1990s, late 1980s?

**General Sir Kevin O'Donoghue:** The answer is we cannot, but some time ago.

**Q156 Mr Jenkin:** When is the first flight going to take place?

**General Sir Kevin O'Donoghue:** Chairman, I am going to Berlin tomorrow to talk with the Ministers from the various countries. I wonder if I might talk about this in confidence at the end?

**Chairman:** Yes, you may, because I think that that is something on which we would welcome some private briefing.

**Mr Jenkin:** Do you want me to leave this then?

**Chairman:** Yes.

**Q157 Mr Jenkin:** Can I ask a general question and we can come on to the first flight and the contract conclusions later on. You described this programme as an example of the worst slippage and “not my fault, gov”, because this is an international collaborative programme where the slippage is out of your control, and I think we accept that, but what are the lessons that we draw from this programme?

**General Sir Kevin O'Donoghue:** The lesson I draw from it is collective projects are essential. If you do not collaborate with partners, then you will not get the kit you want because the production numbers are so small. So that is one end of the spectrum. At the other end of the spectrum, if you have got seven or eight partners, they have all got a view, and it was David Gould, I think, two years ago, if you remember, said the programme slipped one year right at the beginning because it took the German Government a year to sign the MoU. It is very difficult to cope with that. My preference would be a bilateral product which others could join. That would be my lesson.

**Q158 Mr Jenkin:** So a JCA model.

**General Sir Kevin O'Donoghue:** Yes, either JCA or various other projects that are in the pipeline. I would like to go with one other nation and then invite others to join in.

**Q159 Mr Jenkin:** Would you be able to flesh out that conclusion with evidence to make a good recommendation for our Report?

**General Sir Kevin O'Donoghue:** In about six months probably. I am being a bit hesitant because there are a number of things on the go at the moment where I think we do need to move forward with other countries, but I am not quite ready to go public on it yet because there are commercial and political debates going ahead, but that would be my preference: go with one country and let others join in, not on the same equal basis of decision-making.

**Q160 Chairman:** I would like to probe precisely the extent to which you wish to speak to us in confidence. Is it about the general state of the current programme?

**General Sir Kevin O'Donoghue:** Yes.

**Q161 Mr Jenkin:** How early it is likely to fly?

**General Sir Kevin O'Donoghue:** And where we are with our discussions as to how it might go forward.

**Q162 Mr Jenkin:** We have lost another couple of years. Is there any chance of making that up?

**General Sir Kevin O'Donoghue:** I do not think so.

**Q163 Mr Jenkin:** What about the capability gaps that that leaves? How crucial are they?

**General Sir Kevin O'Donoghue:** As you know, we have signed the FSTA contract (Future Strategic Tanker Aircraft). Those will come in. We are looking at C17s.

**Q164 Mr Jenkin:** We have heard about a C17. Are we actually looking at C17s, plural?

**General Sir Kevin O'Donoghue:** It all depends on the affordability issue. One, I think, we are definitely looking at. I would like to look at a second, but you have to balance the budget.

**Q165 Mr Jenkin:** What about the fact that we are using our C17s so intensively that we are using up their hours much more quickly? Has that not got to be factored in?

**General Sir Kevin O'Donoghue:** They will go into deep maintenance. One will be taken out of the equation over the next few years persistently for deep maintenance.

**Q166 Mr Jenkin:** Inevitably, I have to ask the question: we have survived so long without the A400M. Do we really need it?

**General Sir Kevin O'Donoghue:** The air bridge, which is absolutely vital to Afghanistan, is surviving. I would still describe it as fragile. It is still my highest logistic risk, but it is surviving. What we cannot do is any of the other contingent operations which we should be able to do without using aircraft from that strategic bridge.

**Q167 Mr Jenkin:** Given the unlikelihood of mounting operations on this scale without coalition parties—

**General Sir Kevin O'Donoghue:** It is not just on this scale. Quite small scale operations require, depending where they are and the nature of them, air lift.

**Q168 Mr Jenkin:** Am I right in saying that we cannot land C17s at Camp Bastion?

**General Sir Kevin O'Donoghue:** Yes, we can. Yes, we are. We will be able to land Tri-Stars at Camp Bastion in due course.

**Q169 Mr Jenkin:** If we have got C130s and C17s, why do we need this intermediate aircraft? Why do we not just buy more C130s and C17s?

**General Sir Kevin O'Donoghue:** C17s are very expensive; they give you a certain capability. In very simple terms, an A400M carries twice what a C130 will carry and a C17 carries twice what an A400M will carry. The A400M is going to be a good aircraft when it comes into service; it is going to be invaluable. The C130, perhaps, is right at the bottom tactical end of the market. The C17 is very expensive, very competent, very capable, at the strategic end of the market, and there is a gap in the middle.

**Q170 Mr Jenkin:** If you were rebalancing the programme, this is not one of the items that would be rebalanced?

**General Sir Kevin O'Donoghue:** I do not think so.

**Mr Lester:** It is not what is currently in our sights for being rebalanced, no. Essentially, even with the pressures on the programme, it is still looking like quite a cost-effective capability at the moment.

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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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**Q171 Chairman:** At the end of this meeting, it does not sound as though we need to take very long about going into private session.

**General Sir Kevin O'Donoghue:** No, no.

**Q172 Chairman:** A few extra questions about the aircraft carriers. These are ones to be rattled off. The 654, or 674, or 700 million, or whatever, extra cost of delay, does that take into account and include the cost of keeping on the existing carrier capability?

**Dr Tyler:** No.

**General Sir Kevin O'Donoghue:** No, this is just straight carrier.

**Mr Lester:** There is an offsetting saving. If we operate our existing carriers for longer, then we are not operating the new carriers, obviously.

**Q173 Chairman:** But, presumably, the older carriers are more expensive, in efficiency terms, to operate in some respects?

**General Sir Kevin O'Donoghue:** Yes, but, depending on how long you have to extend them, you might not have to refit them.

**Dr Tyler:** And they are a lot smaller.

**Q174 Chairman:** Have you made a decision yet about refitting?

**General Sir Kevin O'Donoghue:** Yes, we are proposing to refit Illustrious.

**Q175 Chairman:** The cost of refitting the Illustrious is not included in this X hundred million?

**General Sir Kevin O'Donoghue:** No, but we would have refitted Illustrious anyway on the original timetable. It is not an additional refit, because the carriers are delayed, if that is behind your question.

**Q176 Chairman:** That was the question. The next question is this. I think this £65 million a year, you said in your memorandum, would be managed by the Department, how exactly?

**Mr Lester:** That is one of the pressures we have to take into account in our planning process, along with all the other fluctuations in the programme. That is the process we are going through at the moment and, in the longer term it is what we will be looking at in the Defence Review.

**Q177 Chairman:** Along with the Territorial Army training, the Officer Training Corps—all of those others?

**Mr Lester:** I expect the equipment programme to sort itself out and not to be cross-subsidised by the Territorial Army.

**Q178 Chairman:** Do you think that the alignment of the carriers and the Joint Strike Fighters are now appropriate in terms of timing?

**Mr Lester:** Yes.

**General Sir Kevin O'Donoghue:** Yes, the Joint Strike Fighter will come into service; the carriers will come into service. Quite understandably, the proposal is

that we have an IOC (an initial operating capability) land for the Joint Strike Fighter, so the Joint Strike Fighters will be worked up, the carriers will be worked up and, at the appropriate point, they will come together.

**Q179 Chairman:** Do you know exactly when you will make a decision about the number of Joint Strike Fighters? You said in your memorandum this will not be before 2015.

**General Sir Kevin O'Donoghue:** We do not need to make that decision until 2015. I would imagine it will be in 2015, but we do not need to make it until 2015.

**Q180 Chairman:** Once you have decided how many to buy, how quickly can they be brought into service?

**General Sir Kevin O'Donoghue:** I think pretty quickly. We are pulling off, as you know, up to 150 out of a total build of some 3,000. It is not like a UK-specific programme with all that design and development. That is going on at the moment. I do not think it will be that difficult. They will come off quickly.

**Q181 Chairman:** I have said this before, and it is perhaps a bit mean, but we all know what “up to 150” means—it means fewer than 150, particularly nowadays with the pressure that there is on defence budgets. Do you have any sort of rough ballpark figure? If you were putting this “up to” figure into ministerial speeches now, what would be it be?

**Mr Lester:** It would be up to 150, I think. One thing I can say is there has been some speculation that we have cut the number of JSF we are planning on buying, but we have not, so up to 150 is still right. There has not been a cut which is somehow buried within that figure.

**Q182 Chairman:** But you know what you are planning on buying, do you?

**General Sir Kevin O'Donoghue:** Up to 150.

**Q183 Chairman:** You know what you are planning on buying. You said, “There is some speculation that we have cut the number of JSFs we are planning on buying.”

**Mr Lester:** What I am saying is that there are a lot of variables in how many airframes to do with how we train and what the capability of the aircraft turns out to be once we start trialling them, but what we have not said is this is a capability that we are going to cut the numbers against.

**Q184 Mr Jenkins:** The interesting date about 2015 when we start ordering, do we have to put a total order in at that date or can we take them in tranches?

**General Sir Kevin O'Donoghue:** We will take them in tranches.

**Q185 Mr Jenkins:** You can order 30, 30, 30, over a period.

**General Sir Kevin O'Donoghue:** Yes.

**Q186 Mr Jenkins:** So the last order might be 2025, for instance.

**General Sir Kevin O'Donoghue:** It could be. Of course, what is a huge advantage with Joint Strike Fighter is that when we bought Harrier we had to buy what we call the "attrition buy" as well—we bought a certain number of aircraft which included an attrition buy—but with Joint Strike Fighter, because it is such a big programme, we do not need to buy those until we need them. So, absolutely, it will go on for quite some time.

**Q187 Mr Jenkins:** When we start ordering them, of course, there will be some trials, sea trials, for these things to land. We will not want large numbers; we will want a small number.

**General Sir Kevin O'Donoghue:** We have ordered three. We have three on order, which are the OT&E aircraft (operational test and evaluation aircraft). They have been ordered. They will come in at 2012.

**Dr Tyler:** They are being delivered into the test programme in the next a couple of years, yes.

**General Sir Kevin O'Donoghue:** They will be flown by Royal Air Force pilots as part of the operational test and evaluation programme.

**Q188 Mr Jenkins:** These three cannot land on the carrier because the carrier will not be there until 2015?

**Dr Tyler:** They are going into a test programme in the US.

**General Sir Kevin O'Donoghue:** They will join with the US Marine Corps with their STOVL aircraft as part of the test and evaluation programme.

**Q189 Mr Jenkins:** We will be sending these pilots over to the US to get their training.

**Dr Tyler:** During the test programme we will have our test pilots over there operating within an integrated test programme alongside the United States.

**Q190 Mr Jenkins:** When do we intend to put the simulators in place in this category for the pilots?

**Dr Tyler:** I do not know. I would have to come back to you on that.

**General Sir Kevin O'Donoghue:** It will be sequenced so that we have the operational test and evaluation flight training programme, test programme. We will get the simulators in.

**Q191 Mr Jenkins:** We have thought of ordering the simulators, unlike the Apache where we did not order the simulators for a couple of years, did we?

**General Sir Kevin O'Donoghue:** Indeed.

**Q192 Chairman:** I have no idea who is in charge of that.

**Dr Tyler:** We do.

**General Sir Kevin O'Donoghue:** May I interrupt you? On the carrier, one of the reasons we are being slightly hesitant over numbers is that there is a submission going through the MoD at the moment for a re-approval of the carrier costs. Our numbers are not clear at the moment, and they will not be

clear until the IAB and Ministers have approved them, and that will be out fairly shortly. I would not want you to think that we are being evasive for the sake of it, but our figures are, as we speak, being refined and a paper submission will go through.

**Q193 Chairman:** When do you think that paper will come out?

**Dr Tyler:** A small number of weeks.

**General Sir Kevin O'Donoghue:** I think it will go to the IAB in December, this month.

**Q194 Chairman:** So it will go to Ministers in, what, January?

**General Sir Kevin O'Donoghue:** At the latest, I would imagine, yes.

**Q195 Chairman:** And it will be made public?

**General Sir Kevin O'Donoghue:** Yes, it will feature in the MPR10.

**Q196 Chairman:** When is that going to conclude?

**Dr Tyler:** The numbers close at the end of this financial year. You will first see it in the Ministry of Defence's accounts and then you will subsequently see it in the MPR.

**Q197 Chairman:** Not meaning to use rude words, the Bernard Gray report says that the planning process is broken, badly broken. Would you disagree with that?

**General Sir Kevin O'Donoghue:** No, I do not think it is broken. I think there would be better ways of doing the planning process, and I do not think I would disagree, I think we might have to get the budget in balance with the requirement. We have to get our cost estimation much better to give to the programmers so that they have got a clearer idea of what the overall through-life cost will be of some of these programmes.

**Dr Tyler:** One of the challenges we will always have with the larger programmes, the more complex programmes, is that the costs of those programmes does genuinely mature through time. For many years there was a lot of uncertainty as well as a lot of risk in the programme, which is always going to challenge the costing. That is not to say we cannot do better, because I definitely think we can. In the case of the carrier, for example, one of the things that we did was we pushed Main Gate as far right as we could but we also said that we would agree the final target cost, the cost against which industry is going to be ultimately incentivised. We would agree that two and a half years after Main Gate, and that will be June of next year where we will strike a final target cost which will be the number, if you like, it will be the noose around the neck of the CVF Alliance in terms of delivery, and for me that seems like a very sensible way, and very consistent with Bernard Gray's report, to get oneself to a point where you really have got a thoroughly good understanding of what it is you are buying and the risks associated with it and you have got rid of a lot of uncertainty, as opposed to the risk, to then being able to confirm and stick to a number. One of the things that we have

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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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constantly done to ourselves over the years (and it has been self-inflicted harm in many ways) is trying to commit ourselves to a number long before we really credibly should be able to.

**Mr Lester:** One of Bernard Gray's criticisms in relation to the planning process was some of the behaviours it engenders. I think there he was quite shrewd. A lot of the measures we are taking to improve our process are about sorting out behaviours and forcing us to be more honest, I guess, and making it less prone to vested interest is too strong a term, but to make sure that we have robust—

**Q198 Chairman:** Perverse incentives would be fair, would it?

**General Sir Kevin O'Donoghue:** Yes.

**Mr Lester:** Perverse from the wider defence point of view. It probably would be fair, yes.

**Chairman:** And that is not vested interests!

**Q199 Mr Jenkin:** Can I ask about how planning rounds operate? Is one of the reasons the programme has got overheated because there has been too much wishful thinking about programme costs in order to squeeze them through the Treasury mangle, and the only way to get the Treasury to sign things off is to pretend they are going to be cheaper than they are?

**General Sir Kevin O'Donoghue:** No, I do not think that is correct. There is certainly what, you will remember, Peter Spencer used to call the conspiracy of optimism, but I do not think it is to get through the Treasury. It is a genuine lack of understanding about what things will really cost, and that is why—what I was talking about earlier—the cost estimation process that I have down in Abbey Wood, which I hold on behalf of the Department as a whole, has to be able to give independent costings which everybody then accepts and people do not shave bits off because, with a bit of luck, the risk will not materialise. It is accuracy in costing, sticking with that cost, putting in management risk funding because it will certainly materialise as the project unfolds.

**Q200 Mr Jenkin:** When we were talking about your estimates of how much the programme has overheated, should that not be part of the negotiation and agreement with the Treasury? Your 50% risk factors, they should be in the programme, signed off by the Treasury. The Treasury should be signing off the risk as well as the number.

**Dr Tyler:** The Treasury's interests are that we are living within our means. They agree the means and we have to find a way to live within it. Of course, they are very interested to see how we are going to do that and they spend a lot of time looking at the detail of that, not just the generality of that, but the planning process itself, fundamentally, in terms of its general approach, is not flawed; it is very simple and it is very similar to what we would do in industry. You start off with a set of assumptions. Put simply, Mr Lester and his people set a set of assumptions, they provide them to DE&S and say, "Please cost everything"—new projects, support for projects and so on—

against those assumptions. That is the stage one of the planning round. We have several screening sessions but we end up with a big session where we agree that, against all of those assumptions that we have been given, everything is costed what we call tautly and realistically. Clearly, history would show that sometimes our tautness and realism leaves a bit to be desired, and that is where we have got a lot of room for improvements, as the CDM has said. Inevitably, again for the reasons we have talked about today, our eyes are bigger than our tummies, and so when we come and look at the full costing of the whole programme against the resources we have got available, we find that we have not got the resources required to fund everything, we then go into stage two, and what stage two is about is running what we call options against that, which is essentially the iterative exercise of balancing our books. This is something that Mr Lester's staff will do. They will generate these options, which will be things like, instead of buying 28 of those, how about if we bought 15 of them, what are the capability implications, what are the industrial implications, what are the cost implications what are the time implications, at a very, very low level of detail? This is a huge exercise. How many options, Guy, will we typically raise in a year?

**Mr Lester:** It might be several hundred sometimes.

**Dr Tyler:** Several hundred, and that is that iterative process of balancing our budget. Then the third stage of it is where we would then be looking at things that we need to add into the programme, new things that have come along, enhancements, and we would be looking to balance those with the options which are taking stuff out of the programme.

**Q201 Linda Gilroy:** The competition for the delayed procurement of the MARS tankers has just finished, but legislation bans the operation of non exempt single hulled tankers from 2010 onwards. The MoD has got an exemption, but what does that mean in terms of the sort of restrictions that the continued use of the single hulled tankers will have to operate under?

**General Sir Kevin O'Donoghue:** There are some geographic restrictions and some nations do not allow single hulled tankers into their waters, but it is not restricting naval operations.

**Q202 Linda Gilroy:** In terms of extent and significance, can you give us some description?

**General Sir Kevin O'Donoghue:** I do not think it is affecting operations at all. What we need to be careful of is what do we do if something does go wrong, and I do not just mean with our tankers. Our tankers are very well maintained; I do not think ours are going to go wrong. What happens if a single hulled tanker from some other nation gets holed and internationally there is a block on? There are two things. One is that that is why the competition is running, and we need to get on with it, and, secondly, we have, as you would expect of us, a fall-back plan as to what we might do if that were to happen. Bear in mind we do have two wave-class double hulled

tankers, so they can operate, they can replenish at sea, and we would need to hire in commercially some double hulled tankers.

**Q203 Linda Gilroy:** Indeed. There is a review of the Royal Fleet Auxiliary going on at the moment. Are the two things related: the procurement of the MARS tankers and the RFA review?

**General Sir Kevin O'Donoghue:** No, because the MARS tankers requirement is a requirement. How they are crewed and how that requirement is delivered of people is a different issue.

**Q204 Linda Gilroy:** Moving on to the Type-45s, when will HMS Daring get the PAAMS capability?

**Dr Tyler:** HMS Daring has got PAAMS capability today. The process of generating what we would call full operating capability, trialled, verified and tested, is going to take, from memory, a couple of years longer to generate. You might have read reports recently about our final trials firing which was not successful. It is too early for us to come up with the diagnosis for that, but that has been a set back in terms of the generation of the full capability, and we are working extremely hard with the other two partner nations and the company to resolve what the problems were with that final firing.

**Q205 Linda Gilroy:** Are there cost increases associated with that?

**Dr Tyler:** Not with that specifically, or if they are they are very minor. The cost of delivering us a working PAAMS system falls with the company.

**Q206 Linda Gilroy:** On numbers, the numbers have gone down from the original 12 envisaged to six. Their primary role is air defence?

**Dr Tyler:** Yes.

**Q207 Linda Gilroy:** I am keen to understand how that works as far as the capital vessels that they are designed to protect. Why was it originally thought necessary to have 12, and can you describe to me what the implications of having six are?

**General Sir Kevin O'Donoghue:** I pass it to the capability requirement man.

**Mr Lester:** I am trying to remember why the requirement was originally 12. The successive reductions we have had from 12 to eight and then eight to six reflected partly priorities in the programme and partly an understanding of the capabilities of the ship, especially when we fit them with the Co-operative Engagement Capability, the improved networking compared with what was originally envisaged, but the judgment is that with a fleet of six we can protect a medium-scale operation, which is two task groups, and that is what we need to do.

**Q208 Linda Gilroy:** That is based on two task groups, so perhaps an aircraft carrier group and one amphibious group.

**Mr Lester:** An amphibious one, exactly.

**Q209 Linda Gilroy:** But not two amphibious groups.

**Mr Lester:** No, our requirement is to protect two task groups.

**Q210 Linda Gilroy:** Does that mean that there is one or two needed to escort?

**Mr Lester:** Two per task group.

**Q211 Linda Gilroy:** Two would be required to escort a task group?

**Mr Lester:** Yes.

**Q212 Linda Gilroy:** That would mean, you would have two, that would be four in use, although I think it has been said that five out of the six would be available for tasking.

**Dr Tyler:** We are aiming to generate availability of five from six.

**Q213 Linda Gilroy:** You are?

**Dr Tyler:** We are aiming to do that.

**Q214 Linda Gilroy:** What is the contingency arrangement? Hopefully it will never happen, but if HMS Nottingham hit the rocks or Endurance flooded, you would have one spare.

**Dr Tyler:** Yes.

**Q215 Linda Gilroy:** What is the contingency plan for that?

**Dr Tyler:** If we are managing to generate five from six, then at any point in time we have got one spare. Clearly, if we lost one, then that would leave us only just enough to protect two task groups on that basis, but, frankly, that goes for all of our defence capability. We have to size it to a particular assumption set and, if you stress that assumption far enough, then we end up with not enough equipment.

**Q216 Linda Gilroy:** The consequence of reducing from 12 to six is that it is at the very highest end of the risk that can be taken as far as the capability being available in adverse circumstances?

**Dr Tyler:** I think it is a bit too much to say it is at the farthest end of the risk. We have taken a carefully calculated risk and believe that we can live with that perfectly adequately.

**Mr Lester:** The other thing is that these task groups, in practice, will be, in many cases, in most cases, probably taking part in coalition operations anyway with other people's navies, particularly the US Navy.

**Dr Tyler:** I think that is where the Co-operative Engagement Capability comes to the fore as well. In the time that Type-45 has taken to be developed and manufactured the networking side of things has come on tremendously, and we are able to get, if you like, more capability out of the same assets by networking them than we would have done previously, by sharing radar pictures and that sort of thing.

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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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**Q217 Linda Gilroy:** That is happening, for instance, in the Gulf of Somalia, and so on, at the moment, the allied operations?

**Dr Tyler:** Whenever we are operating in a coalition operation then, obviously, we are trying to network (it goes back to our FRES discussion earlier) the assets that we have got in the battle space together to the maximum extent possible.

**Q218 Chairman:** Before we move off this issue of 12 to six, there must have been a rationale for having 12 in the programme originally. I wonder if you could please, look it out in the Ministry of Defence and send it to us.

**General Sir Kevin O'Donoghue:** Yes, of course.<sup>6</sup>

**Q219 Linda Gilroy:** The Type-45s have been built fitted for, but not with, some capability, so they can be upgraded as they go through life. Where will these upgrades be done and how will they be procured? Will they be part of the Surface Ship Support Alliance, will they be competition? How will that work?

**Dr Tyler:** It very much depends on the nature of the upgrade that we are talking about. It is highly likely, in fact I think it is probably fair to say definite, that upgrades would be primed within the Surface Ship Support Alliance but, clearly, if it is something like, let us say, a communications upgrade, that might very well involve one of the key suppliers within the supply chain, if it is a propulsion system upgrade it would involve Rolls Royce—it depends on the nature of the upgrade as to how it would be contracted but the work would be conducted through the Surface Ship Support Alliance.

**Q220 Linda Gilroy:** When will they be fitted with close range weapons systems: Phalanx?

**Dr Tyler:** I cannot answer you that question here and now. We can come back to you on that.<sup>7</sup>

**Q221 Linda Gilroy:** Can I just ask what will be the additional costs of keeping the existing capability in service for longer because of the delays to the Type-45 programme?

**Dr Tyler:** I cannot remember that number here and now, but it is in the NAO's value for money report on the Type-45, which was published at the end of last year or very early this year.

**General Sir Kevin O'Donoghue:** I think it was, yes.

**Dr Tyler:** They did a full audit of that and it is in their report.

**Q222 Linda Gilroy:** Just before turning to a couple of questions on the Naval Base Review, Astute, in order to maintain the drum beat, confirmation is needed of the order of a fifth vessel. When is that likely to be forthcoming and when will the name of the vessel be announced?

**Dr Tyler:** We have already got some long lead items.

**General Sir Kevin O'Donoghue:** Yes, we have ordered the long lead items, so that is underway.

**Dr Tyler:** Essentially, what we are doing with BAE Systems at the moment is ensuring that they are not without contract cover to sustain their key capabilities as we move through the Astute programme, but at the same time we are also ensuring that we are locking down prices that we can afford for the subsequent boats in the Astute class, and that balancing act is going on as we speak.

**Q223 Linda Gilroy:** Is that a code for the 22-month drum beat being extended a bit and negotiations being necessary to deal with that?

**Dr Tyler:** The issue of the drum beat has a lot to do with the sustainment of the key capabilities, and clearly that is our biggest concern, to make sure that we do sustain the key capabilities so that we do not end up in the territory that we did 10 years ago. We are very mindful of that. Yes, there is a view that we can extend the 22-month drum beat a bit, and we are, literally, at this moment, doing studies into that to be clear about what it can be extended to without compromising our capabilities.

**Q224 Linda Gilroy:** It is a very fragile skills base and, of course, under pressure at the moment insofar as the nuclear elements of it are concerned from the civil market. Is that something in respect of which you have an active programme too?

**Dr Tyler:** Absolutely, we do. Particularly within MoD we have got a very, very proactive programme, which we can provide you more details of, of what we call the NSQEP (nuclear suitably qualified and experienced personnel). The commercial nuclear, the growth in that business, is both threat and opportunity. Clearly there is a threat that some of our experienced staff will go over there, but it is also an opportunity, because what we are seeing now is an increase in education courses with a very strong nuclear element to them. We are getting a bigger market place of people with the nuclear skills, so in some senses we will be fishing in a bigger market in the future, particularly with young people.

**Q225 Linda Gilroy:** The Nuclear Skills Academy has a MoD defence dimension to it?

**Dr Tyler:** I do not know the specific answer to that, but, again, if we provide you with some information about our NSQEP programme you will get the answers to all of that within that.

**Q226 Linda Gilroy:** On the Naval Base Review, in your submission you set out a variation on a theme, but nothing unexpected, of the announcement that was made that three naval bases would be maintained, but looking ahead there are number of issues which there is a clear interest in, especially from the further south-west side of things. When will the Future Surface Combatant, or the Future Frigate, as I think we are now calling it, numbers and sophistication of the variants be known? There is a programme working on that at the moment I understand.

**Dr Tyler:** We are just going into the assessment phase, so the blunt answer to that would be not for some time yet until we have conducted a lot more of

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<sup>6</sup> Ev 114

<sup>7</sup> *Ibid*

the assessment phase, and I expect that at a strategic level the requirement will be heavily informed by the Defence Review. So it will be some time yet.

**Q227 Linda Gilroy:** In terms of numbers and types?  
**Dr Tyler:** The numbers, types, the extent of the capability and so on. It will be some time yet.

**Q228 Linda Gilroy:** That is something we can expect to see discussed in the Green Paper?

**Dr Tyler:** I do not believe it would be.

**General Sir Kevin O'Donoghue:** No, I think the questions will be in the Green Paper. The answers will come in the Defence Review.

**Q229 Linda Gilroy:** What is the threat analysis and how do these relate to them? Presumably, the timetable for a decision on the base porting of the seven Devonport Type-23 frigates which are there for the next five years, beyond that, will be affected by whatever those decisions are?

**Dr Tyler:** Yes, it may be, and, again, what we wanted to do was to give some medium-term clarity on the situation, hence the five years, and before that time is up we will be able to make much more concrete, longer-term plans, a lot of which, as you appreciate, are to do with the succession between the Type-23s and the Future Surface Combatant.

**Q230 Linda Gilroy:** And what the nature of the new future frigate is?

**Dr Tyler:** Yes, future frigate, if you prefer.

**Q231 Linda Gilroy:** In terms of what will be looked at—it is a rather more detailed aspect but one which is repeatedly raised at the Devonport end—what examination has been given to the lack of accommodation in the Portsmouth area prior to the base port changes to accommodate additional vessels—Portsmouth is pretty full at the moment—and also to the security considerations of having most of the fleet in one location?

**Dr Tyler:** I do not think we can give you a detailed answer to that here and now.<sup>8</sup>

**Q232 Linda Gilroy:** I think I am flagging it up rather than expecting you to answer it.

**Dr Tyler:** We will certainly provide you with more information. All I will say is that this thing has been studied very long and very hard and we have not got ourselves into a situation where the strategic plans that we have got are not deliverable with the size of the force structure that we anticipate in the future, but we can provide you with some of the detail of the analysis that has gone on, if that is helpful.

**Linda Gilroy:** That would be welcome; thank you.

**Chairman:** I think, for one reason or another, Linda Gilroy would like that information as soon as possible.

**Q233 Mrs Moon:** Before I start, Chairman, can I put on the record that I spent part of an industry parliamentary fellowship with Finmeccanica, so

that that is absolutely clear. Dr Tyler, you said earlier on that part of the time you have been guilty of your eyes being bigger than your stomach. I think that, in a sense, has run throughout a lot of today's evidence. In relation to the Nimrod MRA4, an overrun of £789 million, a 10-year slippage. Its in-service date should have been 2000. I understand it is now December 2010.

**Dr Tyler:** Yes.

**Q234 Mrs Moon:** Are you confident that there will not be any further delays?

**General Sir Kevin O'Donoghue:** Yes.

**Q235 Mrs Moon:** Will the programme be implemented in December?

**Dr Tyler:** I am as confident as I can be. In the last 18 months, while we have had the sort of stranglehold around the neck of this project, I think I can say that we have met all of the key milestones that we have aimed for, and one or two of them we have been early on. I think CDM and I would both agree that this is probably, I think the technical term is, a dog's breakfast. This is probably the single biggest dog's breakfast of a procurement project that both of us have handled. We are very much in the very late stages of that programme now and I can say over the last 18 months that things have been going extremely well. We have just completed the flight test programme, which is a major milestone, and we are close to being able to handover the first of the operational aircraft. That has not happened yet but we expect that to happen in the near future. The other thing which I should stress is that, over the course of the 18 months, we have not seen any cost slippage whatsoever on the project, and we still have a healthy risk provision left in the project, so I would give it a high degree of confidence.

**Q236 Mrs Moon:** When will we have the full capability requirement of this dog's breakfast?

**Dr Tyler:** I cannot remember when we will get the ninth aircraft in, if I am honest with you, but we should have the first one handed over to frontline command very shortly, and then the others will follow reasonably quickly thereafter. I cannot tell you when the ninth one will come into service, but, again, we can provide that information to you.<sup>9</sup>

**Q237 Mrs Moon:** One of the issues that has been of major concern to the British public has been the issue of transport helicopters. In your opinion (and perhaps Sir Kevin you would like to come in on this), does the Army have sufficient transport helicopters to support the British Army in the field? Are we there? Are we getting there?

**General Sir Kevin O'Donoghue:** There has been extensive work done on helicopters. We do need to do improvement to the Puma fleet, which I think you are aware of. There is a submission hovering, if I might say, about how we might reshape our transport helicopters. Clearly I cannot go into it now; it is in the processing. I have no doubt it will be

<sup>8</sup> Ev 115

<sup>9</sup> Ev 115



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1 December 2009 General Sir Kevin O'Donoghue, Dr Andrew Tyler and Mr Guy Lester

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announced very shortly, but we have a plan to increase significantly the number of transport helicopters.

**Q238 Mrs Moon:** How do the numbers relate to the number of troops deployed on active operations and, also, how does that ratio compare with that for other nations within ISAF? How are we looking in terms of comparisons to other nations? Are we under supplied? Do our troops constantly have to borrow? Where do we stand?

**General Sir Kevin O'Donoghue:** Some nations do not deploy helicopters at all. We are in a coalition. All the helicopters out in ISAF are part of the coalition helicopters, and it is not a question of borrowing so much, it is best use of assets. I think the Chief of Defence Staff said the other day, you could always use more helicopters, but there is a sufficiency of helicopters in theatre at the moment. Yes, we are pushing more out there. The figures I have got written here: there is a 48% increase in the numbers of helicopters between June 2009 and June 2010 and a 45% increase in flying hours. They are building up the whole time but, as CDS said, you could always use more.

**Q239 Mrs Moon:** Are you happy with the role Merlin is playing in this?

**General Sir Kevin O'Donoghue:** Yes, the first ones are out now. They were in Iraq. They have been in the States practising, testing hot and high flying in the conditions that they are going to be flying in. They are now deploying into Afghanistan.

**Q240 Mrs Moon:** You are happy with the capacity to fly hot and high and to provide enough lift capacity?

**General Sir Kevin O'Donoghue:** There is always an attraction in having more lift. There is a balance between the amount of armour you put on, the amount of protection you put on and the lift of the engines, and it is that operational balance that we need to consider. Am I happy? I am happy that we have got more aircraft out there with a lift capability. Would I like it to be a better lift capability? Of course, and we will look to see what we might do about that, but the key issue, I would suggest, is we have got them out there, and that is a plus.

**Q241 Mrs Moon:** Is it a case of something better than nothing?

**General Sir Kevin O'Donoghue:** No, they are good aircraft, Merlins. They are big, heavy aircraft. Some of the weight they are lifting is their own air weight, but they are good aircraft.

**Q242 Mrs Moon:** How does the award of the Puma contract to Eurocopter align with the Defence Industrial Strategy? Are there any UK-based subcontractors that will be working on this?

**General Sir Kevin O'Donoghue:** I cannot answer that last bit of your question, but I can certainly come back to you on that.<sup>10</sup> Eurocopter are OEM (the original equipment manufacturer), and it was

appropriate to include them in the competition, and they came in the most economically.<sup>11</sup> To answer your question about the Defence Industrial Strategy and perhaps put a name to it, AgustaWestland have a lot of work in hand. Again, we never said that all helicopter work would go to AgustaWestland. This is a partnering arrangement we have, a partnership with AgustaWestland. We need to make sure that their skill-sets and their industrial capability and capacity is maintained so that they can deliver military capability for us in the future, and I am confident that we are doing that.

**Q243 Chairman:** Before we move off that, how is the Puma life extension programme going?

**Dr Tyler:** It is going very well.<sup>12</sup>

**Q244 Chairman:** There are no problems that you want to flag up?

**Dr Tyler:** No. One of the real attractions about the Puma LEP programme is, of course, its low technical risk.<sup>13</sup>

**Q245 Chairman:** How much extra life will it give to the Pumas once it has been completed?

**Mr Lester:** Ten years.

**Dr Tyler:** It is about 10 years. I do not have the precise number but, yes, it is in the order of a decade or so.

**Q246 Mr Hamilton:** Chairman, if we are investing such an amount of money in Pumas which have only got a 10-year lifespan, that does not make sense to me in the long-term, and that was the conclusion of the Committee. Could you explain why is it that, in spite of all that and, indeed, a number of other people saying that this did not make practical and financial sense in the long-term for a 10-year involvement, when you could have taken an alternative which would have given you another 30 or 40 years, you came to this conclusion, in spite of, I think, a logical recommendation to the contrary?

**General Sir Kevin O'Donoghue:** I think, going back to something I was saying to Mr Jenkin earlier, given unlimited money we would have probably bought new helicopters, but we do not have unlimited money, and there is nothing wrong with the Puma aircraft.<sup>14</sup>

**Q247 Mr Hamilton:** That is not the question. I understand the money was not the issue because you would have got the same value and there would have been less helicopters coming from the other company in the UK and they would have had a greater capability of uplift. The question I come back to is the one I have never understood. You are investing substantial amounts of money in extending the Puma for a 10-year period, which will not be 10 years, it will be less than that, because by the time you get to the 10 years you will end up extending it again. Ten years does not make sense to me.

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<sup>11</sup> Ev 115

<sup>12</sup> Ev 116

<sup>13</sup> *Ibid*

<sup>14</sup> *Ibid*

<sup>10</sup> Ev 115

**Dr Tyler:** The Puma did have a lot of attractions to us from the point of view that it was a known quantity. It is a helicopter that has been very well used and understood by the user. There are a lot of benefits that come through in the other defence lines of development, through things like training and so on, the familiarity, and also, time being of the essence, this was a low risk route to getting a helicopter that was a known quantity very quickly, relatively speaking, life extended and getting it back into active service. One of the things we are trying to do with helicopters at the moment is to get helicopters into service and have as many in service as we can at any particular point in time, and that helicopter is a very important one within the defence inventory and it was important that we were to get it upgraded and back into the inventory as soon as possible.

**Q248 Mr Hamilton:** Just to be clear, you get these helicopters into operation quicker than taking another contract?

**General Sir Kevin O'Donoghue:** You get more helicopters into operation quicker by going down the Puma LEP route than you would by buying new of anything else.

**Mr Lester:** The assessment was that, without a very large amount of extra money in the next few years, we would have a big capability gap in operational helicopters if we bought new helicopters rather than upgrading the Puma.<sup>15</sup>

**Q249 Mr Hamilton:** The two major factors were availability quicker, and of course, commonality, the knowledge. The other one, you are saying, would have been more money.

**Mr Lester:** It is the CDM's point, which is that with infinite amounts of money we could afford new helicopters.

**General Sir Kevin O'Donoghue:** More money upfront would have been needed. I have just been passed a note, the Puma LEP out of service date is 2025.

**Q250 Mr Crausby:** Did AgustaWestland ever come up with a figure? My understanding is that AgustaWestland said that they could not produce it for the same price, but I do not think we ever saw any detail of that, did we?

**General Sir Kevin O'Donoghue:** We would have required 44 Merlins, to replace Puma and Sea King. There were only between 14 and 16 affordable by 2015, which is in the middle of the gap, so we would not have had as many helicopters for the same amount of money as we have got with Puma.<sup>16</sup>

**Q251 Mr Hamilton:** What would have been the uplift of those helicopters compared to the Puma? Would it have been the same, more or less personnel? That is the key question.

**General Sir Kevin O'Donoghue:** There is a balance between the lift and the number of platforms, which is why I said earlier we increased the numbers. No, I do not know the answer to that. I suspect a Merlin will lift more than a Puma, but I do not know.<sup>17</sup>

**Q252 Mr Jenkins:** I have got a note here (and I presume it is accurate) saying that the Puma fleet has now gone from 43 to 34 because nine have been damaged and are not expected to fly again as Puma aircraft. Are we renovating those nine fairly heavily damaged Pumas or are we going to stick with the 34 we have got at present in the fleet?

**General Sir Kevin O'Donoghue:** We will not need 34. We do not need to uplift, improve all 35. I am hedging round this. I apologise for hedging round this. There is a strategy about to be published and announced by Ministers. That will set out the numbers of aircraft of various types that we need, and overall you will see it is a significant increase.

**Q253 Chairman:** If you only need 34, why would you have needed 44 Merlins?

**General Sir Kevin O'Donoghue:** Because that is to replace the Puma and the Sea King.

**Chairman:** We will not ask about the future helicopter project.

**Q254 Mrs Moon:** Can I move on to the Chinook Mk3. What progress has been made in making them operational?

**General Sir Kevin O'Donoghue:** The first one was taken over by the RAF this morning. There will be two more in the next couple of weeks, as we said, and the others will come in throughout next year.

**Dr Tyler:** By the end of the next calendar year we will have them all back in service.

**Q255 Chairman:** Can they fly in cloud?

**General Sir Kevin O'Donoghue:** They can fly exactly where all other Chinooks can fly, Chairman.

**Q256 Chairman:** Then I think we ought to take you up on your suggestion of listening to some further evidence briefly in private. We will now sit in private.

**General Sir Kevin O'Donoghue:** While this is happening, I have brought body armour with me, Osprey Assault. I do not know if you have had a chance to see it. Would you like to look?

**Chairman:** We would, perhaps after the evidence in private.

<sup>15</sup> Ev 116

<sup>16</sup> *Ibid*

<sup>17</sup> Ev 116, 117

**Tuesday 8 December 2009**

Members present:

Mr James Arbuthnot, in the Chair

Mr David S Borrow  
Mr David Crausby  
Linda Gilroy  
Mr David Hamilton  
Mr Mike Hancock

Mr Dai Havard  
Mr Adam Holloway  
Mr Bernard Jenkin  
Mr Brian Jenkins

*Witnesses:* **Sir Brian Burridge**, Vice President Strategic Marketing, Finmeccanica UK Ltd, **Mr Ian Godden**, Secretary to the Defence Industries Council and Chairman of ADS Group Ltd, **Mr Ian King**, Chief Executive of BAE Systems plc, and **Dr Sandy Wilson**, President and Managing Director, General Dynamics UK Ltd, gave evidence.

**Q257 Chairman:** Good morning. It is not yet quite 10.30, but—you will be devastated to hear—we are not being televised and so I think we can start immediately. Thank you all very much for coming to give evidence in our Defence Equipment Inquiry. We heard last week from the Chief of Defence Materiel, and this morning it is the turn of industry to give your assessment of how things are. We said when we announced the Inquiry that we were going to concentrate on armoured vehicles, FRES, Strategic Airlift and maritime capability. We asked about those things in the previous session, and in this session we want to concentrate much more on the larger picture, on the process of acquisition. If there are issues on particular programmes that you want to raise, no doubt you will find an opportunity during the course of the morning, but I would like to start with asking about the Bernard Gray Review of Acquisition. During the course of the morning, I am afraid, several members of the Committee will have to leave. Please do not take this as discourtesy; it is not intended to be so. We just do, as Members of Parliament, have a lot of competing calls on our time and sometimes we have to be in several places at the same time. I think you have all appeared in front of us. Mr King, you have not appeared in front of this Committee for some years now.

**Mr King:** I think it is some years ago. I think it was on the FSTA programme some years ago that I appeared.

**Q258 Chairman:** Welcome back then. Dr Wilson, welcome back.

**Dr Wilson:** Thank you.

**Q259 Chairman:** Sir Brian, when was the last time you appeared in front of this Committee?

**Sir Brian Burridge:** 2003.

**Chairman:** A little time.

**Mr Hancock:** It was that memorable, was it!

**Q260 Chairman:** Mr Godden, you have been here virtually every month.

**Mr Godden:** Not quite.

**Q261 Chairman:** The Bernard Gray Review. I want to divide this into two parts. First, the analysis of the problems in the process of acquisition and, second,

the solutions that Mr Gray proposes. I will ask some questions about the analysis of the problems first. Do you think that, on the whole, the analysis of the problems in the acquisition process is accurate or inaccurate? What would you say? Who would like to begin?

**Mr King:** Chairman, we welcome the report. Clearly, there is a lot of detail and analysis in the report and it quite rightly identifies the imbalance that exists between the programme and the budgets and the need to address that issue. I think that is something that we in industry have felt strongly about for some time and certainly in the response we have given before on whether it was right to up-issue the Defence Industrial Strategy we said that the urgent need is to correct the balance between the programme and the budget and then the Defence Industrial Strategy can support that as a balanced structure going forward. I think it is recognised that it is in everybody's interests that the programme and the budget are aligned, but we do feel that we need to go through a proper process, and the right thing is that it does need to start from what is the foreign and security policy of the Government. We are very pleased that all parties have recognised that we then do need to do a Strategic Defence Review, but we are also very, very strong that, as part of that Strategic Defence Review, there does need to be real recognition that industry and the capabilities that we provide are fundamental to the Strategic Defence Review, and so a Defence Industrial Strategy will need to be posted, but it does need to reflect down, as I say, starting with the policy of where we are going to the Strategic Defence Review. There will almost certainly have to be a balancing of that Defence Review around affordability of the programme and then industry will be able to react in terms of a response to the Defence Industrial Strategy and align its resources and capabilities. So, in terms of the recognition in Bernard Gray's report on that as a set of processes, yes, we are supportive of what is said.

**Q262 Chairman:** Mr Godden, in the ADS memorandum you say, "Much of the Gray report goes to MoD organisational matters. That is a matter for MoD." Surely it is also a matter on which you have views?

**Mr Godden:** Of course.

**Q263 Chairman:** What are your views?

**Mr Godden:** With an organisation that is both a customer and a partner in various fashions, we are bound to have views about how things can be improved, but I think the main point was that the key elements of the Gray report are about how decision-making is made in government between Armed Forces and the procurers, ie the customer, and we did not want to be presumptuous in believing that that set of relationships is something that we would want to have any primary role in. We can comment on it—we have got views on it—but that was a statement really, just to say, of course, that is a matter for government organising its own decision-making in terms of priorities of programme and the decision about which types of equipment and services to develop for the Armed Forces in the pattern. And that was an important statement to make sure that we were not accused of or falling into the trap of believing that we can help government organise itself in terms of the ways in which various departments, service units and divisions organise. Then we have a comment, of course, about how that interacts with industry and how that whole effective interface works. And I think we have two or three main comments about, not so much the report itself, but about the features that we believe this report has highlighted, that decision-making between Armed Forces and procurement, or customer, for industry is very often too lengthy, is quite often unclear or unstrategic, and therefore gets reversed or can have a period of uncertainty created around it, and that aspect of the decision-making and the clarity of decision-making and direction is something that we believe does need to be tackled.

**Q264 Chairman:** Do you agree with the general suggestion in the Bernard Gray Review that there is a whole series of perverse incentives within the Ministry of Defence leading to inappropriate decisions?

**Mr Godden:** There are one or two areas where I think we would disagree with the language. The “conspiracy of optimism”, for example, I think, is not necessarily the way that we would describe it. I think the description from industry is that there is a problem of constantly shifting requirements, and that is what we observe and feel quite regularly. Whether you use the words “conspiracy of optimism” for that or not, it is the shifting requirements and the simple lack of understanding of the capabilities that can be achieved on the part of the customer. That is the area that we would suggest is as important a language and important a feature. I think on the TLMCM—

**Q265 Chairman:** I want to come on to that.

**Mr Godden:** Right. That is what I think in general. I do not know what other people want to add.

**Sir Brian Burridge:** May I add a little to that? First of all, the Gray report points out the nature of perhaps tribal rivalry and the way that impacts on acquisition decisions. It is a matter for the MoD to sort out, and I think that is what we meant in that comment. In terms of the behaviours that result,

those—together with the fact that the programme and the budget are not aligned—give rise to particular behaviours: a lack of strategic thinking such that there is certainty over a period, a tendency to generate complexity in decision-making (and perhaps when we come on to Through-Life Capability Management we can explore that) and, thirdly, a failure to recognise that time is cost. These behaviours which either leave decisions tenuous or unmade have a cost to them, and in that respect I think I would doubt that the DE&S themselves were very surprised by that analysis because it is something they constantly live with.

**Q266 Chairman:** Sir Brian, you are the only one of our four witnesses who has actually served in a very distinguished capacity in recent times in the Armed Forces. I think you are, are you not? I just needed to check that. But that part of it, the tribal rivalries part of the Bernard Gray Review, does not strike you as entirely fanciful?

**Sir Brian Burridge:** No.

**Q267 Mr Jenkins:** There was just the remark—and I am sure I misheard it—where Mr Godden said, basically, “What has this got to do with us? It is the MoD’s problem”, but every contractor I have spoken to in recent years has told me that if they did not get the interfering busybodies from the MoD come down every week and all these constant meetings where they constantly reappraise what they are doing and reschedule it or re-spec it, then they could produce the product much, much cheaper and much quicker, and the only reason the MoD is coming down is to occupy their time rather than to process the product. If we continue to make products that are over-priced and have an extended life, we are going to go out of business, because other people are going to come in and offer a much better deal, are they not?

**Dr Wilson:** Can I comment on that? In a slightly wider context of complexity, which I think is an underlying theme you can read throughout the Bernard Gray report, complexity seems to remain in the way that we procure equipment, and it is not just a DE&S or old DPA issue, it goes right back to requirement setting, and we tend to set over ambitious requirements. Ian Godden has just mentioned this constantly shifting set of requirements where new requirements are piled on top of what is already an over-ambitious requirement, and in one sense, if instead of complexity there was a degree of simplicity introduced into the requirement setting and into what was being procured, we could do a lot more to deliver earlier an initial capability which could then be onward developed through a spiral development process. This has the tremendous advantage of eliminating, or at least reducing, vast swathes of risk that go in the greater the complexity of your target. That leads to faster acquisition, probably better value for money and automatically even improves exportability of the product at the end of the day. So there are many things within the Bernard Gray

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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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report that at that level suddenly become quite stark and quite apparent, and the solution to them also looks fairly obvious, at least to me.

**Q268 Mr Jenkins:** If I could add just one proviso, if we were ordering stuff from a manufacturer like helicopters, we would expect them to fly, would we not? We would not have to put a special sub-committee on to go down there and explain the reasons why they cannot fly at night, at dusk or in difficult conditions. Do you think it is disgraceful that any manufacturer should deliver something that cannot fly properly?

**Dr Wilson:** I could not comment on that specifically.

**Chairman:** I think that was a question aimed at me, Dr Wilson.

**Q269 Mr Hancock:** Can I come back to something you said, Sir Brian, about people's failure to recognise that time is cost. Where is that failure most apparent then? It is quite a startling statement, but it could fall down on both sides, could it not?

**Sir Brian Burridge:** The requirement setting phase is lengthy, the refinement of the requirement is also lengthy; whereas, as Dr Wilson has said, if the customer were to view a capability that they want to achieve over the long-term but introduce what Mr Gray calls the 80% solution—we would say an initial operating capability—then that could be reduced, because you would get the capability earlier and you would reduce a great deal of the complexity.

**Q270 Mr Hancock:** As a senior commander, would you have been satisfied with 80%?

**Sir Brian Burridge:** Yes, and we have some experience of it in the way in which we introduced Typhoon. Although we were criticised at the outset, we actually introduced Typhoon in an incremental way. Some of the Committee are well aware and have expertise, but Typhoon came in with a very basic operational capability—air-to-air only. If you look at it now—it is in the Falklands—it is capable of air-to-ground at a level of capability that is very, very impressive. If we were able to adopt that more regularly as a process by which we can introduce capability, provided we know that we have an investment path that will continue, then that will provide capability earlier. It gives the customer the chance to understand the equipment earlier; it gives the customer the chance to understand the support of that equipment earlier.

**Q271 Chairman:** We will come on to incremental development and spiral development shortly. Mr King?

**Mr King:** We have started off talking about relationships, if you like, and having man-marking in terms of relationships, but there is a number of availability-based long-term support contracts where that man-marking issue has been dealt with and the IPTs between industry and the MoD have been aligned—the Tornado availability contract, the ATTAC contract, as it is called, what has happened on Harrier, as Sir Brian Burridge said, how we have introduced Typhoon into the service, the new

munitions structures, the terms of business agreements around the naval sector. All of those address both cost and capabilities to avoid duplication in both industry and in the MoD. I think it is recognised in the Bernard Gray report that in certain sectors we have made massive inroads into reducing duplication.

**Chairman:** I want to move on. Can I ask you, Dr Wilson, to save it up for a future moment, please.

**Q272 Mr Crausby:** Bernard Gray describes Through-Life Capability Management as “fraught with potential pitfalls in practice”. Do you agree with that? Has the Defence Equipment and Support made any progress with the implementation of TLMC?

**Sir Brian Burridge:** Bernard is right in the analysis of the way in which the DE&S is seeking to introduce TLMC because there is no doubt that they seem to be aiming for the gold standard right away; whereas if one looks at it through another lens and says, “What pragmatic examples are there?” the availability contracts that we have just heard about—the Tornado, Typhoon (now), Harrier, helicopters, Apache (the latest one)—that provides the first step, if you like, in a staircase of TLMC, but what the Department are trying to do is seek to trade across what they call “lines of development”. In other words, if we invest a bit more in training, does that remove something from the equipment requirement, or whatever? Clearly, there is not a metric that allows you to trade across things as different as manpower, as doctrine, as equipment and logistics and information; so my long-held view is that the degree of complexity that they have invoked is because they are trying to run before they can walk.

**Q273 Mr Crausby:** But it is achievable, is it?

**Sir Brian Burridge:** It is achievable to a level, and I think the level of certainty is that you can reach a position where you can make trades between the equipment, its logistics, its information requirements and, potentially, the infrastructure that surrounds it—self-evidently, the size of a fleet of armoured vehicles versus the amount of simulation that is available, for example—but I do not believe that you can readily, at the outset, make a trade across all those things. I think that is terribly complicated.

**Q274 Chairman:** Before we get off that, Mr Godden, would you like to say something about TLMC?

**Mr Godden:** Yes, really just to repeat that there is a danger of throwing out the principles of TLMC, which must remain valid (and they do) despite some of the criticisms in the Bernard Gray report, and we would not wish to see the baby thrown out with the bath water on this because the simple version is effective and can be more effective. As it gets more complex, it becomes more difficult and we need to carry on the path of working towards that and not abandon that concept. It is a very important concept.

**Q275 Chairman:** I do not think he recommends the abandonment of the concept.

**Mr Godden:** No, but I think there is a risk that it will be seen as “Oh, this is all too difficult, therefore, let us put it to one side and say we have got too many other things to deal with.” That is the worry, I think; that it will be perceived as too complex to do. Industry in other sectors finds it difficult so this is not unique to defence in terms of being able to implement it. It takes industries many years to adopt these principles, so we would encourage the Ministry to continue with those efforts.

**Sir Brian Burridge:** It has to be said that the UK is a world leader in availability contracting, etc, and other countries look to our experience. I have particular experience in explaining to the Italian Government how all this works. So it is a key capability, and the aspects that have worked very well have taken a lot of cost out of the support of aircraft, etc.

**Q276 Mr Hamilton:** As I understand Sir Brian, what he is really saying is go for the simplest contract first and then you can build upon that as you go through, but that will be dependent upon who the contractors were going to be, if they are in this country. If you opt for a simplistic approach and then you go for a contract outside the country, you bring all the technologists with that. So it is not as simple as you are saying, is it? It really depends on the issue of who has the contract to start with. I just want to be clear about that.

**Sir Brian Burridge:** No, that is absolutely right, but, in the case of an off-shore purchase, the challenge is to make the supplier—who is the design authority, owns the safety case, so they are the major stakeholder in what you do—either to provide you from their own capability with an availability contract and construct in the UK or, as in the case of the Hercules, when that came into service, Marshalls of Cambridge, as it was then, was the on-shore design authority, so they were able to do everything that the manufacturer could do under licence. There are two ways of doing it, but it is essential that the customer understands that that is where they want to get to and it is essential that they explain to the potential supplier at the outset that that is where they want to get to.

**Q277 Mr Hamilton:** So under licence should be a real issue for us?

**Sir Brian Burridge:** I am sorry?

**Q278 Mr Hamilton:** Under licence. If you take an American company, then it is really important for us at the outset that we talk in terms of making sure that we have the intelligence and, therefore, if we put it under licence, it means we have the rights.

**Sir Brian Burridge:** Yes; absolutely.

**Q279 Chairman:** Mr King, you want to talk about the Joint Strike Fighter.

**Mr King:** In terms of having the licence at day one, the reason why you do need to have a Through-Life Capability Management plan, or a view of how you

want to take that system or platform through life, is that that needs to determine what sovereign capabilities you do want in terms of a UK requirement and whether you can have access to those technologies. It is not just about the initial manufacturing and the support of it: you will want to upgrade that capability through life and, you are absolutely right, if you do not think about that at day one, you may be left without the ability to upgrade those capabilities to become operational requirements.

**Mr Hamilton:** Thank you for clarifying that.

**Mr Crausby:** Bernard Gray also concludes that the MoD has a shortage of people with financial and programme management skills. Why is it so difficult for the MoD to acquire and retain these skills? Is it just a question that there is an overall shortage throughout? Does industry suffer from these shortages?

**Q280 Chairman:** Mr Godden, everyone is looking at you.

**Mr King:** I will answer if you want.

**Mr Godden:** No. There is a shortage, in general terms, of skill-base in programme management, systems engineering and equivalent, and you can see that across many industries in the West actually—it is not just a UK problem. Overall there is a shortage of high skill in that area, but the skill level within DE&S and equivalent is lower than you would expect and is lower than necessary. There are two other factors as well, which is authority levels to make decisions that go alongside the skill base and it is the combination of those two factors—the authority levels and the skill base being missing—that causes a lot of issues around how to make decisions and the time taken to make decisions with the lack of skill. So it has an effect on all sorts of things—time, the quality of the decision itself and the quality of the management of the whole process—and we do believe there is a shortage that needs to be dealt with.

**Q281 Mr Crausby:** Is that a real problem continuity-wise? How long do people stay with the MoD? Do they move on into industry, in the sense that industry gives better rewards than the MoD?

**Dr Wilson:** Can I interject there. It is not just an MoD versus defence industry issue. In fact, as we progress into the reinvigoration of nuclear energy in this country, we are going to find a whole gamut of technologists being required across a much wider industrial landscape than we currently have in defence, and they are the same skills—systems engineering, complex contracting—all of the usual things that we put a premium on—programme management. So there is a problem in defence just now. We can always do with more programme managers and more systems engineers. As other industries come up in importance, that is going to be a greater problem, and it speaks to us having to have a skills strategy that feeds all of those industries over the next 10 to 20 years.

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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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**Q282 Mr Crausby:** So what do we need to do?

**Dr Wilson:** Have a skills strategy that reflects the importance of programme management and systems engineering.

**Chairman:** Can you save it up, Mr King, just for a moment.

**Q283 Mr Borrow:** I just want to be clear in my own mind whether this is a money issue or whether this is a systems issue within the MoD. Is this something where, basically, the taxpayer is going to have to pay a lot more cash to get the right sort of people to do the job properly and do that in a climate when both major parties are talking about reducing the pay of top public servants? Are we just going to have to bite the bullet and pay a lot more to get the right people, or does something have to happen within the MoD to make it more comfortable for these people to actually be there and it is not necessarily a cash issue at all?

**Mr King:** It is a nice feed into what I was going to say. There is no doubt that there is a salary structural issue; that if you were to look at what industry is paying these people—because they are a scarce resource across those—then there is a differential, and so, to take your point, you probably do have to bite the bullet if you regard this as a key resource going forward. You then have to put in training schemes, you need a skills strategy and there has to be a commitment to meet these training schemes, because there is not a surfeit of these types of people with these skill sets. If you look into my company, in particular, it is a very recognised function—programme management, project management, whatever you want to call it—and we invest a lot of money in both graduates and training to keep their skills up, so it is a long-term commitment. Then you have to put a career structure around these people. They have got to want to stay in that sector, because these are long-term programmes and you want continuity; so they need to know how they can be promoted within the Civil Service, or the military, or wherever they are sat. It is a really long-term commitment; and I know that DE&S are looking at it, because I have personally spent time discussing the structure of how we have built up our function, and we have had joint activities going on in that area, but there will be a differential in financial rewards.

**Q284 Mr Hancock:** The problem is, if the MoD did that, you would end up poaching them, would you not? You would stop training them and you would poach them. It is not to your advantage, is it, really, because your edge at the moment is there is not the skill and the project management within the MoD, which allows you to take them to the cleaners time after time after time?

**Mr King:** That is absolutely wrong.

**Q285 Mr Hancock:** Are you sure?

**Mr King:** Absolutely and fundamentally wrong.

**Q286 Mr Hancock:** So why have you spent so much money engaged in buying people out of the Services when it suited you, when you needed their skills?

**Mr King:** Because we need those skills, because, as we have moved along providing integrated support availability contracts, we need to marry up our design capability with the operational capability to provide real cutting-edge capabilities. If you look at the benefits of the Tornado attack programme, it has taken £1.3, £1.4 billion of savings to the taxpayer.

**Q287 Mr Hancock:** Over and above all the other costs that it had already cost us. Over and above the original figures.

**Mr King:** No.

**Q288 Mr Hancock:** Yes, it has cost us a lot more money than we originally—

**Mr King:** Not true. On Tornado that is not true. We are very professional about the way that we do these things. We do not go in and just recruit people from the Services. We enter into debate as to where would be the right placement of those skills for the UK.

**Q289 Chairman:** Can I come back to something that you said, Dr Wilson, that it is going to get more difficult to recruit these people. The Bernard Gray Review suggests that the problems in the acquisition field in the Ministry of Defence are bad but accelerating. So things are going to get more difficult in that respect, and putting them right is also going to get more difficult, if what you suggest about the shortage of skills in the future is right. Would you say that was an accurate summary of where we are?

**Dr Wilson:** Yes, I think that is a fair comment, given what Bernard Gray has said and what I have said today, in terms of the wider industrial landscape for skills.

**Q290 Chairman:** You accept that things are bad and getting worse—that comment in the Bernard Gray Review—do you?

**Dr Wilson:** I think that is hard for me to judge, frankly.

**Sir Brian Burridge:** There is one area where things could change. Acquisition reform over the years has had to see the MoD change its approach from a strictly writing contracts type of approach (and they had many people who were very talented at that) to a commercial approach. When you think of the way in which acquisition of both capital equipment and services has changed through PFIs, availability-based contracts, then there is a greater need for people with commercial nous, and that is an area that they are short of in the DE&S and that is potentially an area where they can actually expand, because the nature of the economy will release a number of these people on to the market. So the challenge for the MoD is to get the commercial expertise; the challenge for industry is to understand the user better, particularly, again, in these areas where acquisition has changed, and that speaks to Ian's point about needing people who really do understand what the users do with their equipment.

**Q291 Chairman:** That is helpful.

**Mr Godden:** I do not want to prolong the debate, but, just to reinforce it. I think this is one of the single biggest important features which possibly has not got enough follow-through attention or enough implementation aspects to it to make this real. As I survey the four sectors I am involved in—civil aviation, defence, civil aerospace and security—there is no doubt what Dr Wilson said, that the demands on that type of skill are increasing over time, and, with the civil nuclear coming into that equation quite dramatically, there is a real risk of a further skill drain out of the traditional defence sector, particularly because, as we look at careers—and I listen to people every day talking about their careers—they are beginning to fear that the security space and civil nuclear are much better future careers for them because it has got growth, it has got expectations of more money, it has got more research, etc, and there is therefore a belief that defence has got this risk of being stuck in a box and not going anywhere. So I think we have also got that challenge, which we are dealing with. To me the programmes associated with this are critical. You may or may not know that the DoD have just hired, or are in the process of hiring, 30,000 people into procurement, as we speak, because they feel they have deskilled too far. So they themselves are trying to reach in and deal with it.

**Q292 Chairman:** When you said “the DoD”, you are talking about the United States.

**Mr Godden:** The United States DoD, I am sorry, are hiring 30,000 people in and they are paying above market rate.

**Q293 Chairman:** They are paying above market rate?

**Mr Godden:** Yes.

**Q294 Chairman:** Mr King says that the Ministry of Defence pays below market rate. Mr King, are you able to quantify the differential that you have referred to?

**Mr King:** Not here and now. I suspect it would be fairly easy to do so, but I have not got that data to hand.

**Q295 Mr Jenkins:** I would love to ask you about the rationale and the reason why I need, in the Ministry of Defence, a very good commercial manager to deal with a partner, but the question is more basic than that. As you may be aware—and some people will not face up to it—only a percentage of our people have the ability to acquire and develop these skills. So what are you doing as companies? Do any of you actually finance a chair at a British university to develop these types of skills and how many do you pull in to stop them drifting off into useless occupations like lawyers or accountants?

**Mr King:** We do a lot. You are quite right. We do have relationships with a lot of universities in terms of sponsoring the types of skills needed. At any given time we have got about 1,000 in apprentice schemes, we have got 300 in graduate schemes and we keep on turning up that wick to make sure. We do lose a

percentage of them, but it is recognised that if they can stay within the sector, or stay within the UK industrial sectors, then that is the right thing to do. You cannot turn that wick off. And that is why I come back to the earlier comments about the need for a proper SDR which then determines the Defence Industrial Strategy and that allows us to invest, because it takes a long time to train these people. We are a very specialist sector. They just do not appear. We have gone past the belief that you can just go to other engineering sectors and pick up people who are directly attuned for the defence sector. It does not work that way. You then have to spend a lot of investment in it.

**Q296 Mr Jenkins:** Do you all do the same?

**Mr Godden:** Yes. On behalf of the industry we are trying. For example, at Farnborough we are creating a Futures Day, the Friday, all around this subject about attracting youth into the sector and attracting the science philosophy amongst youth. Our long-term aim is to build that up into something much more significant than it is. Last year I think we had 700 or 800. These need to be thousands. We need to get thousands in here. This will not solve the problem in the next few years. It will not solve it in the context of what we have just talked about in terms of some of the skill bases in the MoD, but it will start feeding the hopper for five, 10 years down the road.

**Q297 Chairman:** Still on the analysis contained in the Bernard Gray report, would you say—from the sound of things you probably would—that this was the most important issue contained within the Bernard Gray Review: the absence of skills within the Ministry of Defence?

**Sir Brian Burridge:** There are two fundamental issues. One we touched on at the outset, the fact that the programme and the resources are out of balance and that generates particular behaviours, but, certainly, in parallel with that is the depth of skill in programme management and in commercial management.

**Q298 Mr Hancock:** Is it possible to bring those two things closer together?

**Sir Brian Burridge:** One assumes that it would be possible. One would have to defer to the Treasury to know what is in the art of the possible, but, yes, in theory, as a standard piece of business practice, that is what you would seek to converge.

**Q299 Mr Hancock:** He did not come up with any real suggestions of how that could be achieved, though, did he?

**Mr Godden:** That was my comment about implementation.

**Q300 Mr Hancock:** Could I, first of all, start with two general questions. As individuals, were you personally interviewed or consulted by Bernard Gray separately, and what was your view of the process that he went through? It would be interesting to hear if there is a different view on that. What was



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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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industry's view generally of the consultation and the efforts that were put in to try and make this as potent a document as he could?

*Sir Brian Burridge:* I was certainly consulted—

**Q301 Mr Hancock:** In a one-to-one capacity?

*Sir Brian Burridge:*—individually, by Bernard and his team. We went over aspects such as Through-Life Capability Management in-depth, strategic partnering arrangements. You will recall that the first strategic partnering arrangement was with AgustaWestland post the Defence Industrial Strategy. What were our views on that? The business of man-marking, which was high on his list, and the depth of commercial and programme management skills, and, from my knowledge and my company's collective knowledge, we recognised that this was a suitably incisive methodology; it would recognise where problems lay. We perhaps thought that it may not come up with anything absolutely brand new, but it would not in any way undermine it for the telling. That said, it is a tough world in the public sector when you are dealing in an environment of constant financial squeeze; so one is always slightly reticent of continuing to beat up on the DE&S in that respect. There are some things over which they have no control, and the budget is one of them, but as a methodology, absolutely no qualms.

*Mr Godden:* I would reinforce that. I was interviewed one-to-one twice and then had a discussion towards the tail end, so he consulted very effectively, and, in my opinion, it was a thorough process, a thorough analytic background and a set of interviews that was quite wide. Secondly, he did present and discuss openly at the NDIC meetings and he was quite comfortable with anybody calling him from DIC (Defence Industrial Council). From that point of view, the consultation was very strong and the implications from it were well discussed. It was very open. It was behind private doors, obviously, but it was a very open discussion about the implications and the nature of the problem. The implementation issues possibly could have required some further effort and time, but I think that was not necessarily timeliness on his part, that was the timeliness to get the report to a certain condition.

*Dr Wilson:* I also had a one-to-one session with Bernard Gray. I did not major really on the source of the problems, because a lot of that, I think, was pretty obviously taken as read at the start of it, and concentrated more on where the solutions might lie. However, we did comment on the commercial process within MoD, the fact that there are certain aspects of that that were somewhat more routine that could be streamlined and our disappointment that that had not yet happened, and suggested that that might be a way forward, but then focused primarily on the so-called 80% solutions, the speed aspects, the risk aspects, and we gave him a short paper on the differences, as we saw it, between the standard equipment programme and the UORs and how the two could perhaps be brought closer together in some new hybrid procurement system.

So we focused very much more, I think, on potential solutions given that things had to change, get faster and cheaper and with less risk.

*Mr King:* I had a one-on-one with Bernard on this subject, and then we also agreed, as part of that process, what other access he should have to the various people in BAE Systems who were either involved in partnering or in other programmes. So we gave him free access to everything he wanted.

**Q302 Mr Hancock:** What do you think he missed?

*Mr King:* I personally think it is a fairly comprehensive report, to be honest with you.

**Q303 Mr Hancock:** Industry is well pleased, are they?

*Mr King:* I think we recognise it is a comprehensive report which addresses the key issues that have to be dealt with.

**Q304 Mr Hancock:** So industry is well pleased?

*Mr King:* I am not sure that the term “well pleased” is founded.

*Mr Godden:* I do not think that reflects the sentiment in industry, as I read it anyway. It is pleased that it is out in the open—some of these issues that have been raised and developed—and I think there is a big debate about how to achieve this, and there is a slight fear in industry that it will be a document that will live as a document and will not have the sharp implementation associated with it. If you ask, “What does it miss?” perhaps it misses the people, leadership and implementation issues in addressing how this is going to become, not a change programme, but a reform programme, and that is, I think, the worry.

**Q305 Mr Hancock:** Which is very different.

*Mr Godden:* Which is very different. A change programme is one thing; a reform programme is another thing. That is my personal worry about it, that it becomes another change programme and it does not deal properly with the skills issue and the reform required to make decisions much, much faster, etc. So if there is a fear, the word “pleased” is not the right word to use for the industry. It is pleased that it is out in the open but it fears it being a wonderful report on the shelf.

**Q306 Mr Holloway:** Does the MoD sometimes make it more burdensome for industry? For example, I cannot remember whether it was the Defence Committee or the Armed Forces Parliamentary Committee, but going down to Westland, the engineers there were fitting rifle racks for the SA80s on some helicopters, some Merlins coming from Denmark or somewhere. There were two Westland engineers fitting these rifle racks and there were seven or nine people from Abbeywood down for the day inspecting that they were doing it properly.

*Sir Brian Burridge:* Clearly these things can happen, but, in terms of the way AgustaWestland at Yeovil run, and you probably will have seen it, there is a combined IPT. There are 200 MoD people integrated into the design, engineering and quality

staff within the factory and, frankly, when it comes to dealing with either something like the Future Lynx programme and things like the Integrated Operational Support for Merlin, they are pretty seamless—it is one of the success areas—but let us be under no illusion, design authority, the safety case, particularly when you are doing modifications at speed, as you are in UOR processes, does need to be properly audited.

**Q307 Mr Holloway:** Having tens of thousands of people working for the MoD whose job is precisely that, do you think sometimes it goes over the top?

**Sir Brian Burridge:** No. This is interesting in the Gray report in leading to the conclusion of a government-owned contractor-operated acquisition organisation. What I would say is that the nature of the skills required, the number of people that can be afforded in DE&S means that the interface between the core of DE&S as an intelligent decider, the interface with industry, is inexorably moving towards the centre of DE&S. Complex programmes these days are likely to require alliances, and so one large company will have to manage the gorillas represented by the other parties in the alliance. So the degree to which you need what was the rather old-fashioned way of scrutinising every turn of the spanner has gone.

**Q308 Mr Hancock:** Do you accept that industry itself has to have more realistic cost estimates in the early stages of programme development, and how could this be best achieved?

**Mr King:** I am sorry?

**Q309 Mr Hancock:** Do you accept that you, as the industry, need to produce more realistic cost estimates at the early stages of programme development, which would enable things to be much more fair? We always seem to be blaming the MoD for cost over-runs. They seem to accept responsibility for everything and industry looks blameless, except they are the ones who have charged more and taken longer.

**Mr King:** There are two comments I would make to that. One is that sometimes in the early stages of contracts we reach for a commercial structure and a price far too early, rather than defining what is the solution you are trying to provide, so it tends to lead to extreme statements of requirements and not necessarily defining which party is best able to handle the risk. You tend to find that in the first stage of estimates it is very open-ended, all the risk largely sits with industry, which tends to inflate what you put in terms of the cost because that is the only option that you have to do. You would be much better down-selecting somebody based on the requirements and capabilities they have in the early stages rather than running a beauty parade with a big cost attached to it, because it is very open-ended, and then working with that party and really honing down to what is an acceptable cost against an acceptable risk and capability profile.

**Sir Brian Burridge:** Some reassurance. The NDIC is working in partnership with the MoD to look at project initiation and really examine what it is you need certainty on before you proceed, because, as Bernard points out, a number of programmes have launched into life carrying really quite high risk which, had some attention been paid at the earlier stages (which was actually one of the pillars of SMART Acquisition) that could have been avoided. I think the key thing in any of these things is to consult industry early so as not to close off options or refine the requirement to the extent that it does impose additional risk and additional cost. If there was a more collaborative approach to these big capability programmes early on with industry so that everybody is on the same page with regard to the complexity and the cost and time aspects, then that would be a step forward, and it is beginning to happen.

**Mr Hancock:** But going right back to the initial statement about willingness to change and to bring in SMART Procurement, seven or eight years have elapsed since secretaries of state were making those statements, and yet there is still this abject failure to achieve what you said was the key pillar—it was the only pillar really—of SMART Procurement.

**Chairman:** We are just about to get on to that.

**Q310 Mr Hancock:** It is Sir Brian's point there about why this has not happened.

**Sir Brian Burridge:** I can give a very short answer. What has made it more difficult has been significant reorganisation along that time period. The three single Service commands into the DLO was the starting point—the DLO into the DE&S, the way in which the central customer was created here—so organisational change. The other absolutely consistent factor has been a budget which is insufficient to meet the aspirations, and that really does influence behaviour.

**Mr Hancock:** What is your view on the spiral option?

**Q311 Chairman:** Before we get on to that, Mr Godden, you said you did not believe in this conspiracy of optimism notion. Why not?

**Mr Godden:** It is the language which I think is not quite right. It gives the feeling that it is over specification and under budgeting that is at the heart of this. The budget issues are clear, which we have just said, but it is the shifting requirements and the indecision around what the real requirements are and the changes to that.

**Q312 Chairman:** What Mr Gray says on page 29 is, “Under current governance, while underestimating the cost of a programme can lead to criticism and delay in the delivery of the required equipment, it is highly unlikely to lead to forfeiture of the desired equipment. As a result, the Forces have an incentive to bid for as many equipments at as high a specification as they can. They also have an incentive to underestimate the cost of delivering this system.” Do you think that is wrong?

**Mr Godden:** No, it is not wrong, but it is incomplete in its view.

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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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**Q313 Chairman:** Do not worry; there is plenty more.  
**Mr Godden:** I think, just going back, it is the constantly shifting requirements as well. That is the point I am making.

**Q314 Chairman:** So it is additional.  
**Mr Godden:** It is not just that there is optimism from the beginning. It is a requirement in order to get the budgets through.

**Q315 Mr Hancock:** But it is a one-sided argument, is it not? Once again, all the blame falls on the MoD. They constantly change the requirement, but then, in some cases, industry has not been able to produce what they originally set out to claim to produce. The MoD have had to compromise because industry has been unable to produce what they set out for. So we have to be a bit equal.

**Mr King:** Absolutely.

**Mr Godden:** That is understood.

**Mr Hancock:** But Gray does not recognise that.

**Chairman:** Do you think that is fair?

**Mr Hancock:** I do not think he recognises the fact that industry sometimes cannot deliver what they say they can. He does not mention it at all.

**Q316 Chairman:** We can ask him about that when he comes in front of us.

**Mr Godden:** I had not noticed he had not mentioned it, so you are pointing out something new, but the idea that a complex engineering project of the nature that we have got can always be on time and on budget because the risks are fully understood, etc—the risk pattern is a double risk and there is no doubt—and you see it in the scientific area—you are not able to predict, so there is an element by which industry will from time to time not have the right answers from the beginning. Absolutely. That is a feature of the risk sharing that was talked about earlier by Mr King. That risk sharing needs to be agreed at the beginning or very well understood, otherwise we do get into a “blame the other” culture, which is very unhelpful.

**Q317 Mr Hancock:** Were any of you party to the suggestions that were being made in the report that certain elements in industry were favouring the spiral approach to development? What do you really see as the advantages and can it really, actually, once again, be delivered? It sounds good, but is it a deliverable option?

**Dr Wilson:** Could I start on that. I am definitely a proponent of the idea of incremental procurement and spiral development. You asked a question earlier which I was going to at some point try and give an answer to. It was going to be asked as a question. If you went and asked the Army what they thought of the aspirations which had led to them not having a protected manoeuvre capability after nearly 20 years of programmes, perhaps they would suggest that they would be happy to have accepted an 80% solution, which was your question. In fact, one of my colleagues has had a conversation with a senior person within the Army, who says, “Yes, we might well have been better to do that”, because they

would have had something, they would have had that early capability delivered and then see mechanisms for incrementing it as the requirement changed. That is my very simple view of why an early delivery of an initial capability will go down very well with the Armed Forces in certain areas. I am not sure you can do this across all platforms or across all technologies, but I think it is fundamentally doable in quite a number of areas—armoured vehicles is one, communication systems is certainly another—and in those cases you can see ways in which incrementalism can help you. You have to take a technology view of this as well, because such things as computers, radios and other pieces of complex electronic equipment tend to get smaller and more compact and more readily adaptable to platforms over time and, therefore, there is no point buying 15,000 of them at day one when you need maybe 3,000 for the next few years and you can incrementally buy those at a constantly upgraded capability. So I think there is a lot to be said for incremental procurement and spiral development.

**Q318 Mr Hancock:** Is it deliverable?

**Dr Wilson:** Yes, of course it is deliverable. We are currently doing that on the Bowman programme.

**Q319 Mr Hancock:** Go back, Sir Brian, to when you were in a leading role. Would you have been happy with that arrangement?

**Sir Brian Burridge:** Yes. I should place on the record, I have never worked in acquisition, I have always been an operational person, but it gives you certainty on removing the previous capability, of the training programmes you need, the infrastructure investment you have to make. There is nothing worse than running on a fleet that you were not expecting to have to run on. If I use the example of fast jet aeroplanes, in the life of an aircraft like Typhoon, JSF, we are not going to change the engine airframe combination. These are now so integral that you will not see the progression that we saw, say, with the Spitfire or even the Harrier—totally different aircraft between the GR1 Harrier and the GR9. Capability in this era comes from software, sensors and systems. These are at the heart of capability, and all platforms ultimately will arrive at a point, perhaps somewhere around 2050, when that is true. Armoured vehicles, which at the moment are relatively unsophisticated, have more and more sophisticated architectures, more integration, use electronics in a much more sophisticated way. If capability is coming in that way and the electronics, as you have heard, over the lifetime of a platform inevitably has obsolescence about it, you have to solve the obsolescence, and you can do that at the same time as you increase capability: faster integrated circuits, etc, etc. If you lay that on to an availability contract, you can do that as part of the regular maintenance of the platform rather than have these huge return to works programmes where, as a front-line commander, you are denuded of your capability in sheer numbers and, as a matter of cost, it is a relatively inefficient way of doing it. So it is already happening with fast jet aeroplanes and it has

the potential, as all types of platforms move through that sophistication curve, to be the way it is always going to be.

**Q320 Mr Hancock:** Do you think it is acceptable to sell that idea of starting with an 80% capability to the wider public, to the media, who would say, “Here you are. Industry is saying do not go for the 100% solution: take 80%. It gets into the field quicker, it offers most of what you want, but it is still 20% down on it.” Is it a saleable thing? It would appear that officers in the MoD are up for it, industry is up for it; but politicians have to be up for it because, at the end of the day, they carry the can if it goes wrong. So how do you sell it?

**Sir Brian Burridge:** Well, do not use the term 80%. The label is wrong.

**Q321 Mr Hancock:** Or whatever. Less than full capability.

**Sir Brian Burridge:** The reason I say do not use the 80% label: what is the 80% solution on body armour? There are some things in some places that do not lend themselves, but if you have to use your newly introduced equipment very rapidly on operations, then you have to go the UOR route, you have to accept that you will invest in a small number, and most front-line commanders hate the idea of fleets within fleets, but that is exactly the way it would have to go. I think the general public have become almost immune to the annual slaughter of the equipment programme by the National Audit Office—this number of months late since last year, this amount of money extra—and the numbers are so large, but I think that it would be widely acceptable and Ministers ought to be able to say, “Look, this is us managing risk properly.”

**Linda Gilroy:** I am trying to relate what you are saying to a couple of circumstances. You have talked quite a lot about airframes, but I am thinking about FRES and, with the wisdom of hindsight, I am also thinking about what I saw when I went out with the Armed Forces Parliamentary Scheme to Camp Bastion last year in the way of new vehicles: quite a big range of vehicles being produced for the convoys and also, of course, the Jackal as an Urgent Operational Requirement and, I believe, a forthcoming replacement for the Snatch Land Rover similarly being procured and something which, I think, our Armed Service personnel would have welcomed some time ago. What I am thinking is, what are the lessons of what Gray is putting forward and what we are talking about in terms of procuring, perhaps, for a basic building block capability into which you can update and put in spiral insertion? The other programme that I am thinking of is, with the wisdom of hindsight and realising some of the things that Gray is now saying, what would the lessons have also been for not just the procurement of the carriers and the Type-45s but looking forward as well to what has been known as the Future Surface Combatant, now the Future Frigate, I think, is what we are calling it, and can we get that one in the right place? I am sorry that is a

fairly complicated set of scenarios, but if somebody could take the vehicles one first and then maybe the lessons learned on procuring naval equipment.

**Q322 Chairman:** Dr Wilson, do you want to talk about FRES?

**Dr Wilson:** Yes, surely. I think if FRES had been procured earlier with either the specification that existed or some lesser specification, then it would have been perfectly possible to get into service a protected manoeuvre vehicle that would have given the Army all of the capability that it currently needs in Afghanistan, plus additional capability for contingent operations. The sticking plaster of a solution which was adopted is to procure what are called protected mobility vehicles rather than protected manoeuvre vehicles, which have limited off-road capability, and that then gives you problems in your tactics as to where you can go to avoid some of the threats, such as IEDs, that you are constantly going to find embedded at the sides of tracks and roads and places that these vehicles can go. I am here specifically thinking of the Utility Vehicle, which was a large eight-wheeled armoured vehicle with all the usual characteristics of V-shaped hulls and lots of armour and lots of blast protection and the like. If that had been procured, whether it was procured as part of the FRES UV programme or had been procured in some other way, whether it was what finally was selected for UV, which was PIRANHA 5, or whether it was a Stryker or some other vehicle, that capability could have been introduced earlier and it would then have been, upgraded, because those platforms have a history of being upgraded. To quote one simple example, PIRANHA would have started at 18 tonnes, often sits at 23 tonnes. PIRANHA 5 sat at about 28 and currently PIRANHA 5 sits at 30 tonnes. So the ability of these platforms to grow over time is well documented, and that does not take into account all of the growth that could have come in the mission fit that could have added additional capability. So I think it is perfectly feasible to have procured something and that would have stopped other procurements, that would have saved money; it would have allowed the incremental procurement to go ahead.

**Mr Godden:** Can I just add one thing which we have not mentioned, which is the export market, because it has an impact. It has had and would have had a big impact on the exportability of many of the pieces of equipment that we have produced over time, and so there is an extra economic incentive which feeds back on itself with the potential for spiralling to become an economic benefit. As well as the reduction in the early stage it also feeds off itself and creates the economies for the upgrades that might be required. So the thing feeds well in that sense as well.

**Chairman:** Do you want to answer the rest of the points?

**Q323 Linda Gilroy:** Can I just say in relation to what you have seen with the Type-45 and the increase in the cost for the Type-45, when I went to the defence exhibition earlier this year—the major one—what I saw there as a Future Frigate seemed to be

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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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replicating, again, going for (never mind the 100%) 110%, 120%, rather than looking at the basic hull that could be designed to cross all two or three types of Future Frigate and then to build from that.

**Mr King:** It still is called the Future Surface Combatant.

**Q324 Linda Gilroy:** Is it? That is a shame!

**Mr King:** One of the key issues on this programme is that they have to build in flexibility and modularity of the design so that it can be exported, because there is no doubt that unless you have a less complex ship, you are not going to export it à la Type-45, and that is a key part of the “Initial Gate” proposal that is in at the moment, which is to start the thinking and ensure from day one that the programme is structured in that way and we do not get too late and too long in the process before it becomes an over-complex set of capabilities. So those lessons are being learnt and it is a key part of the terms of the business agreement that we have signed up with Surface Fleet in terms of the 15-year partnering agreement which looks at the types of skills, in terms of protection of design skills, making sure it is modular and it is flexible both for export markets and home markets.

**Q325 Linda Gilroy:** So the commentators who say that what is being attempted is a substitute for not getting enough of the Type-45s and that these are a Type-45 variant rather than a different support vessel are wrong, are they?

**Mr King:** Yes. The Type-45 is completely different. This is about the replacement of the Type-23 capability and that type of frigate capability rather than the Type-45, which replaces the Type-42s.

**Linda Gilroy:** So the commentators are wrong when they say that?

**Q326 Chairman:** I think you said, “Yes.”

**Mr King:** Yes, I think I would say “Yes” in terms of the structure of the programme.

**Q327 Mr Borrow:** I am trying to come back to basics in a way, because I sense that there is something about defence procurement where you come up with an idea of what you need, which is way different from what you have already got, and then you try to specify it, de-risk it, usually unsuccessfully, and then you are surprised when it takes longer than you expected to build it and it costs more than you anticipated. I am not sure whether that is peculiar to defence. Certainly I can think of two major civil aviation projects where they have come up with something very different from what is already flying and then been somewhat surprised when it has taken rather longer.

**Mr King:** It is nearly destroying their companies at the moment.

**Q328 Mr Borrow:** I think outside defence it does not happen very often that you have a product that is costing a huge amount of money to design and launch and when you do it tends to take longer and be more expensive.

**Sir Brian Burridge:** The level of complexity in defence systems across the world is an order of magnitude different than that in most civil systems, so there is bound to be more technological risk. The factor on cost is that the production runs are necessarily shorter. Marrying those two things together, the non-recurring expenditure on a programme which is at the top end of technology on short production runs means that its unit cost is going to be high, and certainly in the civil aviation industry Boeing and Airbus, of course, look for hugely long production runs in order to sweat that cost over a large number of aircraft.

**Mr King:** I would not want you to believe that there are other engineering sectors which have not gone through the same types of issues that defence has gone through. There are a number of examples, particularly in oil and gas, where they have changed the nature of the contracting structures on major platforms because they nearly destroyed the supply chain in trying to pass fixed-price risk for something that was going through a very highly engineered phase and they have gone to more partnering type structures to manage those things. But, I think, if you implemented incremental acquisition properly so that you do get an initial operating capability, because the definition of what operationally they want will change over time and probably at a speed which is much more rapid than previously, then you can upgrade those platforms and those systems over time rather than trying to define the 25-year picture at day one that will push risk into the programme. It will push complex contracting structures and costs into the programme; and those are the things that we cannot face, either as an industry or the MoD, going forward.

**Q329 Mr Borrow:** But the MoD therefore needs also to have some recognition of the capabilities of industry?

**Mr King:** Absolutely.

**Q330 Mr Borrow:** The classic example is nuclear-powered submarines.

**Mr King:** Absolutely right.

**Q331 Mr Borrow:** You cannot simply decide, “In 10 years’ time we will have a load of these submarines”, if you have not allowed industry to keep the capability to produce them.

**Mr King:** Yes. If you look at the Astute Class submarine, this is the first time for 15 years that we have commissioned a new first of Class nuclear submarine in the UK. If we think those commissioning skills that existed previously have to be sustained for the future, it has to be against a balanced programme and budgets.

**Sir Brian Burridge:** That speaks to my point about consulting industry early. If I may make a very quick related point, the ability to do spiral development does depend on the nation’s ability to maintain the skill base in its engineering industry. In other words, just doing support availability contracts on a support basis does not necessarily preserve the highly skilled aspects of systems engineering, of

design engineering and of development engineering. These are very important aspects in being able to do spiral development.

**Q332 Chairman:** Can I come on to a different issue, namely, the possibility of having this whole process dealt with by a Government Owned-Contractor Operated process? Bernard Gray says that “it is the contention of the review team that any change needs to be system-wide and significant because trialling or small-scale experimentation risks being strangled by the significant forces working to maintain the status quo”. That rings true, does it not?

**Mr Godden:** The statement I made earlier about this being a reform rather than a change I think is very important. It is in the context of saying that if we are going through another change programme without radical change of skill base, etc, then you would say you are looking for a mechanism to get that electric shock through the system.

**Q333 Chairman:** An electric shock?

**Mr Godden:** But it is not industry’s view, although there are different opinions, I guess, that a Go-Co is the right answer, because I think it is a view that says that that is a great conceptual example of getting the shock tactic but it is not very practical. For practical reasons I think industry feels that this is a very complex area, as Sir Brian Burridge mentioned. Therefore, it is not that easy, it is not that simple, to just talk in simplistic terms.

**Q334 Chairman:** Do you think this electric shock might kill the patient?

**Mr King:** Yes.

**Mr Godden:** Yes is the answer. I think that is the consensus.

**Mr King:** In simple terms, yes.

**Q335 Chairman:** Bernard Jenkin asks who is the patient. I think we all are. Mr King, why is that industry’s view?

**Mr King:** There is distinct domain knowledge and I think the debate has taken us in quite a number of aspects around the specific domain knowledge of this. There are a couple of examples where this has been tried in the early days of FRES, in the early days of the carrier, of putting somebody between the MoD and the rest of industry, and both of those constructs were taken apart because they do not really work. If we are talking about some Go-Co, so you are talking about this fantastic organisation that has got all these commercial, these programme management, these finance skills as specialist to the area, all of which we debated earlier and which are in short supply, where is this going to come from? What benefit are we going to have from putting somebody between industry and the MoD when, if you look at the real things which are showing progress, the real things which are showing value, these availability contracts, these partnering structures, if we think of how the munitions programme is now structured, the terms of business around naval, that is the way forward rather than putting some artificial interface in the way.

**Q336 Mr Jenkin:** This is all a bit grim, really.

**Mr King:** It is the life we live.

**Q337 Mr Jenkin:** I was struck by the electric shock comment because I think you are the patient that has suffered the electric shock and you are suffering the prospect of the axe falling on various programmes as reality dawns on the public sector generally. I just wonder what you can say at this Committee meeting that is really going to be much use to us generally because we are in this sort of limbo land now waiting for the Defence Review, waiting to see what changes to the procurement process are made.

**Sir Brian Burridge:** What is our light at the end of the tunnel?

**Q338 Mr Jenkin:** It is all a bit paralysing, is it not?

**Sir Brian Burridge:** It would be to our advantage and to the advantage of the nation if we were to emerge from this tunnel with a sustainable, affordable force structure where in each sector it was known and understood where technology was going to take us in terms of capability and where the Government wanted to set its limits. I think that as a statement underpins the difference with where we are now with a programme and resources so hopelessly out of balance that they are just constraining both parties’ ability to act rationally.

**Q339 Mr Jenkin:** Chairman, I should just draw attention to the entry in the Register of Members’ Interests concerning a charitable event that was supported by a defence contractor. I think it is worse for you than that because is not the Bernard Gray report rumbling the industry? A lot of people think that the procurement process for the defence industries has been—and it is not necessarily my view—a bit of a racket and the party is coming to an end? Why is that an unfair charge?

**Mr King:** I do not necessarily think it is an unfair charge. There is no doubt about the uncertainty that exists as we head inexorably towards the Strategic Defence Review and the rhetoric that gets pushed around the Bernard Gray report is challenging every programme. So, if you look at our shareholder base, those people who invest in us, who put support in us, yes, they are questioning where is the UK going. If you then come back to one of the key issues which says that we have to retain skills, so there is going to be a set of operational requirements and a set of needs to be provided, it does not help us in recruiting people, in sustaining people in this industry, if there is that amount of uncertainty out there, which is why, when I was asked to comment at first, I said that the important thing is that we go through a very logical, valuable process of the UK deciding what its foreign and security policy is, which leads to a Strategic Defence Review. If you have to go back round the route because it could be unaffordable, then at least you have come up with a policy, which leads to a Defence Industrial Strategy, and then we in industry can align our resources and capabilities around that DIS. That is what our shareholders want, that is what our employees want, and I think

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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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that is what the Armed Forces want, because they need to know where this capability is going to come from.

**Q340 Mr Jenkin:** I think that answers one of my questions, which is, why have not previous reforms of the procurement process worked, and we were talking about that earlier, and it is basically because there was still far too much uncertainty.

**Mr King:** There is a lot of uncertainty and, as Ian Godden said, one of the issues is, do people believe it can be implemented?

**Q341 Chairman:** Mr Godden?

**Mr Godden:** I was just going to add that it is the implementation issue that I think is the fear. You could say that if there was political will at this stage the Bernard Gray type reforms or equivalent could be done out of sync, as it were, with an SDR because it is an implementation operational matter, and in one sense there is a fear that we have that the next Strategic Defence Review and Defence Industrial Strategy will simply focus on procurement reform and not deal with the other very important strategic matters about capability, operational sovereignty and the need for an industrial base, and that this becomes the focal point and wrongly so. It is a feature of an organisational and implementation aspect which we need to get on with and it will be hijacked by the pressures on the budget as a consequence of that, unfortunately, but it is not the biggest signal in terms of industry worrying about the uncertainty, about the future. That comes in things like the technology, which I know we have talked about before, and research and development comes into it, the programme decisions and the decisions about what is the nature of what we are trying to fight, which is SDR territory.

**Q342 Mr Havard:** The question is about the Go-Co, but the truth of the matter is that there is not going to be a Go-Co; there is going to be a strategy for acquisition reform announced in the new year which will say there is going to be a trading fund, because Bernard Gray says, "At the minimum you should have a trading fund", and, when he looks at the Go-Co versus the trading fund, basically they have the same virtues. The only argument he makes is that one would be a slower rate of change in terms of commercial thinking, skills, best practices and so on, vis-à-vis the other, so that is the background reality, is it not, and is it not the case, if that happens, that the fear you have just expressed is taken care of, because this change to a trading fund and taking account of these things that he lists will be done in the new year in any event before a Strategic Defence Review? Is that right?

**Mr Godden:** If you read the tea leaves, which I sometimes try to do, then you might say yes, but I do not know for a fact what is going to happen in the new year.

**Q343 Mr Havard:** The Secretary of State has made all sorts of statements about having a review. I do not know whether you have been involved in the

discussions about such a review, because it is supposed to take place in the early new year, but clearly he has rejected the Go-Co idea, he has accepted the trading fund, so that is the objective reality against which you plan, is it not?

**Sir Brian Burridge:** It is, but that is not a quick outcome. It will take a long time to create a trading fund out of the structure that they have already, and it does provide the one advantage, necessity even, that a Go-Co does not. Under a Go-Co structure I was hard pressed to understand how, say, the Permanent Under Secretary as the Accounting Officer would exercise his accountability because so much of decision-making would potentially be outside his purview and I think he would have a very difficult time justifying a programme, say, in 10 years' time that was run under a Go-Co arrangement. That is my suspicion.

**Q344 Mr Jenkin:** Despite all the reforms that the MoD has made and may be attempting to make, what has industry done that has worked, that has improved the procurement process?

**Sir Brian Burridge:** I think that on availability contracting in particular industry has done an enormous amount and I was on the other side of the fence in creating the Tornado programme. My colleague was the person I was talking to.

**Mr King:** He was my customer; nice chap.

**Sir Brian Burridge:** And we both had to move a long way in terms of our aspirations and develop much better our understanding of who was best placed to manage risk. It was not straightforward. It took about 18 months longer than I expected but it broke the mould and it is that mould which pretty much applies now to helicopters in terms of integrated operational support. I think industry has done a lot in that respect, programme management too. The future Lynx was the first post-DIS contract with very long time lags or time distances between milestone payments but very significant milestones, and that was a completely different way of creating a contract.

**Q345 Mr Jenkin:** We do appreciate that. We have in fact looked at the Finmeccanica example as an exemplar of this. I am most struck by the comment raised earlier about the lack of people with the relevant skills. Is that not something the industry should be doing? Should there be a new institute for defence acquisition management? Should we be developing a new college to train the people that are required on both sides of the divide in order to bring forward the volume of people that we need to do this?

**Mr King:** We do have joint training schemes. We have accredited our programme managers, we have accredited our commercial managers, recognising this, and we do offer these schemes both to the MoD and to industry.

**Sir Brian Burridge:** Following the creation of the Defence Academy and real focus on acquisition skills, I think it has moved a long way since the days

when it was the Royal Military College of Science focusing purely on weapon technology. I think there is some very good management training available. No doubt it is proving difficult for the MoD to release people. We release people and it is difficult for us as well but you have to make that investment.

**Q346 Mr Jenkin:** Do we require a step change in the effort here?

**Mr King:** Yes.

**Sir Brian Burridge:** Yes.

**Mr Godden:** I believe we do. I would say that there was one other programme we have started to implement which needs a step change as well, which is the SC21, the 21<sup>st</sup> Century Supply Chain programme, to make the whole supply chain of the 3,000 companies that are in this game much more efficient.

**Q347 Chairman:** Was that not something that was going to be addressed in the Defence Industrial Strategy 2?

**Mr Godden:** It has started and it is early days, I would say. In civil programmes it has been implemented faster, I would say, but on the defence side that started about a year ago. I think it has got another three or four years to run before you would claim it is going to get significant implementation. It is implementation that is the issue, not concept. We have got the concept, we are applying it and we are seeking (which Baroness Taylor signed up to at Farnborough last year) commitment from the MoD to the programme. We have got 550 signatures out of 3,000. It is not the signatories that count; it is the ability to get on with it. That is a programme that is ambitious but needs a step up in terms of real, concrete results.

**Q348 Mr Hancock:** Can I just ask you to clarify that, 500 out of 3,000? You say it is not significant, the signatures; it is the attitude, I suppose, you are talking about. Why were so few then interested in signing up physically for something like that? Are they worried about something we have not been told about?

**Mr Godden:** No. It is the smaller companies, the £1 million to £5 million companies that believe this is another example of bureaucracy coming from not Westminster but from the south of England or international programmes and so on, and it is a fear of realising that they are having to do this. This is like any industry-wide initiative which all corporations know about. If you apply that in your supply base it takes a long time to get the full range of suppliers to accept that principle. We are still in the missionary phase amongst the small to medium sized companies who have come off the back of four or five years of good economic growth and only really woke up to the fact that they needed to do this as of, say, 2007–08, and they are beginning to wake up to that in a big way now.

**Mr King:** As part of the revised structures that have been put in place by the MoD with the

Finmeccanicas, the GDs and ourselves in these partnering arrangements, we ourselves have had to learn the skills of how we partner with the rest of the supply chain, and from the SMEs, quite rightly so on their part, there would be slight antipathy at the start in trying to determine whether we were in this for the long run and encouraging them and developing new structures and new skills. I think we are making good progress but we do need to recognise that the UK has, I think, of all European countries, more SMEs than anybody else, and we do need to spend time on this. Going back to a slightly earlier question, what is the worst thing for us, the worst thing would be a knee-jerk reaction which happened around what the budget should be as opposed to a long-term Strategic Defence Review, and in that interregnum we are going to really struggle with the SMEs because they are the ones that are going to get hit first in any cycle change.

**Q349 Mr Havard:** There are a number of reasons why I asked the question earlier, and I noticed I did not get an answer to it, which is whether or not you would be involved in the discussion about the Strategy that is going to be published in the new year, not the least of which is this question about SMEs, which has been an issue that has been running for years, about how they see themselves coming into the process and how they can be involved in the discussion. What discussion is taking place about SMEs and larger companies being involved in that new Acquisition Reform Strategy that is just about to be announced but which seems to be a mystery?

**Dr Wilson:** If I can make a comment, there has been an ongoing dialogue before we get to this point of producing a paper or a strategy at the start of next year about how SMEs should be engaged. That has been quite a long dialogue with the DMA as it was and is now continued by ADS, and with companies, and I will give you one example of that. When we deal with small technology companies which come up with very good ideas they find it extremely difficult to survive in the defence environment until their ideas can find some traction. My company has set up an R&D technology pull-through mechanism which we have published widely around the MoD, which has quite a lot of intellectual attraction for the people in the S&T community and more widely and probably forms the basis of some mechanism that could be used by MoD and more widely by industry to pull technology through so that SMEs are not left in this valley of death with great ideas that cannot be exploited, so that does not answer your question either.

**Q350 Mr Havard:** It might do but is it one of the things that is in the review?

**Dr Wilson:** It certainly has been a view that has been put forward to the MoD on countless occasions and I think it has now got some traction.

**Sir Brian Burridge:** In inputting to the Green Paper we certainly put forward some views on acquisition reform, particularly the strategic management of



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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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R&D, the importance of a pragmatic approach to TLCM, and these are now what will appear, I am told, as challenges in the strategy for acquisition reform which will be published in parallel with the Green Paper. Separately, as the DIC, we have been asked to put forward three or four people to assist the authors with producing their document.

**Q351 Chairman:** I am not sure that that is very reassuring because I had the impression that when the Defence Industrial Strategy was produced there were constant discussions between the Minister and industry, and industry, so far as I could see, thought it was a perfect example of clarity and involvement. I am not getting the impression, partly from yourselves—

**Sir Brian Burridge:** I would not want necessarily to speak for the MoD but I do not think that this will necessarily be a hugely detailed document. It is not like the Defence Industrial Strategy. I absolutely agree with you. The second version of DIS that follows this we would expect, and I have no reason to doubt, to be deeply engaged in.

**Mr Godden:** There are small initiatives, I would say, and I will use the phrase “small initiatives”, to consult on various aspects of what you have described. It is a very short time frame and it is not a process that looks like either the DIS process or equivalent in terms of a full consultation over a period of time that we can collectively work through the issues on. There is debate, there is dialogue, but it is of the nature that Sir Brian mentioned, not some big formal process of engagement.

**Q352 Mr Havard:** So it does not clear your fear that in fact the other things will not be strategic in a proper sense but will collapse into a whole detailed argument about procurement and acquisition, so the acquisition issues will not be resolved in description before we have the Strategic Defence Review?

**Mr Godden:** It depends, I think, on the follow-through from January.

**Q353 Mr Havard:** Is DIS more important in doing that than the Strategy Review that has been announced?

**Sir Brian Burridge:** The DIS serves us in a different way.

**Mr Godden:** Yes, it is a different thing.

**Sir Brian Burridge:** And we, as we have emphasised, need to understand the customers’ requirements in the sectors in which we operate.

**Q354 Mr Havard:** So in terms of this argument that it is about implementation, which I tend to sympathise with, the real argument is that the real working active document that you require that probably the acquisition process would benefit from is a new Defence Industrial Strategy in some detail now before you have the defence?

**Sir Brian Burridge:** No.

**Q355 Mr Havard:** What is wrong with that?

**Mr King:** We are concerned that the Green Paper will be done in the absence of looking at what the industry provides as part of the Defence Review. But we do see that as just an input into an overall SDR, and then, as part of the SDR itself, once it has been settled as to what the requirements are, we would like a full and complete DIS done as to what the industry’s position should be in supporting the SDR.

**Sir Brian Burridge:** The common thread in almost everything we have said this morning is the lack of balance between the programme and the budget. The most sophisticated way to bring that back into balance is to conduct a policy-led defence and security review, cost it and ask yourself whether that is affordable. If not, change your policy until it is affordable. Otherwise, we do not get, and nor does the customer, a sustainable view on where we are headed. As I think I said earlier, what we look for is a force structure which is both affordable and sustainable with a common understanding in each of these sectors of where it is the MoD wants to go.

**Chairman:** I want to move on to David Hamilton.

**Q356 Mr Hamilton:** Chairman, there is just one part strikes me and it was Dr Sandy Wilson, I think, that answered it, and that is about the SMEs. The SMEs were extremely critical, not of the MoD but of yourselves because what they were finding when we did the Report the last time was that they were being asked to take all the risk of design and so on and when they were getting selected one would be selected out of five and they were carrying the burden. I understand from your comments that that has somewhat changed and, in terms of the partnership question that Ian King indicated earlier, there is much more partnership taking place now.

**Mr King:** Yes.

**Mr Hamilton:** My problem is this. At the very beginning of the discussion in the evidence session we talked about, and Dai has touched on it, clarity of purpose. If we get the clarity then we can deal with the issue. The problem I find is that you never bite the hand that feeds you. None of you is biting the hand that feeds you, and I understand that, but we have got to try and work our way through that. My problem is that we have not got the clarity even though the Strategic Review is there. Is it BERR now they call it? It used to be DTI. They are now making it quite clear that we should diversify away from finance and build up our manufacturing base. If we have got a department that is saying this then why can we not get together and sit down and work out a strategy? I know it is very simplistic but I think the easiest way forward is a straightforward way of doing things, but you cannot do that if you are continually moving from bit to bit where we say we do have a manufacturing base and we want to maintain that manufacturing base, as we did with shipbuilding, and then the next thing we do is give contracts out to foreign countries where we do not have a—

**Chairman:** So the question is?

**Q357 Mr Hamilton:** The question is: are the SMEs getting a fair deal? Are you getting a fair deal? It is about time you started to argue your corner rather than being diplomatic. I tell you, it is like sitting with a bunch of parliamentarians.

**Dr Wilson:** Just one comment on that. The engagement with BIS is now much greater than it has been in the past. In fact, Ian Godden and I were talking with Lord Drayson just the other week about, amongst other things, the skills issue that we mentioned earlier and some ideas that might accelerate the focus of the education system on producing those skills. There are many interesting issues being debated, all of which are there to sustain this really quite significant part of the manufacturing base of the country.

**Mr Godden:** As the person who often gets his hand bitten off—

**Q358 Mr Hamilton:** I notice it is the Scots by the way!

**Mr Godden:** —and has put the case forward, there are two features of it. One is the economic impact of the defence sector on the wider economy, industrial activism, manufacturing technology, et cetera, and that is one that we have believed very strongly in and believe there is further work to be done. Progress is being made in terms of making sure the BIS type Innovation and Skills Department is fully aware of what is happening in what has historically been a narrower Defence Industrial Strategy which has been within its own vertical and the wider impact on the economy. Secondly, the recognition of the SME community, which is growing, and I think we were the first to point out 3,000 companies in the UK is more than France, Germany and Italy SMEs added together. We are promoting the interests of the SME community in large measure. In terms of the individual relationships between large companies, medium-sized and small companies, and I would differentiate between those three, not just two, it is up to the individual companies how they conduct their business, but we see that dialogue taking place quite actively in a way that before has been a little bit split apart. That debate is happening and that discussion is taking place—civil aerospace side and defence. We are having a big debate about that on the space side at the moment and there is an even greater debate on the security area where the relationships have historically been quite fragmented with small companies and government. That is a big part of our agenda. You are right, there is work to be done but it is underway and hopefully we will see some results in the next year or two.

**Dr Wilson:** Can I come back on the issue of SMEs and some of the issues that we face over the next couple of years. We all welcomed the SDR and the rebalancing of our international posture and defence posture, but the time it takes to do a proper SDR is not instant. Very few SMEs are sitting with fat order books with several years of sales that allow them to weather any reduction in order output by a principal customer such as MoD.

Therefore, the SDR really ought to be conducted on a timescale which does not have a terribly deleterious effect on their business. One fears that when we get into the purdah that is always associated with an SDR there will be some fallout, especially in the SME community, and it will cascade down through the primes, the mid-tiers and finally hit hardest those who are least able to cope.

**Chairman:** That is a problem well made.

**Q359 Mr Hancock:** That uncertainty is not a good value one, is it, and it has persisted for a long time. The carriers are a good example, are they not? Every time a secretary of state or a minister speaks about the Navy or the aircraft carriers there is an on/off switch that the media relates to and there is a scare story about whether the carriers are ever going to be put in the water, et cetera. There has to come a time when industry say, “We can’t cope with this state of limbo or on/off situation” and at some stage you are going to have to say, “We cannot go on operating like this” and Government is going to have to listen. It is not only the businesses that are at stake but the tens of thousands of jobs that are on the line all the time. With this on/off business and indecision, lack of speed giving clarity of thought into these issues, when are you going to dig your heels in and say, “We cannot sustain British industry on this method of doing things”?

**Mr King:** We are already making those decisions.

**Q360 Mr Hancock:** It did not come out in this, did it? There was nothing hard-hitting saying, “We’re going under if you do not do something”.

**Mr King:** The actions are stronger than the words. We have announced 3,000 redundancies across sectors of our business.

**Q361 Mr Hancock:** I know, my constituents are some of them.

**Mr King:** We do go to the MoD and talk to them about the consequences of decisions. For instance, on the decision around FRES slipping, or Warrior slipping, we said we would have to cut back on resources. You are quite right on the carriers, for a long time it was on/off and it does affect our employees and shareholders because they keep on listening to the rhetoric and you have to keep on saying, “This is a committed programme, we are building this programme and if we continue to build uncertainty into it, it will no doubt increase the risk profile which inevitably increases over time which inevitably increases cost”.

**Q362 Mr Hancock:** Is it possible for you to help that situation by informing Parliament regularly of where you are as companies with these various projects? I am thinking of in my own constituency where we have redundancies in the aerospace industry, layoffs in the dockyard, et cetera, all due to, one way or another, the Government being blamed for their lack of a coordinated approach to defence spending—you make your excuses. I am interested to know how you keep your employees

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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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and Members of Parliament informed of the problems you are experiencing. We have to be part of that answer somehow, do we not?

**Mr King:** We do. We are committed. We give our employees a state of the nation assesment in terms of programmes, and then particular information on their own business, which is why, across the air sector and the land sector, we have announced what will happen over the next two years, whereas perhaps traditionally we would have done it over a shorter timeframe because we think we are being disingenuous to them if we are not telling them where the nature of this business is going.

**Q363 Chairman:** Then you get criticised for being too close to Parliament.

**Mr King:** That is fine.

**Q364 Mr Hancock:** I would rather you did that. Say on the carrier project where you have got loads of SMEs who are waiting for the decisions to be made—

**Mr King:** We have committed to the SMEs.

**Q365 Mr Hancock:** You have?

**Mr King:** Where the design is mature enough on the programme we have made full programme commitments to these people.

**Q366 Mr Havard:** On this issue about longer term planning, certainty and all of that, what is your view of this idea that the Ministry of Defence will have a 10-year planning horizon with the Treasury? Is that a set of golden handcuffs or is that a positive move?

**Mr Godden:** I think the industry view is that it is long overdue, that is one of the answers, but if you set that at a time of depressed economic conditions and say 10 years in a depressed time you get into an argument about whether the cyclical nature of the economy and the needs of the nation have been cemented in at the wrong time. We would assume a 10-year plan is then refreshed quite regularly as most 10-year plans can never survive the 10 years. The idea of an SDR every five years and a DIS as a follow-through to that is a sensible thing to do with a 10-year programme where you can make decisions about bringing things in and out of it and have to adjust, as all corporations do, to changing circumstances.

**Q367 Mr Hancock:** Could you live with that?

**Sir Brian Burridge:** Yes, we could. Absolutely.

**Q368 Mr Hancock:** Knowing that it was definitely going to happen?

**Dr Wilson:** Yes.

**Q369 Mr Havard:** Are there positive benefits in it?

**Mr Godden:** Huge benefits. For all those that live and work in the US, and there are lots of things wrong with the US and we can always bash ourselves versus the US, but the US is much less efficient than we are here in our opinion, the one thing that is

absolutely clear is their commitment to longer term programmes and commitment to R&D associated with it is of great benefit.

**Q370 Chairman:** Do you see any difference between the 10-year rolling budget proposed by Bernard Gray and the 10-year indicative planning horizon suggested by the Secretary of State?

**Sir Brian Burridge:** Yes. We need to go back some many years to see when we had a 10-year equipment programme and, in parallel, a government intent on the way defence expenditure would be managed in that timescale. Not Treasury commitment, but intent. Without that your 10-year plan is not going to stand contact with the enemy. There needs to be a much clearer view of what proportion of national wealth is a government willing to commit to defence and security. It is as simple as that.

**Q371 Chairman:** In practice, can one not look at the Bernard Gray report and the Government's reaction to it and think that the Government has diluted it to the extent that it sounds as though they are bringing in something similar to Bernard Gray, but it is not Bernard Gray-like so much as just a tinge of Bernard Gray at the bottom of the glass?

**Sir Brian Burridge:** Until we see the colour of their money, in other words what they really do bring in, it is hard to comment. Your analysis so far is correct.

**Q372 Mr Hamilton:** Is it not the case that an MoD/Treasury remit in a review would be wrong because surely the other part of that should be BIS?

**Sir Brian Burridge:** That is absolutely right.

**Q373 Mr Hamilton:** If we are talking about a skills base it must be wider than that double-edge. That is part of the problem we have got.

**Sir Brian Burridge:** This is a national strategic resource and it has not been acknowledged as such, the degree to which both Government and the MoD in particular misunderstand or have failed perhaps to define accurately what they mean by "operational sovereignty", which is not really a good term, and the degree to which they need indigenous capabilities in order (a) to support the defence industry and frontline forces, (b) to generate the spin-offs in the wider economy, and (c) the connectivity with our university and education system. We have had a market approach to this for a very long time in the UK and this is at the core, the definition of what do we regard as an indigenous capability and why. It is not just about defence equipment.

**Q374 Mr Havard:** There is an interesting discussion around all of these things in other parts of the world, not the least of which in the United States, on where and what is agnostic acquisition in relation to all of that, but we have not got time for that at the moment. The 10-year planning process seems to be a positive, but what that does not do in America is solve some of the other problems we were talking about earlier. It seems to me their percentage change of increase in expenditure from main investment to the end of the programme does not deliver any better

in terms of timescale for delivery. Lots of the process issues that you discussed earlier about implementation of mechanisms are as equally deficient anywhere else. I notice Bernard Gray said: "There is no magic formula for acquisition reform". Thank you very much! I do not know how much that cost! That is true, however, is it not, that planning process will not necessarily resolve your other problems?

**Mr King:** There is no system that you can go to in any place in the world and say, "You can import that into the UK" and that solves all those problems, you are quite right.

**Chairman:** When you say you do not know how much that cost, as I understand it Bernard Gray did not charge for his review.

**Mr Havard:** I do not know about that. Pro bono work for the Tories now! I do not go to that club.

**Q375 Mr Hancock:** To follow up Dai's point, the very last sentence that Gray wrote was the one that Dai started to explain: "No evidence yet of a magic formula for acquisition reform that has been shown to deliver its intended benefits. Only time will tell in all these cases". There is not a single suggestion in here about where the future will be, is there? He says that he cannot find a solution, but he does not actually give too many ideas. Where were your ideas in this to help him try and find that? It is a pretty startling final paragraph, is it not? It is on page 229, the very last sentence in the book.

**Mr Godden:** Some of the comments were made earlier and if we try to summarise them maybe it sounds like a coherent set of recommendations. The comments about the fact that we made progress, IPTs, et cetera, and using those as case examples for driving those into the 200 programmes and getting the best practice in through that, that is one mechanism for doing this. Secondly, the skill issue that we talked about, to really address that subject. That needs some heavy lifting to get it to happen in a way that is not discussed in there. Thirdly, the decision-making process and the risk-sharing. Those are three or four of the things that we believe are absolutely essential for this to go forward. You asked earlier whether we are pleased with the Bernard Gray report, and we said we are pleased that it is being used for this type of debate to go to the next stage. That is as far as it goes but, you are right, it does not go far enough.

**Sir Brian Burridge:** Perhaps one of the criticisms is that it is easy to get hung up on the acquisition of equipment because the numbers are large and quite startling, but the ratio between the purchase price of, say, a fast jet aeroplane and its through life cost is 1:4. In interacting with Mr Gray, we made the point if you take a whole life view, which you must, then your support solution, availability contracting, is absolutely vital and that takes a long-term relationship, not only with the prime, who is the design authority, but also constructing the supply chain in a particular way. If you have a long-term relationship then you can run as a team and you can

all put your skin in the game, as we say, you can all manage your bit of risk, but you cannot do that on a short-term basis.

**Q376 Mr Hancock:** I hate to use this expression, but would the four of you say that things can only get better?

**Sir Brian Burridge:** You never know until you know.

**Q377 Mr Hancock:** Would your impression be that we are now about to turn a corner which will improve this situation?

**Dr Wilson:** There are a number of suggestions now on the table which, if implemented, would make things better. I will point out a sentence in Bernard Gray's report on page 31, paragraph eight, and he is talking here about incremental procurement: "Many senior figures in the military and industry are keen on this approach, but unless significant steps are taken to subsequently reduce the pressure within the equipment programme it is unlikely to become a viable way of working". So we come back to that basic point.

**Mr Hancock:** He did not say how that could be done. I read that paragraph and I thought, "Where is his suggestion?"

**Chairman:** I want to get on to research and development.

**Q378 Mr Havard:** Can I ask one other question related to that. I happened to see him on telly last night, by accident, and he said, "One thing the MoD has not got is anybody at the centre who can deal with scheduling" and that is the problem, this business about what is in the programme and what is not and how you make these decisions about entry, exit and those sorts of issues. What is your view of what that scheduling process should be? Where should that be? Is that not a political set of questions as much as it is an economic or capability set of questions?

**Sir Brian Burridge:** There is some process aspect in that. The Ministry of Defence has a very elegant acquisition scrutiny process culminating in the IAB where they sign off on a particular acquisition solution to a capability or an equipment, but what they do not do is manage the integration of that into the broader financial programme. That is not seen as their job. That will end up with the Defence Management Board. I think Mr Gray takes some trouble to point out that the Defence Management Board is often not best placed to make those sorts of decisions.

**Q379 Mr Havard:** So who should be?

**Sir Brian Burridge:** It should be the IAB. They should judge affordability not only in value for money but in profiling and insertion in the programme and then deal with scheduling as required. This was one of the tenets of SMART Acquisition, that the Joint Capability Board would, in a sense, do this on behalf of the IAB, but where

you are in a position of really tight resources, which we are now, it takes the higher level body to do it. The Defence Management Board is not particularly well placed to do it.

**Q380 Chairman:** The sentence that Mike Hancock read out earlier was: “No evidence yet of a magic formula for acquisition reform that has been shown to deliver its intended benefit”. He found that startling. I know it is the run-up to Christmas, but I am afraid I do not find that startling; only time will tell.

**Mr King:** If you get reviews done of businesses generally they come up with there is no magic formula either.

**Chairman:** I am delighted that you do believe in magic formulas.

**Mr Hancock:** I was hoping that this guy would have come up with something.

**Chairman:** Maybe he will and we can find out next week. I want to get on to research and development.

**Mr Hamilton:** We will find out through David Cameron!

**Q381 Chairman:** Research and development is a matter of extreme importance. What proportion of research and development on defence equipment is funded by industry?

**Mr Godden:** I should have that, but do not have that number to quote here. I can bring it back later.<sup>1</sup>

**Q382 Chairman:** Could you please bring that back. What is your reaction to the planned future expenditure on research and development in the UK? What is the reaction of industry to this?

**Sir Brian Burridge:** Two points. One is that it is insufficient because this is, again, a strategic resource, an indigenous capability, which allows you to manage risk, allows you to develop capabilities. It cannot be turned on and off like a tap. Secondly, because it cannot be turned on and off like a tap it needs to be managed strategically in that there needs to be constant cognisance of where the research programme is going as IPTs, delivery teams, gradually converge on the solution to their requirement. We have seen occasions where the two for plausibly good reasons have just not linked up, and those good reasons are often about time in the sense of getting your programme agreed before the shutters come down even further.

**Mr King:** I would just come back to one of the points I raised earlier. In the absence of a Strategic Defence Review, cutting back on R&D at this stage does seem to be putting the cart before the horse. You really need to have a plan. There is a long cycle for this activity. We are not talking about huge amounts of money that the MoD spends on R&D and it is precipitous to do it before we have got a clear Strategic Defence Review.

**Q383 Chairman:** Mr Godden, I want you to come back on this. I am disappointed in what you have said so far because I have heard you speak eloquently about research and development and I want you to do it again, please.

**Mr Godden:** I am sorry I do not have the numbers but I will get them.

**Q384 Chairman:** You do not have to have the numbers.

**Mr Godden:** For me, this is three things. One, it is an example of a knee-jerk reaction to pressure.

**Q385 Chairman:** What is an example?

**Mr Godden:** The cutting of the research budget, which is a 24% cut over three years.

**Q386 Chairman:** A 24% cut over three years. Which three years?

**Mr Godden:** That is 2007–10. The latest announcement is from £471 million to £439 million.

**Q387 Chairman:** That sounds like figures. That is very helpful, thank you. Why is this a mistake?

**Mr Godden:** There are two reasons. One is it is one of the few things that has been analytically proven that spending on research and technology six to seven years from now means a direct link to the quality and nature of our defence products and equipment. We are storing ourselves up a problem. Who knows who and what we will be fighting in seven years' time. This is a signal that we are not interested in that. That is number one. Sorry, you have wound me up so I will respond to you.

**Q388 Chairman:** That is what I want.

**Mr Godden:** Two, it is totally contrary to the beliefs of most political parties that we are seeking to rebalance the economy and create a high value, high technology industrial base out of the pieces that remain in this country. For me, given that defence, and I will look more widely than defence, is 15% of the total national R&D spending, therefore that is a signal that somehow or other—I do not understand this—one part of us says we are trying to create a high technology economy and the other part is cutting one of the largest R&D activities in the country. Personally, being on the board of two companies where the impact of research and development being cut not only affects defence but this company deals with medical equipment and some of the industrial and scientific equipment, I have already noticed that impact. My last point is that this is seen internationally as a signal. There are many signals that the country gives about a commitment to industrial base. One is, are the politicians committed to the international selling of this sector or these activities; two, how much research and development does the nation itself put into this sector; and, three, what is the mechanism by which the industrial base is attracted in. In the criteria as I look at it, and perhaps speaking out of school for some of my members, they say, “With the UK as a base with this uncertainty, with a cut in R&D and over the next year or two with the

<sup>1</sup> Ev 120, Ev 121

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8 December 2009 Sir Brian Burridge, Mr Ian Godden, Mr Ian King and Dr Sandy Wilson

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disruption of a general election, this is not a very good set of signals about whether to invest here or in the UK”.

**Mr Hancock:** Does it not go further than that? Is it not also about how the areas of research and development are geared, who is making the decision where the reduced resource is going to be spent? Who is telling the tale to make the decision a profitable one? One of the things I found mind-boggling over Drayson’s first attempt was that he missed that point. Even though he talked the talk, the report did not produce the sort of commitment to research and development that I felt we needed as a country. This backs up what you said. Is it going to change?

**Q389 Chairman:** I think that is a question that you should be asking us rather than us asking you.

**Mr Godden:** I have addressed it with three Secretaries of State for Defence in a row and I have addressed it, as the Chairman will know, with the other political parties in opposition and have raised the subject quite openly. So far there is no action.

**Mr Hancock:** No, it is pathetic.

**Chairman:** I did not actually. Perhaps I should have done, but I am delighted you have.

**Q390 Mr Havard:** Are you also saying it says something about what sort of future customer we are going to be, or what sovereignty or dependency we might have in relation to what we might wish to do and if we decide strategically we want to do X we may not have the capability to do X and will be dependent on someone else to deliver it in a way that we otherwise would not be able to?

**Mr King:** Both the issues that you raise in terms of what sort of customer and what capabilities the UK will have in terms of sovereign capability, that is absolutely right.

**Q391 Mr Hancock:** You must be looking around now, must you not?

**Mr King:** Yes, absolutely.

**Chairman:** I have one final question which is nothing really to do with the Equipment Report, it is more to do with the Report that we are doing into the MoD Annual Accounts. We have heard that we keep losing Bowman radios.

**Mr Havard:** Misplacing them.

**Q392 Chairman:** Dr Wilson, you have been making these with loving care. Is there any suggestion that you might have at a very affordable price, no doubt, for keeping track of these things?

**Dr Wilson:** Yes. There is a raft of work already ongoing to look after assets in the field. I do not think there is a simple answer to this. There does need to be greater integration of the existing systems that deal with configuration management of the platforms in theatre, linking that to some of the ordering mechanisms that MoD uses to call up spares when they find they need them. One of the key things that industry can do to help with that is put more people in theatre with the right skill base to get round some of these problems. We have been delighted to be able to put only a couple of people in to do repair and overhaul activity in the last month or so, but I would hope to see that would migrate to a technical management role and also to looking after some of the assets for them in there. Fundamentally, I think there needs to be a greater level of control applied. We have got mechanisms to help do that. When JAMES comes along—Joint Asset Management and Engineering System—so long as it really does have embedded in it a suitable asset tracker and configuration management system, I think we will see some improvement. The message I would have is accelerate rather than delay in those programmes.

**Chairman:** Thank you, that is very helpful. Gentlemen, many thanks indeed for this morning’s evidence session. It has been very helpful, very interesting, and I hope that we can continue this on other occasions because it is very important. Thank you.

**Tuesday 15 December 2009**

Members present:

Mr James Arbuthnot, in the Chair

Mr David S Borrow  
Mr David Crausby  
Linda Gilroy  
Mr David Hamilton

Mr Dai Havard  
Mr Bernard Jenkin  
Mr Brian Jenkins  
Robert Key

*Witnesses:* **Mr Quentin Davies MP**, Minister for Defence Equipment and Support, **General Sir Kevin O'Donoghue**, Chief of Defence Materiel, and **Vice Admiral Paul Lambert**, Deputy Chief of Defence Staff (Capability), gave evidence.

**Q393 Chairman:** Minister, good morning.

*Mr Davies:* Good morning, Chairman.

**Q394 Chairman:** Would you like to introduce your team, whom we have met before?

*Mr Davies:* With great pleasure, although I think they are well known to the Committee. On my left is General Sir Kevin O'Donoghue, who is Chief of Defence Materiel and Head of the DE&S, the Defence Equipment & Support organisation, and on my right is Vice Admiral Paul Lambert, who is Head of Capability. They are my two principal collaborators.

**Q395 Chairman:** Can we begin by asking about the timetable for the various equipment announcements that are coming over the next few months because we have a statement this afternoon, as I understand it, we have something coming out next month, and at some stage we are going to have a decision on Trident? Tell us what the general timetable is if you would not mind.

*Mr Davies:* Chairman, the only things I can say to you are that a statement was made this morning which you know about, which you have received, about helicopters, and an oral statement is being made by the Secretary of State this afternoon in the House, I assume at 3.30, on the future defence spending plans for the coming year. Beyond that we do not have any timetable for any particular set of announcements, but obviously we will make announcements from time to time as soon as we are able to make them.

**Q396 Chairman:** What was this statement about helicopters this morning?

*Mr Davies:* There was a statement, I understand, put out this morning about helicopters; is that right? It was a written ministerial statement.

**Q397 Chairman:** When is that going to get to us?

*Mr Davies:* I am rather surprised it has not got to you.

**Q398 Chairman:** So am I.

*Mr Davies:* I am told that the Committee should have received it by now. I do not know why that has not happened, Chairman, I am sorry.

**Q399 Chairman:** This is a poor start, if I may say so, because we are having an equipment hearing in front of the Defence Select Committee. You have known

for weeks that you were going to make a helicopter announcement, you have known pretty much what it was, and yet you come before us today and you say you are surprised we have not had it. Well, we have not had it. What is this announcement? Can you tell us roughly what is in it?

*Mr Davies:* Chairman, we will try and get a copy of it to you right away. Let me just say first of all that it is not correct that we have known for weeks what these announcements were going to involve—

**Q400 Chairman:** I have.

*Mr Davies:*— simply because although we have been deliberating on this for some time and, of course, I have been playing a full part in that (although I have not played a part in that just in the last few days), and the Prime Minister wanted, in the light of his visit to Afghanistan, to come to final decisions on this matter. The Secretary of State himself came back from Afghanistan on Friday. I did not see him on Friday because I was in Spain at the A400M ministerial meeting, so final decisions have only recently been taken. I have to say that we have made these announcements as rapidly as we have been able to. It is perfectly true that it is unfortunate from the point of view of your Committee's meeting, which is why I asked yesterday that you should be given a confidential briefing which I understood you had been given. I hope that took place. I am very happy to come back subsequently when you and the Committee have been able to digest these announcements to talk in further detail about them. I am not, of course, personally responsible for the timing of these matters, but I assure you there was no conspiracy to try to make sure they came out as late as possible for this session of the Committee, absolutely not. I am very sorry about it. It is one of those unfortunate coincidences.

**Chairman:** We have an awful lot of those.

**Q401 Mr Jenkin:** What is in the Statement?

*Mr Davies:* I think we had better get this helicopter statement here and then I will read it to you.

**Q402 Mr Jenkin:** Rather than read it to us, Minister, can you summarise what is in it?

*Mr Davies:* I would rather have the statement in front of me if you do not mind.

**Q403 Mr Jenkin:** Presumably you know what is in it.  
**Mr Davies:** I know the substance of it, yes, but—

**Q404 Mr Jenkin:** Could you just tell us the substance of it, please?

**Mr Davies:** It is very good news, Mr Jenkin; it is extremely good news. It is something—

**Q405 Mr Jenkin:** That is a subjective assessment of it. Can we just have what is in it?

**Mr Davies:** It is something that I have been working towards for at least six months and which we discussed when I last came before the Committee, which is a major investment in new lift helicopters and Chinooks. We are planning to buy 24 new Chinooks and two of them will be to replace the Chinooks which have been damaged and destroyed in theatre and the remaining 22 will be additions to the fleet. That is an enormously important enhancement of our Chinook fleet, which will be now 70 when those deliveries are completed, and there will be a corresponding increase in the availability of Chinooks for Afghanistan. Indeed, we shall be bringing forward more Chinooks into Afghanistan—of course, I cannot give you the exact numbers here because we never reveal the numbers of equipment in theatre—in the course of next year, so we will not be waiting for delivery of the new Chinooks. We will be able to deliver more Chinooks as the Mk3s become available, and they are currently becoming available. That will be followed by new deliveries of Chinooks from Boeing over the coming years, starting in 2012, so I think it is unambiguously good news and it is exactly the kind of announcement I had hoped to be able to make.

**Q406 Chairman:** What about Wildcat?

**Mr Davies:** Wildcat is doing well. It has had its first flight.

**Q407 Chairman:** No, not how well is it doing. Does the helicopter announcement include purchases of more Wildcats?

**Mr Davies:** Chairman, we are already committed to buying 62 Wildcat. There is no change in that at all. The Wildcat is on target, on schedule and doing well. As I said, it has already had its first flight fairly recently.

**Q408 Mr Havard:** I want to go back to the Chairman's first question which is about the sequencing of events. We were told, and it is in this NAO report here, about the Strategy for Acquisition Reform in the new year. "New year" is a fairly elastic term; I have asked this question before and I was told it was going to be early in the new year. How does this Statement that is being made today relate to the Strategy for Acquisition Reform that is going to be announced in the new year? The Concept phase of Trident was due to be announced about last September. I was then told it was going to be December. It is already December the something-or-other, so where does that fit with the sequence of events? I was then told that this stuff about DIS and DIS2 was coming and that some of these things

might be coupled together with a Green Paper which might be in February, etc. The question I am asking is, can somebody somewhere, along with all of that list, pick up the questions we have asked in the past about the various changes to performance management systems that are supposed to deliver these changes as they come, and what the sequence of events is for the implementation of these various different programmes and activities, because frankly I have now lost the plot? Unless I am listening to the BBC at half past six in the morning I do not know what is going on and that seems now to be a constant strategy, and, frankly, it is unacceptable.

**Mr Davies:** Mr Havard, all I can say is that there has been absolutely no attempt to be anything less than totally straightforward—

**Q409 Mr Havard:** I am not suggesting it was a deliberate activity; forget all of that. Maybe it is a cock-up, but, whatever it is, it does nothing to illuminate the argument as far as we are concerned so that we can do proper scrutiny of your activity, which is what we should be doing on behalf of the British people.

**Mr Davies:** I am not concealing any statements from you and I have no plans to make any statements myself. No doubt I will be making them but I have not got any current plans to make any statements about the equipment procurement activities for which I am responsible. I should say that I am responsible, as you know, as Defence Equipment and Support Minister, which could be translated as procurement and logistics, for those two things for the current equipment procurement programme, and, of course, for the DE&S, and of course the management of the programme and the DE&S we continue to make changes and improvements in. I can talk about that if you like. Lord Drayson has been asked to look forward at potential new models for acquisition reform. He will be bringing forward his ideas in due time, I do not know when. I believe he is coming before you, Chairman, so there will be a lot of opportunity to talk to him about that, but that very much is a matter which I think it would be better to refer to him because he will be able to tell you how close he is to coming to conclusions on that matter.

**Q410 Mr Havard:** Can someone give me the matrix of activities and the timelines of resourcing with all of these various developments and a little bit more information about which one comes before what?

**Mr Davies:** I think I have just explained to you, Mr Havard—

**Q411 Mr Havard:** No, you did not. I knew all of that. What I do not know is what is happening when, in due time, some time, somewhere. It is not good enough.

**Mr Davies:** The implication is that I have in my mind a schedule which I am concealing from you. Nothing could be further from the truth.



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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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**Q412 Mr Havard:** You ought to have a schedule even if you have not got one, and I would like to know what it is and whether you have written it.

**Mr Davies:** All I can tell you is that the Secretary of State is making a statement this afternoon in the House and that is the only statement which I am aware of which is currently planned to be made. No doubt there will be further statements in the new year but I have no date for them.

**Q413 Chairman:** But, Minister, you must know roughly when the Defence Industrial Strategy is expected to be announced. Say January or February?

**Mr Davies:** I think it probably is in January or February; it is in the early new year. That is what we have stated and I am sure that is true, but I am not in charge of that aspect of matters so I cannot be more precise, Chairman. I cannot wade in on somebody else's territory and announce publicly when they will be reporting.

**Chairman:** I see; okay.

**Q414 Mr Jenkins:** Perhaps I could ask you on the announcement of the new-raising helicopter numbers. Are they being built in this country or are they being built abroad? How does that fit in with our Defence Industry Strategy to maintain the skills base in this country and are they being supplied by the same manufacturer who supplied us in the recent past with a load of helicopters which could not fly and we had to pay again to put them right? Is it the same company?

**Mr Davies:** Mr Jenkins, first of all, I understand why you are asking the question. Where we can we obviously like to support employment in this country and we like to support the British defence industry—

**Q415 Mr Jenkins:** The answer is no.

**Mr Davies:**— and we do many things in order to achieve those two purposes, but when it comes to the crunch what we have to do is buy the best equipment that money can buy for our Armed Services. We have to do everything we possibly can to make sure we contribute to the success of current operations and above all contribute to the saving of lives of our personnel. Those are the overriding considerations and we are buying Chinook because Chinook is simply an incomparable aircraft. It is much bigger than any other aircraft that we might think of. In fact, apart from Russian ones, which, for obvious reasons, we would not want to purchase, it is the biggest in the world. I am quite convinced that is the right vehicle for us. I have had endless conversations with people, including in the front line in Afghanistan, right across the Services, not just limited to the Army or the RAF, and there is universal consensus that what we need is Chinooks. We are therefore buying Chinooks. They will be manufactured in the United States but they will be supported here. There will be a lot of work in Vector Aerospace in Gosport where the existing Chinooks are being supported. You have made reference there to the sad case—and it was a sad case and a very

regrettable case—of the Chinook Mk3s which resulted from a contract signed by the last Conservative administration and it took us many years to sort ourselves out there, but the Mk3s are now coming into service. They are going to be exactly similarly equipped as the other Chinooks we have in theatre so we will have a uniform fleet, which is obviously important for training and logistics purposes. As a result of the introduction into service of those eight Mk3s we are going to be able in the course of the coming months to release more Chinooks from Afghanistan ahead of the deliveries from Boeing of the new helicopters to which I have just referred.

**Q416 Mr Jenkins:** As it is the same supplier you are going to be very careful when you go through the order small print because there is nothing worse than getting a car delivered and finding that it has got no wheels—“Oh, you wanted a car with wheels?”. You do not deal with those people unless you are very careful. Can we have an assurance that you will be extra careful with this company and this contract in future?

**Mr Davies:** Mr Jenkins, we certainly are and I can assure you that some very competent people are working on this. We are very conscious of the lessons from the past in this as in other fields. We do not forget these lessons, but I would like to ask General Sir Kevin if I might, since you ask for that kind of assurance, to say a bit more about the arrangements we have for negotiating the purchase of this helicopter and the arrangements we have for supporting it and making sure it delivers the capability that we expect of it.

**General Sir Kevin O'Donoghue:** And I think we need to remember that, setting aside the Mk3s, which we have discussed before and were a bad procurement and I accept that, the other Chinooks we have are outstanding aircraft and they are doing sterling work out in theatre. Of course we will make sure that the contract for the new ones is as you would wish.

**Q417 Mr Jenkin:** May I just place on record my entry in the Register of Members' Interests about a defence manufacturer that sponsored a charitable event? Can I ask very briefly about Merlin? Was there a competitive tender for this order because they could be built by Boeing in the United States or they could be built by Finmeccanica?

**Mr Davies:** We have to procure them in the cheapest and most effective fashion, Mr Jenkin. We are not interested in cutting any corners.

**Q418 Mr Jenkin:** So was there a competitive tender?

**Mr Davies:** We are not going to cut any corners but equally we are going to make sure we get the best possible deal.

**Q419 Mr Jenkin:** Was there a competitive tender?

**General Sir Kevin O'Donoghue:** We have not gone to tender yet.

**Mr Davies:** We have had some additional discussions with the supplier, with Boeing, but we have not concluded a full production contract yet and you would not expect us to.

**Q420 Mr Jenkin:** Will there be a competitive tender?

**Mr Davies:** There will be an announcement of intention.

**Q421 Mr Jenkin:** Will there be a competitive tender?

**General Sir Kevin O'Donoghue:** It is possible. If Finmeccanica from Italy could produce these helicopters to the right standard, the right quality, cheaper than Boeing can in the United States, then, of course, we would consider that, but whether there will be a competitive tender is a different issue.

**Q422 Mr Jenkin:** What is happening to the Future Medium Helicopter? Is that being scrapped now?

**Mr Davies:** Yes, and that is exactly what I intended to achieve in the summer and that is why I said I had been working towards this for quite a long time, for many months. In fact, we discussed it when I last came before this Committee. It seemed to me some time ago, in the spring of this year, I suppose, that the plans we had needed to be opened up again to question, the plans we had, as you know, which would procure the Future Medium Helicopter halfway through the next decade, and meantime we should invest money in upgrading and lengthening the life of the Sea Kings and the Pumas, and I thought there were several problems about that. One was that if we were going to procure the Future Medium Helicopter in the middle of the decade we ought to be procuring it now much more quickly, and, secondly, that maybe we could save some money by not going ahead with those particular upgrades. Eventually I was persuaded that that would leave an undue gap which we could not fill. We must not, of course, leave a gap in helicopter capability so we have gone ahead with the Puma upgrade but not the Sea King upgrade except for minimum expenditure on Sea Kings for safety purposes to keep them flying, and that is the intention. We have come now to an agreement and I hope we will be getting on contract shortly 24 new Chinooks which are the ideal helicopter we need for lift purposes.

**Q423 Mr Jenkin:** May I just ask Vice Admiral Lambert does the scrapping of the Future Medium Helicopter leave gaps that require to be filled in other ways in our capability?

**Vice Admiral Lambert:** No, it does not. We had a careful look over the summer at the Future Medium requirement and on detailed analysis what we really want is lift. That is what is needed in Afghanistan, that is what is needed in all theatres, and so we changed our strategy to provide maximum lift. When we look at what is needed in the medium capability we think that the Merlin fleet will suffice.

**Q424 Robert Key:** But, Chairman, the Merlin fleet itself is not being upgraded as was planned. Only 30 are being upgraded, leaving eight not upgraded. Is it

wise to base the entire helicopter strategy on the need for Afghanistan's purposes? After all, we are talking about the day when we withdraw from Afghanistan. Surely you cannot say the whole of our helicopter strategy is based upon our current needs in Afghanistan while at the same time not upgrading Merlin and talking about abandoning the Future Medium Helicopter.

**Mr Davies:** We are not doing that at all, Mr Key. Rather, we are doing the reverse. The future of Merlin will be as a naval helicopter. That is the future vocation of Merlin as we see it and that is a very important vocation role for Merlin. We are deploying Merlin at the present time in Afghanistan and it is playing a very important role but over the medium term we will be looking to the Chinook to provide lift and the small helicopters we will have for lift in theatre will be the re-engined Lynxes and then they will be replaced by the Wildcat. I do not know whether Vice Admiral Lambert would like to add to that.

**Vice Admiral Lambert:** The 30 Merlin helicopters you are talking about which we are upgrading are the anti-submarine warfare helicopters. We will marinise the Mk3s to give them amphibious capability.

**Q425 Chairman:** Minister, the *Major Projects Report* out today, which I am just about to come on to, says that as a result of your decision to upgrade only 30 instead of 38 Merlin helicopters the Merlin force will be unable to provide simultaneous anti-submarine protection to more than one naval task force, such as an aircraft carrier or amphibious group, unless supplemented by Merlin helicopters used for training. Is that right?

**Mr Davies:** That sounds correct. If we had an anti-submarine threat against two task groups simultaneously I think we would pull out all the stops to get all the helicopters we could out there.

**Q426 Chairman:** So there is the additional problem of having fleets of helicopters within fleets and the logistic problems that go with having two different marques of the same type of helicopter, which adds to the expense of maintaining those helicopters?

**Vice Admiral Lambert:** One of the things we have been trying to do is drive out first of all fleets within fleets and also drive out the number of different types of helicopters we have got. The strategy that was announced earlier this morning drives out a class of helicopters, it reduces the number of types of helicopters and it brings us into an era where we can see four main helicopter types going forward with the Chinooks doing the heavy lift, two types of Merlin, one which will be the anti-submarine helicopter and the Mk3 doing the amphibious lift, the Lynx helicopters with the Wildcat and the attack helicopters. As an addition we are moving forward with the Puma to fill a particular niche capability but it reduces helicopter types and we are trying and drive out fleets within fleets.

**Mr Davies:** If I may summarise, Chairman, we are trying to do exactly what you suggest and I am very conscious of the need to do that. We are trying to

minimise the number of different types of helicopter. The result of the strategy which was announced this morning will be to remove the Sea Kings, which is a considerable simplification. The results of the announcement I made in August, the investment in the Project Julius and in the 714 engines for the Chinook, will mean that all our Chinook fleet will be of one type—the same cockpit, the same engines and so forth, so that is a considerable simplification. Equally, we have got the Wildcat, which will replace Lynx, so it is only in the Merlin going forward where there are going to be two different variants of one type of helicopters. That is not desirable but it is a very considerable improvement on the present situation.

**Q427 Chairman:** As you know, Minister, we are entirely with you on the Sea King—entirely. However, it worries me at any rate that you are creating a fleet within a fleet in order to save up-front costs in the Merlin fleet with the consequent expense later on down the line, in other words, making the precise problem that you are trying to resolve in other ways.

**Mr Davies:** Yes, of course.

**General Sir Kevin O'Donoghue:** If I may, Chairman, we have 38 Merlin Mk1s of which we are going to convert 30. We will not then use the other eight for anti-submarine warfare. We have 28 Merlin Mk3s currently flown by the RAF for land use. We will need to modify those so they can operate off amphibious shipping. We will probably need to convert the tail rotors so they fold, certainly the main rotors will need to fold, so we will in effect have one fleet of 58 Merlins, 30 of which will be optimised for anti-submarine warfare and 28 of which will be optimised for amphibious lift. Actually, the helicopters are the same.

**Mr Davies:** Can I just add something which will be of interest to Mr Jenkins and Mr Jenkin as well, and that is that the work that General Sir Kevin has just described on the tails and the heads of the Merlins and so forth, marinising them, making them all suitable for naval work, will be work undertaken by AgustaWestland in this country, so that is a positive contribution to the Defence Industrial Strategy in terms of helicopters in this country. I thought I would just make that point.

**Q428 Chairman:** I think I would describe this start to the morning as rather tetchy because there was this announcement about helicopters that was apparently released by the Ministry of Defence at 9.30, it was sent to the Defence Committee at 10.39 and you announced it in front of us after the release but before it was sent to us. Let us get on to something different, which is the *Major Projects Report*, which was released at one minute past midnight this morning. It is pretty startling stuff, I think you will agree, with the Auditor and Comptroller General saying the current defence programme is unaffordable, that the delays to the carriers reflect poor value for money, that the Ministry of Defence has a multi billion pound budgetary black hole which you are trying to fix with

a “save now, pay later” approach. Normally the *Major Projects Report* is pretty bad reading for the Ministry of Defence and people within the Ministry of Defence feel they are doing a bad job; yet in this case it is quite plain that people within the Ministry of Defence are doing a pretty good job because Mr Morse says that the budgetary black hole gives a misleadingly negative picture of how well some major projects in the MoD are managed, but overall would you not say that it presents a pretty bleak picture?

**Mr Davies:** Chairman, I think it presents a fair picture in the sense that we obviously do not have ideal financial circumstances. We do not have an unlimited amount of money. It would be very nice to have an ideal amount of money.

**Q429 Chairman:** It sounds like the statement of the Japanese emperor after the dropping of an atomic bomb.

**Mr Davies:** I think he did say something like that. I seem to remember the quotation. I think the war had not gone entirely favourably for Japan or something, but my responsibility is to operate within the constraints that we have, which are perfectly understandable constraints. The defence budget has been increasing, as you know, by 1.5% in real terms. We cannot reasonably expect the taxpayer to pay more than that. We have in addition got the UOR mechanism for financing current operations and we make it a religious principle that we do not deny anything to operations which commanders there require and say they need. We have been living up to that. We have been providing an enormous range of equipment for theatre. Just in my time in this job we have purchased 700 new armoured vehicles for Afghanistan. We have purchased completely new body armour. We have more than doubled the helicopter hours available to us there and there will be a 50% increase in helicopter numbers there between the summer of this year and the summer of next year, for example. These are very substantial changes. At the same time we have made some very considerable progress which I am proud of in terms of building up the nation's long-term defence capability, the carriers, for example, which we have made a lot of progress in building now, and we will come on to that in a second, the building of the escort vessels, the Type 45s and Astute, which was launched the other day, now in Faslane. There is the JSF programme which we are committed to. We have bought the first three aircraft. There is Typhoon. These are very important things. I have to say that I think it would be quite unrealistic not to recognise the very considerable achievements of the Defence Procurement Programme and I hope that people do recognise them. Perhaps we are not good enough at blowing our own trumpet in these respects.

**Q430 Chairman:** A multi billion pound budgetary black hole.

**Mr Davies:** There are limitations, of course; we cannot do everything. Part of my job is establishing that we have got the right priorities. We continually

review those priorities. Sometimes we therefore have to say maybe we are going to have to abandon something or else put it off or extend the period of procurement of some new system. We did that in the case of the carriers.

**Q431 Chairman:** At a cost of over a billion pounds.

**Mr Davies:** No, no. If you look at the figures in front of you—

**Q432 Chairman:** £1.124 million in costs in subsequent years.

**Mr Davies:** But the cost of rescheduling the carriers, of re-profiling the procurement, was actually £674 million, a lot of money, I know, and you will see that in the report.

**Q433 Chairman:** Where are you going to find that £674 million?

**Mr Davies:** That is part of the new cost of the carriers, so we will be finding that over the period of procurement of the carriers.

**Q434 Chairman:** Is that the “save now, pay later” approach?

**Mr Davies:** I am not trying to disguise from you that by deciding that we could not afford everything that we wanted to buy this year we had to put some things off, but principally the carriers, and I thought it was responsible to do that with the carriers because we do not need the carriers until the JSF is available to fly off the carriers and they cannot be made available before 2016 anyway. That was a rescheduling which involved no loss of national defence capability but, of course, it involves a cost. When you push things forward it always involves a cost and I do not dispute that and do not deny that. It is a substantial cost, £674 million is over 10% of the cost of the two carriers, which is about £5.2 billion.

**Q435 Chairman:** Which is what he describes as a “save now, pay later” approach.

**Mr Davies:** I think that is a necessary thing to do and it is a good deal better, Chairman, than cancelling a major defence programme. I think that your party are indicating that they want to cancel the carriers. We are not going to cancel the carriers; we are totally committed to carriers; the carriers must be built for the sake of the country's long-term defence needs.

**Q436 Chairman:** As you know, I do not speak for a party.

**Mr Davies:** I recognise that but I make the point because that was an alternative. We could have simply cancelled a major defence programme. I would not have wanted to do that. The Government would not have wanted to do that. We have not done that, but we cannot buy in year more than we have the money for; I recognise that. We all recognise we have to live under financial disciplines. Every family, every business in the country has to live under financial disciplines, and if you put off purchasing something when you do purchase it it may cost more; that is a fact of life.

**Q437 Chairman:** How did it come about that six months after you had done the contracts for the aircraft carriers you suddenly discovered you needed to delay them by two years?

**Mr Davies:** I do not think we discovered we needed to delay them. We discovered that—

**Q438 Chairman:** You wanted to?

**Mr Davies:** I had to look through the programme and see where we could make some particular adjustment which would enable us to avoid cancelling important but long term defence capability, and particularly to avoid not buying in the short term things we urgently needed in the short term, including for current operations. This is what I call priority setting. It always involves difficult choices. There are never simple choices. There is never 100% on one side of the equation; it does not work like that. You just have to try and make sure you have achieved the best overall solution. I believe we did achieve the best overall solution. I believe that any solution would have involved either serious loss of defence capability, which we have not done, or some increase in the full life cost of the programmes that we delayed. I accept that and we chose the carriers because, as I have just explained, that involved no loss of defence capability, and that was a very important consideration in my mind.

**Q439 Mr Jenkins:** Minister, I do not think anyone is trying to blame you or this present week's or year's Government. It is a long term problem. In fact, you may remember that we sold the homes and the houses and the beds of our sailors and soldiers and airmen to raise money to fill a black hole in the defence budget previously, so it is not a new problem. For 10 years I have been involved with PAC and looking at PAC Reports where they constantly criticise some of the legacy projects and have said why do they override them, why do they cost more. No; it is the feeling that things just have not got better. I do not feel assured that the Department is any better at turning down some of the requests to go on the wants list rather than the needs list and adding to the problem of pushing stuff to the right and extending this date rather than knocking it on the head. Do you feel that things are getting better? The Gray report has come in to point out the weaknesses we have known for 10 years or more. Why was it not done before?

**Mr Davies:** Mr Jenkins, let me deal with both of those points, first of all whether this is a constant feature of defence procurement and whether it has happened in the past, and secondly whether things are now getting better. There is no doubt in my mind that it is a constant feature of defence procurement and there is no doubt that some of my predecessors have taken the wrong decision. Take the Conservative Government of the early 1980s when John Nott was Defence Secretary. They tried to get rid of the carriers altogether because they found themselves in a financial crunch, just a few months, as it happened, before the Argentinians invaded the Falklands. The consequences of such a deletion of major defence capability could have been absolutely

disastrous for this country. That is not what we have done on this occasion. We have done the right thing. We have kept to the programme; we have not cancelled the programme. We have found other ways of resolving the matter though it does involve a longer through life cost. As for whether things are getting better, I am determined that they should get better and since I have been in this job I have been trying to do that. We have been taking a very careful look at priorities. I have set up a new committee called the Procurement Policy and Priorities Committee, which meets every month and involves, of course, my two colleagues on either side and many other people, and we try to get a consensus—I am a great believer in trying to get consensus in organisations; organisations work best that way—as to what our long term priorities really should be. We are trying to accelerate the whole equipment programme. In my view the major reason for the cost overruns in the past has been excessive delays so I have tried to get rid altogether of some of the more cumbersome and costly and time-consuming procedures, particularly formal international invitations to tender, which I have got rid of in a number of cases. We have just talked about the Future Medium Helicopter. I think I have talked before about the MARS procurement programme. Similarly in armoured vehicles; we have got rid of that. We are procuring the new reconnaissance vehicle and the Warrior upgrade on a much faster track system. What I like to do is have competitive dialogue, which is turning the thing round instead of specifying what you want, which is the traditional way of military procurement. You spend months but it is usually years and can occasionally be decades with often an awful lot of expert and splendid people spending two or three years in a job and then another lot coming in for another two or three years, trying to specify some new requirement and then you go out into the world and you say, “Would you like to bid for this and have a year to conduct the tender and we will spend a year evaluating it?”. We have tried to get rid of all of that. What I have tried to do is turn the thing round and go for competitive dialogue, saying, “Look: we need this requirement. You, industry, tell us how you think we can best meet it”. You do not get 100% satisfaction in all the theoretical requirements that you might have dreamt up, but you get something which is practical, something that is much more rapid, something that saves time and something above all that reduces technical risk. We are doing that in everything from armoured vehicles to the MARS tanker programme at the present time, so we are changing our procedures there. I was also very concerned that no-one had individual responsibility for defence procurement programmes. I come from the private sector. We would never dream of running an organisation like that, so we have for the first time now established that one individual, one man or woman, has personal responsibility for the conduct and management of every single project in our programme. There are about 30 of them and we are making them chairmen of the programme boards, who have all been appointed in recent months by

Admiral Lambert, and we are bringing them together in January as a matter of fact to go through their new responsibilities. They have already been told they are responsible. If something goes wrong, if there is some sort of screw-up or mess-up of some kind, it is their job to bring that to our attention, to do what is necessary to resolve the matter. If it does not work it is their responsibility; if it does work they get the full credit for it.

**Q440 Chairman:** Can I break in?

**Mr Davies:** If I can just make a final point, we are also adopting a completely different attitude towards termination and cancellation of projects. We have already cancelled one quite significant project and, where projects do not meet their milestones, whereas always before we got into some kind of endless renegotiation we are now saying that the default option, the automatic response, is cancellation. Only if a positive case is made to somehow renew that contract should we do so. Those are a few examples of how we are improving the process and the procedures. Are these going to produce results? I do not know but I believe they will.

**Q441 Chairman:** Can I break in? The National Audit Office says that the defence equipment programme is unaffordable. Bernard Gray's review said that the defence equipment programme was unaffordable. Last week the Director of Capability Resources and Scrutiny told us that DE&S had estimated that there was a 10-year funding gap of £6 billion at the start of this planning round and £21 billion at the start of the previous planning round, which makes £15 billion that somehow has been reduced. Do you know how that reduction was achieved?

**Mr Davies:** Yes, indeed, I was part of it, Chairman, as you would expect me to have been. What we found at the beginning of the year was that, looking forward over the 10-year planning horizon we look at, there seemed to be in excess of around £21 billion. One must not be too precise about these figures because you realise there are great uncertainties when you go forward, and certainly when you go forward 10 years you would be very foolish to accept too precise figures. However, let us talk about in broad terms £21 billion. We have made some changes which we have to do. They are called “Managing the Programme”, “Managing the Budget”, and we got down to £6 billion. You are going to say to me that £6 billion is still more than we expect to be able to have to spend, and that is going to go on, I am afraid; that is going to go on to the end of time, that is just life. It may not be pleasant or comfortable but it is just life. Every year we are going to have to look and see what we can afford, where we have to cancel something, whether we have to push something forward, whether we have to de-specify something to accept that we have a slightly lesser specification than we otherwise would get, whether we have got a better method of acquiring something.

**Q442 Chairman:** So what was cancelled to achieve this £15 billion?

**Mr Davies:** "Cancellation" is the wrong word because we are not talking here about contractual liabilities. We always meet our contractual liabilities; we never cancel those, but we made a number of changes in the programme.

**Q443 Chairman:** £15 billion in a year is a lot.

**Mr Davies:** It is.

**Q444 Chairman:** So what changes were there?

**Mr Davies:** General Sir Kevin has just reminded me that we do not normally go into the details of what we have in the 10-year forward programme, so I am going to withdraw on that, Chairman, if you do not mind because otherwise I shall create a precedent which will probably be very bad for a lot of us. As you know, one of the things we did was to re-adjust the carrier programme; you have already referred to it.

**Q445 Chairman:** And, as we know, that has added £674 million to the cost of the carriers.

**Mr Davies:** Yes, quite so.

**Q446 Chairman:** So is that a saving of money?

**Mr Davies:** No, it is not a saving over the long term but it was a saving this year, yes.

**Chairman:** You have rendered the Committee speechless.

**Q447 Linda Gilroy:** If you are looking at a 10-year horizon what is the net impact of that over the 10-year period?

**Mr Davies:** The net impact over the 10-year period is an increase in the cost of carriers. I have made that plain already. I accept entirely the figure of £674 million but over the period of construction of the carriers we will be limiting the expenditure. What we are doing the whole time is that we look at the long term programme, and we do take things out of the long term programme from time to time. We then look every year, which is what we have to do, at the short term programme, the one-year programme, and there we have to make some changes such as I have already described.

**Q448 Linda Gilroy:** The £15 billion figure that we are talking about, that should be looked at over a 10-year horizon?

**Mr Davies:** That is to be looked at over a 10-year period.

**Q449 Linda Gilroy:** That is an average of £1.5 billion.

**Mr Davies:** Yes.

**Q450 Linda Gilroy:** You must have some idea of which programmes are going to produce that average across the 10-year period.

**Mr Davies:** We made a lot of adjustments, Mrs Gilroy, but, as I have already explained to you, I do not want to go through that programme with you because we manage this programme on an active

basis and we change things quite frequently in the long term programme, and it damages our commercial position with the industry if they know too precisely what exactly it is at any one time we are planning to buy and when we are planning to buy it. It may even cause false expectations on the part of industry sometimes, so we cannot do that.

**Q451 Chairman:** The one example you have produced for how you have made up the £15 billion saving is a £674 million increase.

**Mr Davies:** No; I have explained to you, Chairman. Maybe there is a confusion about whether you were talking about the short term or the long term. Let me go over this again very carefully so there is no ambiguity about it at all. I acknowledge that our pushing forward the carrier procurement has resulted in an increase in the cost of £674 million, not the £1.5 billion you have quoted but £674 million. That is correct. That does, however, relieve the programme during the construction period. That does provide more resources for us in this year and next year which we can spend and necessarily must spend on other things. That is exactly why we have decided to do that, so I have acknowledged that entirely. In terms of the long term programme, the 10-year programme, there are a lot of things there which we are always playing around with, we are always looking at again, we are always deciding, "Do we need this? Do we need that? Can we do it a different way?", and so on, so it is, if you like, a moving amount of money the whole time and we have reduced it considerably, which is why we are saying that the value of it is about £6 billion, the excess, rather than £21 billion. We have recently conquered that number. We are proposing—the Secretary of State said this in his statement—in the future to agree with the Treasury on a more transparent exposition of the 10-year forward equipment programme, which is a good thing, but I do not want to anticipate on that this morning by going into individual items if you do not mind.

**Q452 Linda Gilroy:** The consequence of what you are describing to us is that the job we try to do of scrutinising this is becoming more opaque rather than less so, so let me just ask you if you can help us a bit with that. How many programme boards are there?

**Mr Davies:** About 30.

**Q453 Linda Gilroy:** And across the piste of those programme boards some of them will have to produce these savings of £15 billion over the 10-year period. In the Statement on the helicopters today as an example you say, "We anticipate the reduction in fleet types will produce substantial through life cost savings over the next decade and beyond", and you are also exploring the possibility of further benefits that might arise, for example, estate rationalisation and the more efficient delivery of training solutions. The NAO report also talks about for the first time producing data on the defence lines of development. Surely you are able to give us some broad brush

picture of where these £15 billion savings are going to come from, which programme boards are going to be expected to help you deliver them?

**Mr Davies:** First of all, you have touched on support costs. That is an area where we have saved a considerable amount of money and where we expect to save considerable amounts of money. The £6 billion is a net figure. Let me be plain. Where we can anticipate a saving that is included in it. Where we anticipate a cost that is included in it. We are always trying to deliver the capability that we need more effectively, more efficiently, and, as you rightly say, the chairmen of the programme boards will be focused on that. Sometimes we will, from a top-down point of view, want to question the whole capability area. That will not be for the chairmen of the programme boards; it will, if you like, be imposed on the chairmen of the programme boards. We may decide not to go ahead with one or two projects. Maybe I could ask my colleagues if they would like to comment on any of those aspects but we want to be quite transparent with you about the processes. I cannot be entirely transparent with you, at least not today, on the individual projects. There are many pages of printout there which change from time to time, so it would be quite artificial for me to start giving you some individual instances of projects that we have put in or taken out of the 10-year prospective budget.

**Mr Borrow:** Can I just come in? I can understand that you cannot say which projects have disappeared and which projects have been cut.

**Mr Jenkin:** I cannot understand that.

**Chairman:** Carry on, David Borrow.

**Q454 Mr Borrow:** I am not going to pursue that. I certainly accept that in certain projects you will find savings where you can do it more efficiently, you will make a reassessment of the capability needs for the future and therefore things will get cut, but what you have not said, which could be a significant part of the £15 billion, is to what extent some of that £21 billion has been pushed forward beyond the 10-year mark. If you could say to us that £15 billion has been found over the next 10 years through efficiency and reassessment of what is needed, that to me is much more impressive than saying, "We have put £10 billion beyond the 10-year mark". I would have thought you could give us a figure for what you have pushed beyond the 10-year mark, even if you cannot specify which programmes you have pushed beyond the 10-year mark.

**Mr Davies:** I can see exactly, Mr Borrow, what you have in mind. We have undoubtedly pushed some things beyond the 10-year mark and we have taken some things out altogether. What you are asking is the breakdown of those two things and I cannot give you off the top of my head exactly the breakdown between those two categories, I am afraid.<sup>1</sup>

**Vice Admiral Lambert:** You do raise a very good point and we are very aware of it. In the past with a 10-year programme there has been a temptation to push things just beyond the 10-year point so that you

do not have to worry about them until the following year when they will creep into the programme, so we have started to look at a 20-year plan. It is something that was suggested by Mr Gray and we are in the early stages of doing that to make sure that we try not to be tempted to push things just beyond the bit that everybody is concentrating upon.

**Q455 Mr Jenkin:** There comes a point, does there not, where your equipment programme becomes so disconnected from your defence policy that really you do not have a defence policy any more?

**Mr Davies:** That certainly is not the case at the present time; that is not a fair characterisation at all. I would say that it is more connected because we have got down that, if you like, potential deficit from £21 billion to £6 billion.

**Q456 Mr Jenkin:** By either cancellation or deferral.

**Mr Davies:** Yes, that is a much more manageable amount.

**Q457 Mr Jenkin:** Defence policy was premised on having certain capabilities for certain contingencies at certain times. I refer you again to the NAO report which says, "If the defence budget remains flat in cash terms after this time then the extent of the over-commitment widens to £36 billion".

**Mr Davies:** Mr Jenkin, you can come up with any figure you want to—

**Q458 Chairman:** No, this is the NAO.

**Mr Davies:**— if you make a particular assumption. You can do this as an academic exercise; you can say, "What happens if the defence budget was flat in cash terms?", which would mean that it would be falling in real terms by the rate of inflation every year.

**Q459 Mr Jenkin:** No. The departmental assumption of 2.7% growth per annum beyond 2012–13 is flat in real terms. Could you therefore describe to us what the effect of the Pre-Budget Report is on that assumption?

**Mr Davies:** Just a second, Mr Jenkin. I have just been given the quote here. "The Department estimate, however, that the defence budget remains over-committed by £6 billion over the next 10 years". That is the figure we have been talking about. "This assumes an annual increase of 2.7% in their budget after the end of the current Comprehensive Spending Review settlement in 2010–11".

**Q460 Mr Jenkin:** What is the effect of the PBR on that assumption?

**Mr Davies:** I am taking up your earlier question. "If the defence budget remains flat in cash terms after this time then the extent of the over-commitment widens to £36 billion". I am just explaining that "flat in cash terms" would be a dramatic and obviously desperate situation to be in. It would mean that our defence budget was falling by the rate of inflation every year in real terms, say 2.5%. At the end of that time I cannot believe we would have much in the way of national defence left at all. If you were going to recruit soldiers, sailors and airmen and say, "Join up

<sup>1</sup> Ev 124

and we guarantee that you will have falling real terms remuneration of 2.5% compound per annum”, I think not.

**Q461 Mr Jenkin:** Can I refer you to the graph?

**Mr Davies:** Yes.

**Mr Jenkin:** And there is a corrected graph at the front of the document. The flat dotted line shows the projected defence budget using departmental assumption of 2.7% growth per annum beyond 2012–13, okay? What is the effect of the PBR on that assumption? It is not right any more, is it?

**Chairman:** The Pre-Budget Report.

**Q462 Mr Jenkin:** It is going to get worse, is it not?

**Mr Davies:** I am sorry; you have asked me to read a graph while listening to your question. It is a bit difficult to do that at the same time.

**Q463 Mr Jenkin:** But the assumption in that graph is a 2.7% cash increase each year, okay? That is not going to happen next year, is it? It is going to get worse, is it not?

**Mr Davies:** No, on the contrary; we remain next year in the current Comprehensive Spending Review period and that provides for a 1.5% real terms increase in our budget, and beyond that—we only take these decisions one year at a time—I cannot tell you where we shall be but if you told me that for the following 10 years we would be limited to flat cash, as I have said to you, that would—

**Q464 Mr Jenkin:** No, I am not talking about flat cash. I am talking about the assumption in the graph.

**Mr Davies:** If we then have flat real, which is what you are suggesting, in other words the rate of increase is the prospective inflation rate of two point something per cent, then the £6 billion applies. It would have been £21 billion originally and it is now £6 billion.

**Q465 Mr Jenkin:** But we are not going to have that increase. I can quote you the figures from the Pre-Budget Report. This year it is £38.9 billion; next year it is £36.7 billion. I appreciate that reflects Urgent Operational Requirements taken into the current year and not into the next year but the fact is the core budget is declining next year, is it not?

**Mr Davies:** No. I do not know where you get this idea from.

**Q466 Mr Jenkin:** Would you be able to give us the figures, explain to us what the effect of the Pre-Budget Report is on the core budget?

**Mr Davies:** The Pre-Budget Report, Mr Jenkin, and I have listened to this with some interest, does not actually make a statement about the future growth of the defence budget. The Chancellor, when he made his Pre-Budget Report statement, the Autumn Statement, the other day, did not actually make a statement about the future rate of growth of the defence budget.

**Q467 Mr Jenkin:** So what is going to be the rate of growth in the core budget next year?

**Mr Davies:** I do not know that, Mr Jenkin. That is something which we will obviously be discussing in the next year. At the moment we are talking about the budget for 2010–11. We are going ahead one year at a time, so no doubt this time next year I will be happy to answer your questions about the following year's budget.

**Q468 Mr Jenkin:** So it is not going to get worse?

**Mr Davies:** I do not know, Mr Jenkin, but I do not know what the budget is going to be. Let me just sum up what I am trying to say to you. I do not know what the budget is going to be in the future any more than you do, but what I do think is implausible—

**Q469 Mr Jenkin:** But I thought that was the whole point of having a three-year plan.

**Mr Davies:** No, we are making an assumption here going forward over the 10-year period of a flat real terms budget. What you asked me to consider at one point was not a flat real terms budget but a flat cash budget which would mean a decline in—

**Q470 Mr Jenkin:** No.

**Mr Davies:** I am glad you have moved away from that because I have convinced you perhaps that that was a completely unrealistic assumption to make. It would obviously be disastrous if it were imposed on us but I have absolutely no reason to suppose it will be and I cannot believe it would be by a Labour Government.

**Q471 Mr Jenkins:** Can I go back to this £15 billion reduction, which is a great figure? I thought the previous question with regard to pushing it beyond the 10-year line was an excellent question; I wish I had thought of that myself. I am disappointed that we cannot now know what programmes are cancelled but we will obviously find out in the future. Can you give me an assurance that you will not follow the same path that the MoD followed in the previous round? When they were told they had to reduce the size of their stores one of the things they did was to reduce the price of boats from one pound to one penny and therefore came back and said, “We have reduced the cost of our stock”. They had not reduced the cost; they had reduced the cost on paper. Can we have an assurance that this reduction of £15 billion was not brought about by somebody going through the programme with a pencil and remarking downwards what they estimated the cost of the programme was?

**Mr Davies:** I am sure you can have that assurance. The work would have been done by teams in the DE&S and I can ask General Sir Kevin if he would like to deal with that point directly.

**General Sir Kevin O'Donoghue:** He can have that assurance; that was not done. In fact, what we are trying to do, and I explained 10 days ago what we must do, is get our cost estimation much more accurate, and that is the process we are going through.



**Q472 Chairman:** Minister, there is one question I want to ask you to repeat the answer to; I am sorry about this, and it is the question of this £15 billion. I am not minded to accept that you should keep from this Committee the make-up of that £15 billion because I do not understand how we can conduct proper parliamentary scrutiny if you do keep that sort of thing from us. Please would you explain again why it is you feel it is right to keep the make-up of that £15 billion from this Committee?

**Mr Davies:** Mr Arbuthnot, first of all, I would not want to answer that question without warning of it, because I simply cannot come out with a whole list of projects of what we have done to them, where we have moved, which one, and so forth. I would need to have a comprehensive printout to be able to do that.<sup>2</sup>

**Q473 Chairman:** That is a different question.

**Mr Davies:** That is a different question, I quite accept that, but the reason I was not expecting to be asked that question or prepared to give that kind of answer is because, traditionally, we have never done that. We did not do that in your time in government; we have never done that. We have always regarded the long-term equipment programme as a confidential document—confidential for the reasons I mentioned. We want to be able to change it without upsetting our relationship with industry in any way, we want to be able to keep our powder dry, we want to be able to benefit from the market opportunistically on occasion, and that sort of thing. We do not necessarily want everybody to know exactly what our plans are. At the same time, I am a great believer in principle and transparency, as I know you are, and we have made a commitment, the Secretary of State has made a commitment, to a more transparent approach to the longer-term planning of our procurement budget. That is a commitment he has already made. We are looking at how that commitment can be best delivered, and I will certainly transmit to him your comments to me this morning, which I take very seriously: I think they are very reasonable comments to make by a select committee. It is the classic job of Parliament to press the executive branch for more information on these matters and I am very sympathetic to it, so maybe we shall be able to come up with something. If we do, I think it will be necessary to transmit it to you in writing. This is something we will try and focus on and I will try and ensure we do it favourably.

**Chairman:** I would hope that you would because we have a job to do and you need to help us to do that job.

**Q474 Mr Jenkin:** Chairman, industry knows all these figures and background. You give far more information to the contractors than you are giving to us.

**Mr Davies:** No, Mr Jenkin, each individual contractor, in respect of his particular discussions with us obviously knows more than we tell you, that

is perfectly true, but contractors as a whole, industry as a whole, do not know about other contractors, and so, as a whole, they do not know more. That is certainly not correct. As I have explained, we certainly do not reveal to industry what our long-term purchasing intentions are. We do that in our own time when we think it is the right moment to do it. For example, on helicopters we decided recently we had better open some discussions with Boeing to see where they were in terms of delivery and price and all the rest of it because we wanted to buy these new helicopters quite late in the day.

**Q475 Chairman:** How can anyone conduct a Strategic Defence Review on this basis?

**Mr Davies:** I think the Strategic Defence Review is really about our view of the world, the likely evolution of the world, the threats that emerge in the world, the capabilities we need to meet those threats.

**Q476 Chairman:** And how we deal with them.

**Mr Davies:** Exactly, and, therefore, we may well get involved in the kind of capabilities that we need, whether we need to invest more in cyber, whether we need to invest in anti-ballistic capabilities. All these sort of question will arise in the second phase of analysis in the SDR, but when it comes to saying how much money you need to purchase a particular requirement and whether you need this requirement or that requirement, it is a very long assessment phase, it is a very long time before you get to that, and, what is more, you come up with a level of detail which, as I say, is something you do not necessarily want to give to your potential commercial counterparts.

**Q477 Linda Gilroy:** One of the things that have been happening in recent times is signing some very long-term agreements, terms of business agreement with BVT and also with Babcock. If we, as a Committee, were to choose to scrutinise a particular TOBA (Terms of Business Agreement), would that enable us to see some of the issues that we are having problems in defining at the moment?

**Mr Davies:** I think they are very interesting agreements we have had, and it is a formula which I like and I think we may extend in other directions. Again, for the reasons I mentioned, I am not going to tell you now in which direction, but they are working very well. On the other hand, whether it would help you to understand the issue of the £15 billion, how we made the £15 billion reduction and the long-term expenditure expectations, I am not sure that it would, because the TOBA means that we are actually committed for 15 years, as you know, to pay certain minimal amounts of money to the naval shipbuilding industry to maintain that capacity there. That is something which is a contractual liability and we cannot reduce that. So I can assure you that the savings have not been taken from the TOBA.

**Q478 Mr Jenkin:** One last point on the core budget. I am really astonished at the answers that you have been giving to me. The Institute of Fiscal Studies has

<sup>2</sup> Ev 122

reported that the non-protected government departments will effectively have to take a 16% cut in their funding. Are you actually telling us that MoD, which is a non-protected department, is not going to be making any contribution to those cuts?

**Mr Davies:** Mr Jenkin, what I am telling you is this. First of all, I know nothing about the Institute of Fiscal Studies report and I cannot comment on it at all. I do not want to comment on it. I do not know anything about it and so I am not going to comment on it. The second thing is that we have not engaged in discussions about our long-term funding levels.

**Q479 Mr Jenkin:** The core budget, yes. That is what I asked you about. It was the Pre-Budget Report.

**Mr Davies:** And I repeat it to you, Mr Jenkin. You suggested to me—and perhaps it was bluff because I think you were listening at the same time as I was to the Chancellor—that the Chancellor had made some statement about the future level of the defence budget. I can assure you he did not.

**Q480 Mr Jenkin:** There was an implication about what the Chancellor announced, was there not?

**Mr Davies:** You choose to extrapolate from whatever the Chancellor—

**Q481 Mr Jenkin:** Yes I do. In the absence of clear answers I choose to extrapolate.

**Mr Davies:** My dear Mr Jenkin, I am giving you completely frank answers. I am not concealing from you a number. We have not engaged in those discussions. We have not come to conclusions on that matter. We are engaging in discussions at the present time about our budget next year and the Secretary of State is going to be making a statement on that this afternoon, as I have already said.

**Q482 Mr Crausby:** Can I take you back to where we expected to begin today, of course, on the Gray report. I guess to some extent the Committee has an inkling of how you feel about the report but, for the record, what do you think about Gray's analysis of the problems that exist within the Ministry of Defence in relation to defence procurement?

**Mr Davies:** I think there was some good analysis there. There was some provocative analysis, which is always useful. It is always good to be stimulated by critical comments and so forth and have an opportunity to re-examine ourselves in the light of other people's comments, and I welcome that. Some of the recommendations, as you know, we have accepted, and one or two, including one very major one, which we have declined.

**Q483 Mr Crausby:** The CDM in his evidence to us told us that he disagreed with Gray's figures. I think he said he did not accept the maths. What steps are being taken to resolve the differences between the figures so that we can come to some agreement as to what the real numbers are?

**Mr Davies:** I read Mr Gray's report and I think you had a discussion of it when General Sir Kevin came the other day and went through some of those issues.

It is not for me to explain Mr Gray's numbers. I believe Mr Gray is coming before you and I am sure he will be able to explain the numbers to you.

**Q484 Chairman:** Have you spoken to him about them?

**Mr Davies:** Yes, I have.

**Q485 Chairman:** The figures?

**Mr Davies:** I have asked him several questions. I have not always had answers which totally convince me that the numbers are right but, as I said, Mr Gray is responsible for his numbers, I am not responsible for his numbers, and I am sure it is right that you should ask him about them.

**Q486 Mr Crausby:** So you have not been able to reach agreement on the numbers, you still both agree to differ then.

**Mr Davies:** No, it is not my responsibility to reach agreement with him on any particular set of numbers. I have read his report with considerable interest and I noted a number of issues, some of which I found persuasive. Some of his judgments I found persuasive, some of his judgments I found less persuasive; some of his recommendations I thought attractive, some of his recommendations I thought less attractive. I think that is how I have already explained it. If you have got issues about his numbers—I know that you questioned, the other day, CDM and some of his colleagues on the numbers—those questions should really go to Mr Gray. I am not going to put myself in the position of answering for Mr Gray.

**Q487 Mr Crausby:** Can I ask then about Bernard Gray's view on Through-Life Capability Management? He described it as fearsomely complex and fraught with potential pitfalls in practice. We interviewed industry representatives as well and they told us that TLCM is achievable and that it will be effective, but their view was that the MoD had been aiming for a gold star when they had not really mastered the basic principles. Was that a fair analysis by industry and Bernard Gray?

**Mr Davies:** I think TLCM is the right way to go. I think it is not only a good idea, it is necessary idea. I think it has already brought improvements and, if I can just take you through what it amounts to, I think you will agree that it is a sensible idea. The first thing is that it means that we look at the through-life cost of systems that we purchase so that we do not just look at the immediate cost of the hardware, we look at the cost of supporting the equipment, we look at the cost of training, the costs of infrastructure that are associated with that equipment and we look at them through-life. That is a rational and sensible way of making investment appraisals, which would be standard practice in the private sector. You may say: why did not Government use it before? I am glad the Government has in this case now introduced it. It makes a lot of sense. The second thing is that we need to look at capability in a coherent way, because capability can be delivered by purchasing some

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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hardware, it can also be delivered sometimes by purchasing just software. It can be delivered by different tactics, by training of different kinds. We need to look at all that in a coherent way. It is exactly what Admiral Lambert does every day and the people who work for him, the chairmen of the Programme Board. I think that TLMCM has introduced a new rigor into our investment appraisal process and a new coherence into our decisions. It has already delivered results, it is part of the improvement process which I discussed earlier with you, and I am very committed to it. I think we are all committed to it. I do not know if my colleagues would like to add anything.

**Q488 Mr Crausby:** Can I just say, no-one questioned the wisdom of Through-Life Capability Management. What Bernard Gray questioned was the MoD's capability to deliver it.

**Vice Admiral Lambert:** I think Bernard Gray highlighted a real risk that we can, or could, over complicate these issues. Once a risk has been identified, I think it becomes a lot clearer how we should manage it. I run a governance board together with the Chief Operating Officer from Sir Kevin's organisation whose remit is to make sure that we do manage Through-Life Capability Management correctly. I am very keen that we do not over complicate it, that we keep it as simple as possible, that we have got the right management information systems so we can do Through-Life Capability Management. One of Bernard Gray's other risks that he highlighted was that we could turn Through-Life Capability Management into a talking shop: too many people sitting round the table just talking rather than having single points of accountability. Again, we are very aware of that risk. So, I think, in response to Bernard Gray, I would say that we are aware of the risks and we are trying to manage them.

**Q489 Mr Havard:** Mr Gray makes his observations, but the NAO make their observations in this report that was published this morning and they congratulate you in the sense of trying to do some of these things and some of the architecture that you are putting in place to try and deliver it: the defence lines of development and the project management boards, and so on. At the same time they are rightly pointing to gaps that you have got in those processes as they currently stand, particularly the question about management information in order to make the decisions you want to make on these boards, and they make observations about how and when you might improve that and say something about what you have said about what you are doing about improving it. They say you are telling them that there is going to be a new tool for collecting both financial and non-financial data in place and operational by March 2010 in order to illuminate these processes. They also talk about training programmes for project management for frontline commanders, and so on. Can you tell us a little bit more about what you are actually going to do in those areas as a consequence of these observations that are made today?

**Vice Admiral Lambert:** We are mandating a management tool across the piece, as you can imagine, across the Ministry of Defence. There is quite often a habit of using different management tools in different areas, and so we have mandated the same management tool across all the lines of development so that we are all talking the same language. We hope to have that in place by March so that the programme managers' chairs can see the information in a coherent way. We have already started the training schemes across the piece to make sure that Through-Life Capability Management is part of the normal training packages of anybody involved in that side of the business, so it is working away. It is what we would be doing and are doing at the moment.

**Q490 Mr Havard:** I understand that, consequently, next year, when we see the major projects, you are going to be changing the emphasis to look more at the performance of in-service capabilities rather than the stuff about contractual relationships. Is that going to be achieved? Am I going to have a lot more illumination on that question when I read these documents next time?

**Vice Admiral Lambert:** I think the documents already start to demonstrate a capability output. In the documents you will see that the risks against each line of development are starting to be put in place. We only introduced this in the summer of this year and we are already starting to see where we need to concentrate management effort, which does not always have to be concentrated on the equipment line, some of the other lines we are having to concentrate to make sure that the capability output is what we want to achieve.

**Q491 Mr Havard:** How does all of that fit with the broader project management review that is taking place of the whole of the MoD, and how does this acquisition and projects management fit in that larger matrix? Can you also explain to me how Through-Life Capability Management actually fits with whole-life capability management in terms of how you decide to make an acquisition in the first place?

**Vice Admiral Lambert:** How we make a decision on acquisition is that we do audits of capability areas, either annually or biannually, and once we have done the audit we will see where there are capability shortfalls and if there is a capability shortfall we will see which of the lines of development can help us fulfil that shortfall. For example, if in one area we see we have got a capability shortfall, we may be better off spending some money on training rather than on equipment, and it is at the programme board level that they will decide if there is an equipment shortfall rather than a shortfall in one of the other lines of development.

**Q492 Mr Havard:** I will just ask you one last question because there is an observation at the end of this section in the NAO report that I was just looking at which talks about Through-Life Capability Management. At the end they throw away a remark

which is talking about training courses for commanders and so on. They say: "We have also noted differing approaches to the extent and the timing of industry involvement in discussions". Can I come back a little bit to one of the questions that was raised earlier? How can that happen? When you do it, you are obviously giving visibility about what it is you want to industry. You say you cannot tell us these things, but you are going to have to have a way of timing these things for industry, and at the moment it seems as though different parts of your organisation do that differently.

**Vice Admiral Lambert:** Industry is invited along to Through-Life Capability Management courses where the totality of the defence budget and how we manage the defence budget we do not go into. However, within certain programme boards, when it is appropriate, industry is invited along to the programme board to assist with the Through-Life Capability Management of that programme.

**Q493 Mr Havard:** When you decide it is appropriate to invite them, you invite them?

**Vice Admiral Lambert:** Yes.

**Q494 Mr Havard:** Is that the point at which we will see a development of platforms? If you are going to try and embellish something, change it, modify it, are those the major points at which those changes take place and those invites happen?

**Vice Admiral Lambert:** The invites will occur when it is appropriate with the appropriate industries. So, as you can imagine, when we are discussing the Type 45 project, we will invite BAE Systems and MBDA along to that part of the programme, but not for the entirety of the programme board.

**Mr Davies:** Can I say as a general point, Mr Havard, there is always a balance to be struck. We need to have a close relationship with industry, we need to know what industry can offer to us. It would be absolutely ridiculous to conduct the capability function in a vacuum without knowing what capabilities industry may have identified which might be useful to us. So we need to have a dialogue, but at the same time we cannot commit ourselves to industry too soon, and we do not want to create a monopoly situation unless we have decided to have some long-term exclusive partnership with someone. We have to strike a balance. It is an ad hoc matter when the programme boards or where the IPTs and the DES decide to open a dialogue with industry, what meetings they invite them to, what degree of visibility they give industry of what our plans or our needs are, and then the dialogue proceeds, but I do not think you can have a general principle saying it will almost always happen in exactly these circumstances. You cannot define exactly the circumstances. You have to trust the management decision.

**Q495 Mr Havard:** I appreciate all of that, but what I am searching for is how does the Through-Life Capability Management of an existing thing that you are looking at as you evolve it in its life, and the decisions you are making tactically about how you are dealing with it now, fit with the whole of life

capability decision management process in the first place? You must have a view of what you are requiring in the first place: the whole of its life and how you are going to account for all of that. That calculation presumably changes because of changes you make in the Through-Life Capability. You might decide to add something to it that you never thought you would put in in the first place. How does this accounting process work?

**Vice Admiral Lambert:** We would only put something on to a platform if there was a capability need and a capability shortfall in the first instance. The whole process starts from capability shortfalls and how we are going to fill them.

**Q496 Mr Crausby:** Can we discuss the question of reduced numbers of staff in Defence Equipment and Support? The defence programme is designed to reduce numbers from 27,000 in 2007–08 to 20,000 in 2012, and some reductions are taking place already, but clearly there is some way to go. What are the consequences of these reductions in staff? Are they real or is there a shifting of these responsibilities elsewhere?

**Mr Davies:** I am going to ask General Sir Kevin to answer this, because he is actually the author of that programme, which I totally support. I think it has been very well conceived and is in the process of execution at the moment. We have come down in DE&S, which is more logistics, more support than it is actually equipment procurement—roughly 7,000 people involved in defence equipment there—and the balance in logistics and support and the numbers have come down by 25,000, I think, Kevin, since you started off, to 22 today, and we are hoping to get down to 20. I personally think that there is a point, of course, below which you must not reduce, but there is a point at which actually reducing numbers increases the individual responsibility of individual teams and actually motivates people and sometimes gets better productivity out of them and better decision-making processes.

**General Sir Kevin O'Donoghue:** Is some of the work being done elsewhere? The answer is, yes, it is being done in industry. As we outsource, as we change the boundaries between what we do and what industry does, then, yes, some of the work is being outsourced and done in industry. One of the implications or one of the issues that is very important is in order to come down to 20,000 we have to upskill and reskill and I must continue to spend money on upskilling and reskilling. We need to continue to bring in apprentices, we need to continue to bring in graduates and I need to continue to bring in those experts that we cannot grow in the short-term within DE&S.

**Q497 Mr Crausby:** Bernard Gray talked about skills, did he not, as well as quite an important part of that, and when we interviewed industry they agreed with that. It does seem to me that you train them and they claim them. I know that is always a difficulty, but what do you do about ensuring that you do not lose the very best people that you introduce to industry, thus giving industry a bigger advantage than you have?

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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**General Sir Kevin O'Donoghue:** I do not think we lose that many people. I think that the Civil Service in DES, the Civil Service right across the Department, is an extremely loyal Civil Service. They are certainly a key part of what we do delivering UORs, for example, working all hours, seven days a week to deliver kit to the frontline. It is the reward of doing that, knowing that they are making a difference to the soldiers, sailors and airmen on the frontline that retains them. So I do not think it is as big a problem as perhaps you might think, but, of course, it happens.

**Q498 Mr Crausby:** Industry seemed to think that it was a problem. Their view was that there needed to be an appropriate skills strategy.

**General Sir Kevin O'Donoghue:** I thought you were talking about the drain from my organisation to industry.

**Q499 Mr Crausby:** The question of skills and the general level of skills. Industry took the view, as Bernard Gray did, that skills were too low within the MoD?

**General Sir Kevin O'Donoghue:** I have in my organisation 700 people with project management qualifications, external civilian project management qualifications. That is a pretty good record. I suspect we have got more qualified project managers than most others. There is a skills programme and we are spending money on it. I am spending the same amount this year as I spent last year and I will spend the same next year. It is vital, we have to continue to reskill, and I accept that and we are doing it.

**Q500 Robert Key:** Minister, you and I have been in the House of Commons for quite a long time now and both of us started with other careers. You have, therefore, an important insight into how the country works. Since you and I were elected to this House a long time ago and since I became a member of the Defence Committee for the first time in 1995, there have been shed loads of reports into defence procurement and its reform, but there has been no fundamental reform. The rest of the country, in every sector, has reformed enormously over the last 15 years. What is it that is so resistant to change in defence procurement that means that, almost uniquely, successive Ministers have banged their heads against brick walls of defence procurement? What is it that makes it so difficult?

**Mr Davies:** Mr Key, I have the premises to your question, but I do not really agree that there has not been a real change, a real reform recently. I think there have been some qualitative steps forward in the last 10 or 12 years: the introduction of SMART Acquisition was enormously important, the putting together of the IPTs, the new relationship with industry, Through-Life Capability Management, the bringing together of logistics and support and equipment procurement, which were previously two quite separate functions, and the Defence Logistics Organisation, or Agency as it was then, simply bought the equipment and then threw it over the fence to the DLO to get on with it and look after it. That is a hopeless formula, because it meant, of

course, that there was no sense at all in which the procurement organisation, or those doing the procurement, had any sense of long-term responsibility for the actual performance of the equipment and the capability which they were spending the taxpayers' money on acquiring. That has all changed, and it has been reflected in these long-term support contracts, for example, which are very novel. They are very novel in this country, and I find that very, very interesting, because we now have a national asset there. We are much better at doing these long-term support contracts and we have moved much further towards capability and availability contracting than either the Americans or the Continentals, and that actually gives our industry a benefit. You will recall it was not so long ago when defence manufacturers really focused on selling a bit of hardware and they did not really care very much what the price was of the hardware because they were guaranteed enormous profits on the spares which they could supply over the next 20 years. That was where the real profit lay, and governments, not just in this country but elsewhere around the world, would buy the hardware and then somebody else would be responsible subsequently for buying the spares. That is hopeless; that has gone. Now defence contractors who deal with us on major platforms or systems know that they have to look at it on a through-life basis. They are delivering capability and, in many cases, an increasing number of cases, we are actually not even specifying so much the numbers of equipment that we are purchasing, we are specifying the capability that we need and then they can decide how many platforms are required—a good example of that is the Future Strategic Tanker Aircraft, for example—and we will be doing more of those availability and capability contracts in the near future, I hope. It is a completely different approach. I was going to say that British industry has benefited there because, having gone through the possibly slightly agonising process of changing the method in which they supply our requirements and doing that increasingly well, they have been able to cost these long-term support contracts and, therefore, they feel more confident abroad when they are exporting at being able to offer that long-term service, that long-term support arrangement, to other customers and clients around the world; whereas their competitors, in whose home market the local military may still be procuring by the old system (and generally are) including, in many cases, the Americans, are not used to that and so they find the costs of this particular type of risk extremely difficult to predict precisely and they find themselves at a competitive disadvantage in offering a competitive product but with a long-term support contract. These are big changes and I think, again, we perhaps are not good enough at blowing our own trumpet and they are not sufficiently appreciated by the general public. Then there are the other things which we are working on at the present time, and which I have just mentioned in answer to an earlier question.

**Q501 Robert Key:** Since the Gray report was published, I think I am not alone in having the impression that the Ministry of Defence does not

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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really take it very seriously, it will soon be forgotten and it is an eccentric inconvenience. Is that, in fact, how you see it, or are you going to learn lessons and introduce reform?

**Mr Davies:** No, I think that we have looked at it critically, in the original sense of the word critically. That is to say, we have tried to engage with it, we have tried to see where there are lessons which we can learn from, we have tried to make sure that there is no kind of ego preventing us from adopting any of the proposals. On the contrary, we have adopted a number of proposals, as you know. There are other areas where we do not follow the large argument or logic and where we do not actually accept the proposals. I think that we have had considerable engagement with that document. My colleague, Lord Drayson, has been leading most of the work on that particular subject because most of it looks at the longer-term horizon, but I think what I have just said characterises the attitude of the Ministry of Defence as a whole. We want to gain from it everything we can gain and if we decide we want to go into a particular direction we are determined to make a success of going there.

**Q502 Robert Key:** The Ministry of Defence website actually says you will work with Lord Drayson on acquisition reform. Was that what you were referring to in the Committee you mentioned a little while ago that you had established, a Procurement Policy Committee. Is that right?

**Mr Davies:** Policy and Priorities Committee.

**Q503 Robert Key:** That is the one.

**Mr Davies:** The PPC. That is a Committee which I chair. It is a practical working Committee and it is a way of bringing together people outside the formal structure of the Defence Board, and so forth, looking forward, including to the medium and longer-term, to what our priorities ought to be in equipment procurement so we can generate something of a consensus, hopefully, about that and that guides some of our decisions and guides each of us individually in the decisions we have to take subsequently. That is the purpose of that. This is all to do with the management of the current programme so that falls within my responsibility, not Lord Drayson's responsibility.

**Q504 Robert Key:** So he is not a member of that?

**Mr Davies:** No.

**Q505 Robert Key:** How exactly are you working with Lord Drayson?

**Mr Davies:** Very amicably, but we have separate responsibilities which were set out quite clearly at the time of the last reshuffle. I am responsible for the procurement programme, the equipment programme. As I said earlier, I am responsible for the DE&S, responsible for a number of the agencies, all of which produce some kind of defence goods or services, like DSDA (Defence Storage and Distribution Agency), DSG (Defence Support Group), the AWE, of course, and so forth. Those are my responsibilities. I also have, since that reshuffle in

the summer, the responsibility as Defence Minister for assisting and promoting British defence exports. That is a new responsibility which I take very seriously.

**Q506 Robert Key:** Is there a single team in the Ministry of Defence that is responsible for developing a strategy for acquisition reform?

**Mr Davies:** Yes, Lord Drayson has his own group, which I am sure he will tell you about when he comes before you.

**Q507 Robert Key:** Who will be members of that, apart from Lord Drayson, do you know?

**Mr Davies:** That is a matter for Lord Drayson.

**Robert Key:** Thank you.

**Q508 Chairman:** Minister, can you tell us how the MoD is going to improve its costing and forecasting, as Bernard Gray suggested needed to be done?

**Mr Davies:** I think General Sir Kevin has already referred to the fact that he is investing a lot in human capital, both training people that he has got and also, where necessary, importing new skills. I know he believes that is one of the skills that he particularly needs to refine or improve—the whole business of cost accounting. I do not know whether he would like to say a word or two about that.

**General Sir Kevin O'Donoghue:** I think there are three areas of cost estimation which we need to improve on. The first is the original cost estimation, the parametric costing, to see what a project should cost, and that we will do in an organisation that will live in DE&S but will be accepted across the board as the truth, the single costing. We then need what I call cost engineering, which is engaging with companies who have some very expert contract lawyers, and we need some greater expertise in that area, and then I would call the final area cost validation, which is, once a contract has been let, are we paying for what we are getting? So those three areas. We are increasing the size of the staff in that area, we are increasing their training and we almost certainly in the short-term, if not in the longer-term as well, will need to draw in some expertise from outside in those parametric costing areas.

**Q509 Chairman:** Will this be ready in time to produce reliable data for the Strategic Defence Review?

**General Sir Kevin O'Donoghue:** Yes. It already produces costings for the major projects. What has changed is that it is now mandated that those costings are the costings used right across the Ministry of Defence, and other bits of the Ministry will accept those costings as the basis for the SDR.

**Q510 Robert Key:** In the past four years, Minister, the research budget in the Ministry of Defence has fallen by about 20%. That is a cash cut of £100 million a year to the defence research budget. Why are you continuing to cut defence research?

**Mr Davies:** It is a very unfortunate victim of the pressures we have been under. Some of the reduction you refer to actually has not had great cost to us

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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because I discovered there were some programmes which really had a marginal significance for defence. We were spending money on things like climate change. You can always argue that everybody should be interested in climate change, but I think we were able to dispense with some of the programmes without any loss of defence capability. There are undoubtedly some programmes that we have had to cut, or some prospective programmes we would like to have given, particularly to industry, which we have not been able to give, which I very much regret, but I repeat, Mr Key, my job is a difficult job and one never likely to make one very popular anywhere because it is a job of setting priorities. We cannot buy everything we would like to buy in any given year, we cannot buy everything we would like to buy at all, clearly, so we have to make these difficult decisions and these difficult sacrifices, and we have to decide that we are only keeping what is the highest priority in terms of defence capability. There is no way in which we could say that if we had an additional marginal pound we would rather spend it on something other than we are actually spending it on. That is the way I try and look at it.

**Q511 Robert Key:** I think that is refreshing, because in the response to this Committee's Defence Equipment 2009 Report you argued that, in spite of those fierce cuts: "We believe that this overall effort will maintain and improve our capability", which sounded a bit strange; but I think realism is very important and you have given us realism there. For how many years in the future do you think there will be continuing decline in the defence research budget?  
**Mr Davies:** I hope there will not be, Mr Key. We have come down to this level of around £450 million, if I recall, roughly, and my hope is that we do not get too much below that. That is certainly my hope and intention.

**Q512 Robert Key:** The Ministry of Defence gave us the impression that you were seeking to shift the burden of research more to the private sector. Is that a part of the strategy?

**Mr Davies:** Let me put it this way. Obviously we want research to be done. The important thing in the country's interest in the future of defence capability is that research is done. We recognise that companies are more prepared to spend their shareholders' money if they can spend it alongside ours, so we generally look for some kind of additionality. If we are commissioning work from companies we like to see that they are putting in their own parallel investment. Where companies are making an investment we like to be able to reward them at a certain stage by perhaps coming along and joining them and adding to the flow of funds for that particular project if it looks to be promising. So it is not a simple case of saying we cannot do quite so much so industry must do more. We are trying to encourage industry to do all they can all the time, and we will continue to do so. I am very sorry, and of course industry is sorry, we have had to make this

cut back. As I said, we do not think it is part of a kind of secular trend going on downwards. I trust we are not going downwards. That really is my firm intention. Though if we stay there, I cannot promise that we are going to go up dramatically because we continue to have the financial constraints we have been talking about.

**Q513 Robert Key:** Yesterday's announcement of £50 million for three years by the Prime Minister, which will go on research into IEDs and intelligence, is very welcome. Is that part of the Ministry of Defence's core budget or is that a new expenditure actually under the Treasury Urgent Operational Requirement regime?

**Mr Davies:** As a matter of fact, Mr Key, that is a very pertinent question to ask me, because I am about to start discussing that exact matter with the Treasury. The Prime Minister, as you know, only made that statement yesterday afternoon, and the Prime Minister, as I have already told you, wanted, and rightly wanted, before he took final decisions on any of these things to be able to run it across the people he was meeting in Afghanistan, people actually at the frontline, the people who are in command of our brave troops there and who know better than anybody else what sort of requirement needs they really have. So anything that I might say here, anything that the Chief of Defence Staff might say, although the Chief of Defence Staff is, of course, with him in Afghanistan, and anything that any of the rest might say, he wanted to be able to digest it and talk to the key people at the frontline before he finally makes a decision. So all these matters are still very much in negotiation.

**Robert Key:** We wish you well in your discussions with the Treasury, Minister.

**Chairman:** Moving on to FRES and armoured vehicles, Linda Gilroy.

**Q514 Linda Gilroy:** In our Report in 2007, we said: "The MoD's attempts to meet its medium-weight vehicle requirement was a sad story of indecision, changing requirements and delay", and in a speech in October you appeared to agree with that, saying it had been a perfect disaster and that you had stopped it. Is the FRES programme still in existence or not?

**Mr Davies:** No, it is not. Let me be quite clear about this. I am not sure that when your Report came out I may not have been quite as generous as I might have been in endorsing some of the words you used. I have, of course, since then had an opportunity to look at this in greater detail. I think this was a sad and sorry story and we have changed, and I take full responsibility for that. We have changed the strategy entirely in this matter. Let me speak very deliberately, because I do not want there to be any confusion about it. The FRES programme originally was a very idealised vision of a future family of armoured vehicles which would be specified in abstract, novel vehicles to meet our ideal specifications which would then be tendered out to industry to produce, and the idea was that this would be a set of vehicles which would be rapidly

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 15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert
 

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deployable. Above all, they would have a very large commonality of parts and systems and, therefore, considerable synergies in support and in training, and that is a very attractive vision, but I am afraid it was too attractive a vision; it was too idealised a vision, in my view. You know what happened. You know better than I do what happened, you have had probably more time to focus on the historical research than I have had. Clearly it took a very long time to agree on specification. It was very difficult to procure anything. At one time we, I think, appointed an external co-ordinator or integrator, and that did not work out very well, so a number of classic mistakes were made. I take the view, Mrs Gilroy, that what we should be doing in defence procurement is reducing risk, reducing cost, reducing time—they all hang together. So what I want to do, and what we are doing in this particular case, is not to go in for these idealised solutions but, wherever possible, to try to find something that is in this world which either can be obtained and has been tried and tested or can be modified slightly in a clearly defined way and will meet a large proportion of our requirements. Whether it is 70% or 80% or 95% you can always argue about, but I prefer to go with something that is concrete and actually exists than some sort of image of something which might be totally ideal. So the FRES programme is dead. We also found that we could not contract for the Utility Vehicle, we could not agree on contractual terms with the potential supplier. All sorts of things went wrong. Anyway, what we are doing now, as I said earlier on is a general principle to do, we are going to a limited number of people; we are looking to see which people have something serious which might meet our capabilities; we are engaging with them. We want a rapid timescale to try to see what they can offer us, and we are procuring on the most rapid a timescale possible, and what I am trying to do is to put together procedures of procurement which are not as rapid as the UOR because you cannot do that in long-term procurement. You do need to have an element of permanence, an element of integration with other systems which you do not necessarily have to go for in the UORs, which are just needed for one campaign but much quicker than the classic system. That is what we are doing with the reconnaissance vehicle and that is what we will be doing with the Utility Vehicle. Just to give you an example, I think we agreed on the specifications for the reconnaissance vehicle, which were broadly drawn, not narrowly defined, in about March, and we went to industry in about May and we made a formal invitation to tender about June, if I recall, and we asked for their responses by October. We have got them and we are currently evaluating their responses, and I shall be down with General Sir Kevin in Abbey Wood going through a lot of things in connection with this later this week and we will, I hope, sign a contract in February, something of this sort. That is my target. I think you will agree that is pretty rapid compared with the previous timescale. We will be doing the Utility Vehicle on the same basis. Let me emphasise one point. It is a very important point. Of course, where we can get a

degree of commonality, we will go for it, particularly in the area of, let us say, sensors or weapons or some other system of that kind. These vehicles all need to be able to fight together, they will need to be able to work together, they will need to be rapidly deployable, they will need to fit into an A400M, supposing we procure that aircraft. So there will be that degree of coherence—as much coherence as we can get—because it is a difficult system. FRES is dead.

**Chairman:** Do you think you could stop just for a moment, please. This flow of words is just overwhelming. If you could try and limit your answers to, say, two shortish sentences, that would be helpful because we are being washed away here.

**Q515 Linda Gilroy:** Maybe just a simple yes or no answer. If I have understood what you are saying, it sounds to me as if FRES, the original concept, has gone but there is still something called FRES. General Sir Kevin told us last week that the FRES UV programme has stopped but the overall FRES programme is continuing. Is there a programme still called FRES and is it just that it is entirely different?

**Mr Davies:** No. I intend to ask the Army Board to propose another name because the name is confusing. It relates to a concept which is no longer valid, no longer exists.

**Q516 Linda Gilroy:** So it is not a Future Rapid Effect System you are after, it is a fleet of vehicles.

**Mr Davies:** It will be a future set of armoured fighting vehicles which will be rapidly deployable, but I have decided that, since the concept has changed, the name should change, otherwise we will have a great confusion. We will have a new name.

**Q517 Linda Gilroy:** Can we also have something much simpler, describing what is actually being procured rather than something which nobody understands? Can I move on?

**Mr Davies:** There is one thing I must correct there. We have not stopped the Utility Vehicle. We will be procuring the Utility Vehicle. It remains my objective that we shall have the Utility Vehicle in service in 2018, in nine years or whatever it is.

**Q518 Linda Gilroy:** That is not part of an overall concept?

**Mr Davies:** But it will not be called FRES. We are going to change that name. The Army Board normally makes these name changes and I am going to ask them to consider alternative names.

**Q519 Chairman:** So is the programme dead?

**Mr Davies:** The existing programme FRES, yes.

**Q520 Chairman:** Or is it a change of name?

**Mr Davies:** I have already explained. On the substance, Mr Arbuthnot, it is already dead, but let us today, now, in this Committee, say that we will also bring the name into line with the reality.



**Q521 Chairman:** I am confused now because the Chief of Defence Materiel says it is not dead and you say it is dead. It would be helpful if there were some synergy between the two.

**Mr Davies:** I actually discussed this with him before this meeting and I think we were agreed, but I will, of course, let him answer directly. We are all agreed on the substance; we are now agreed on the name. Not surprisingly, General Sir Kevin did not want to anticipate anything I was going to say this morning by announcing last week that he was going to change the name. We are actually going to change the name as well as the substance, but I would be delighted—

**Q522 Chairman:** He had the opportunity to agree with you, because you had said in your speech in October that the programme was dead, and he said, “No, it is not dead.” Is it dead?

**Mr Davies:** Let me repeat. We are procuring the reconnaissance vehicle, we will be procuring the Utility Vehicle but the FRES notion, the FRES concept is dead, yes.

**Q523 Linda Gilroy:** Is what is dead there the degree of commonality of the vehicles that you will be procuring, or are you still aiming for that?

**Mr Davies:** Yes, the degree of commonality is not practical because we will be procuring quite different vehicles from different manufacturers, and so that concept is not valid, it is dead. Today, at this meeting of the Select Committee on Defence—I cannot think of a better locus, if I may so to do this—let us bury FRES. It is not only dead, let us formally now, today, bury FRES, shall we?

**Q524 Chairman:** CDM, is FRES buried?  
**General Sir Kevin O'Donoghue:** Indeed.

**Q525 Linda Gilroy:** This has a commonality, I think, with *Monty Python* and the dead parrot, but we will move on.

**Mr Davies:** There is a hole in front of me, Mr Arbuthnot, that might serve very usefully!

**Q526 Mr Havard:** In terms of the financial decision-making about whatever this thing is, is this now seen as part of an existing programme capability, or is this something that General Sir Kevin is now going to look at putting forward the financial structures that will be common across all the various parts of the MoD when they deal with it? Where does it sit? Is it an iteration of existing capability or is this now a new decision about something that is going to happen and Sir Kevin will set out what the rules are for the game right across the piece?

**Mr Davies:** We have three major core armoured vehicle programmes at the moment apart from the vehicles procured to Afghanistan, and they are the Warrior upgrade, the reconnaissance vehicle and there will be a degree of commonality there because they are both going to have the same cannon so that is splendid and it happens to work out that way. I hope contracts for both of those will be signed within

the next two or three months, seriously, and then there will be the Utility Vehicle, which we will be procuring over a longer timescale. We will find some name to encompass and encapsulate those three vehicles.

**Q527 Mr Havard:** Call it “Kevin” if you like. I do not care what you call it, as long as we have it.

**Mr Davies:** What interests me is the facts, the substance. Have I explained the facts and the substance sufficiently?

**Q528 Mr Havard:** Yes. What I am trying to get at is there was a Scout vehicle as well. There are different questions about armoured fighting vehicles that are going to come. Some will be, in a sense, iterations of existing capability, others will be new decision-making, and I am trying to get where this thing about through-life and whole-life is. The whole-life decision is about when you acquire it in the first place, and that is the financial tools that General Sir Kevin sets out, as I understand it. Is that going to fall to his remit or is this some sort of iteration of an existing financial programme irrespective of whether you change the name?

**Mr Davies:** Every capability definition, requirement definition falls to Admiral Lambert and every procurement falls to the responsibility of General Sir Kevin O'Donoghue. There will be no doubt about that at all. That is the only way we do things. We do things in this totally coherent fashion. We do not have some other organisation which procures certain things, or anything of that sort—absolutely not. We distinguish in our own minds between the core requirements, the long-term requirements of the British fighting services—you know about that—and the UORs, which are temporary. There is an issue if Afghanistan comes to an end, which it will do one day, what we will do with the last generation of vehicles there, will we bring them back to the core. All that will be a matter to decide in relation to the capability, but basically those are two separate things.

**Q529 Chairman:** I think it is unwise to talk about FRES as being done in a totally coherent fashion.

**Mr Davies:** We are not talking about FRES at all.

**Q530 Linda Gilroy:** So as I can understand that in terms of the new way of doing things, the programme boards, how will that look different? Will there be one programme board that deals with all of these vehicles?

**Mr Davies:** All armoured vehicles, yes. Do you want to say a word about that?

**Vice Admiral Lambert:** Yes, it sits within one of my heads of capability areas. The issue that it is trying to solve at the moment is for a Scout-type replacement, and he has reprogrammed what he has available to make sure that the most important operational need is met first, which is why the Scout is right up there as the first thing he is moving ahead with. The next area where he has got the capability

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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shortfall will probably be in the armoured fighting vehicle area, and so the Utility Vehicle will probably be the next one. Again, it starts with a capability shortfall and then looking at the best way of filling that shortfall.

**Q531 Linda Gilroy:** The programme of UORs is continuing. Is that under the same umbrella as well?

**Vice Admiral Lambert:** Yes, it is. We will have to look at at what point another vehicle ought to come in and replace those vehicles important to UORs or whether we can run the UORs and have a replacement vehicle a little bit later. So that is all looked after in the same programme board.

**Linda Gilroy:** I think probably most of the questions that fell under there have been explored, Chairman, unless you can spot one that has not.

**Chairman:** No, I think I agree with that.

**Q532 Mr Jenkin:** A400M: it has flown, I understand?

**Mr Davies:** It has indeed, and I witnessed it myself. It not only flew but, to my great surprise, it flew for two and a half hours and made a number of manoeuvres on the first flight.

**Q533 Mr Jenkin:** When is the in-service date now? I remember the last time we asked about this we could not have an in-service date because it had not flown. Now it has flown it must have an in-service date!

**Mr Davies:** It flew on Friday, Mr Jenkin. The purpose of my going to Seville was not primarily to see the first flight, though, of course, I was delighted to see it, in every sense delighted to see it, and it was a British pilot. I would like to put that on the record, Ed Strongman, former RAF, who actually was the chief pilot on that occasion. He works now, of course, for EADS. The main purpose of going was to go to a ministerial meeting of the partner nations to discuss the way forward and the negotiations which we have with the EADS which will need to be resolved very rapidly if we are going to be able to go ahead with that programme. You will understand that it would be very stupid of me to make a public statement about the content of those discussions, but I can say that we came to an agreement as partner nations and we are sending a letter, which I hope will go out tonight, to EADS on behalf of us all, which was something which we agreed on Friday. I remain committed to trying everything possible to save this particular programme. I think it would be a great aircraft. I think it meets our requirements extraordinarily neatly, and my own instinct (and it cannot be more than an instinct, I am not an engineer), having spoken to lots of different engineers and experts (and Sir Kevin sent out a technical team to Seville a month or so ago and, of course, I have read their report), is that the technical problems of this aircraft can be resolved. Whether we can resolve the commercial and financial issues satisfactorily in the timescale required I do not know and I cannot really express a view on that today.

**Q534 Mr Jenkin:** That was all very interesting, but when do you think this aircraft will come into service? That was my question.

**Mr Davies:** That will be part of the renegotiation. At the moment, the indications are that deliveries should have started early in 2011 but they will now start perhaps in 2014. I think it is 2014 which EADS is hoping for. If and when we can renegotiate this contract, Mr Jenkin, there will be a precise delivery schedule in the contract and, let me assure you, there will be liquidated damages if that new delivery schedule is not reached. We have not got to the point yet when we have finally agreed on that schedule, but we are talking about three years' delay, roughly. I cannot give it to you more precisely than that.

**Q535 Mr Jenkin:** What are the financial effects of the delay?

**Mr Davies:** We were talking about delays in another context. Delays always, I am afraid, mean increases in cost because fixed costs run on for longer and fixed costs in defence manufacture are always very heavy. Just as we were talking about with the carriers, there are obviously costs, but the issue is whether the costs can and should be borne by EADS or by others. Clearly EADS have a contractual obligation to us and we expect EADS to fulfil their contractual obligation and when our defence suppliers sign a fixed price contract with us we mean to hold them to it.

**Q536 Mr Jenkin:** Is this adding to cost pressures within the 10-year time horizon, or is the delay actually helping us close the gap?

**Mr Davies:** It is a good question, but actually, as you will see from the *Major Projects* report which has been before us, and I only got it myself yesterday, that is included there as part of our cost overruns because we have made a provision in our accounts, as you would expect.

**Q537 Mr Jenkin:** Of £653 million.

**Mr Davies:** Correct.

**Q538 Mr Jenkin:** Where are we going to get that money from?

**Mr Davies:** Mr Jenkin, I cannot answer that question until I know whether we are going to succeed on a renegotiation or not. I am not going to ask anybody for money unless I know that we are going to succeed in renegotiation. I do not know at the present time whether we are going to succeed in renegotiation or not but, I repeat, we are making a prudential provision there. It is not in any way a commitment to spend that money or give that money to EADS, let me assure you of that.

**Q539 Mr Jenkin:** When do you think the negotiations will be the concluded?

**Mr Davies:** They must be concluded fairly soon. I originally said that I wanted to try to drive our colleagues forward, and I wanted to have agreement on the main terms by end of this year. We are clearly not going to achieve that, but we are asking for a response to our latest initiative by 31 December.

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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**Q540 Mr Jenkin:** So you are trying to push this forward.

**Mr Davies:** Yes, we are trying to push this forward with all due despatch, Mr Jenkin.

**Q541 Mr Jenkin:** DCDS (Capability): how are we coping without this capability for an extra three years? I remark that the air bridge to Afghanistan has been described to us extremely fragile.

**Vice Admiral Lambert:** It is extremely fragile. The current operation is it is remaining at the top of our priority. We are looking at how we can reduce that risk to the air bridge and we are considering whether we need in the interim to take on additional aircraft to reduce that risk.

**Q542 Mr Jenkin:** Has a firm decision been made about a C17?

**Vice Admiral Lambert:** We are still considering that as an option.

**Q543 Mr Jenkin:** When will that decision be made, Minister?

**Mr Davies:** I think, Mr Jenkin, I must ask you to wait for the Secretary of State's announcement this afternoon.

**Q544 Chairman:** I think that is a fair enough answer. Is there a risk that a decision on A400M might be delayed by election purdah in this country?

**Mr Davies:** Mr Arbuthnot, if you are asking me to speculate on the date of the election, I clearly cannot do that.

**Q545 Chairman:** I am not really.

**Mr Davies:** The Prime Minister could ask the Queen for dissolution this afternoon, I have no idea. I am hoping that we will resolve this matter very shortly. When I say "very shortly", it means within a matter of weeks, not in a matter of months, certainly not in a matter of years.

**Chairman:** That gives a helpful indication,

**Q546 Robert Key:** It seems to me, Minister, that, rather like FRES, SMART Procurement is dead when it comes to the A400M. One of the great tenets of SMART Procurement was that there should be a not-to-exceed level, and today's report from the NAO, Appendix 3, figure 4, points out that the risk differential, that is the difference between the budgeted cost and the highest not-to-exceed cost, is in fact six times what it should have been. That is a 600% overrun cost here. Is that actually right?

**General Sir Kevin O'Donoghue:** A big chunk of that is foreign exchange. It is very, very difficult to establish at the start of a project what the value of sterling might be three, four, five, six years out. So a big chunk is foreign exchange.

**Q547 Robert Key:** How big?

**General Sir Kevin O'Donoghue:** I do not know.

**Q548 Robert Key:** Ten per cent, 20%?

**General Sir Kevin O'Donoghue:** No.

**Mr Davies:** Quite a large amount. What I can tell you is that for the last couple of years foreign exchange losses have cost us about £300 million. It is quite a significant factor.

**General Sir Kevin O'Donoghue:** If I may go on, there is a chunk of foreign exchange, a chunk is inflation because as projects move out, of course, inflation bites, and the third chunk is cost of capital. So that is the basic reason for the increase. I have to say that SMART Procurement is very difficult in an international collaborative project.

**Q549 Robert Key:** So European collaboration is dead then?

**General Sir Kevin O'Donoghue:** No, I am just saying it is difficult. I said last time, you have to have collaborative projects because you will never be able to afford the equipment you need unless you collaborate with partners. My preference is for a bilateral project rather than a seven or eight-way project, which is always a challenge.

**Q550 Robert Key:** Bilateral as in buying more C17s?

**General Sir Kevin O'Donoghue:** No, or with our European partners, whichever route you go down. I am talking in general here.

**Q551 Robert Key:** Which would you prefer?

**General Sir Kevin O'Donoghue:** I would prefer a bilateral project with whoever is going to share the non-recurring costs and get greater numbers and, therefore, the unit prices goes down.

**Robert Key:** There we are, Chairman: Typhoon, A400M. I think that is probably the end of that, do you not?

**Chairman:** Back to the carriers, just when you thought you were home-free.

**Q552 Mr Borrow:** A lot of the carrier stuff we have talked about. You mentioned earlier that you took the opportunity of slipping the carrier programme backwards to tie in with the availability of the JSF and, coincidentally, that enabled you to save a bit of money upfront.

**Mr Davies:** It was the other way round, to be quite honest, Mr Borrow. We needed to make some savings in the immediate future—we needed to find some money, we needed to find some room—and looking at the defence capability costs of any of the alternatives which were before me, they all had costs, they all had undesirable features. It occurred to me immediately, or pretty much immediately, that we could delay the carriers without a loss of capability because the aircraft that we were going to use on the carriers would not be available. So it was the other way round. It was driven, and I admit it was driven. The impulse was the need to save money and to make sure that we were spending money most effectively in support of defence capability.

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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**Q553 Mr Borrow:** Lancashire aerospace workers are very pleased with the Government's commitment to the carrier programme, because there would not be any point in buying carriers if you did not have anything to fly off them.

**Mr Davies:** Precisely.

**Q554 Mr Borrow:** The question I then ask is: how many JSFs do you intend to buy?

**Mr Davies:** Up to 150.

**Q555 Mr Borrow:** At what point do you think you will be ready to commit yourself to the programme?

**Mr Davies:** First of all, we have got to go through the test and evaluation phase. We have bought two aircraft, three aircraft. Is it two rather than three? I am told three on one side, two on the other, but, anyway, we are talking about three aircraft. I think we have actually purchased two, but we need them for the test and evaluation work. We are going to fly them. Our pilots will be flying them in conjunction with the American pilots, and the Americans will have, I do not know, 15 aircraft in a test and evaluation process, and that is going to go on for a couple of years. The idea is to get to know the aircraft intimately, to see what its strengths and weaknesses are, to see what modifications might be introduced, and only then will Lockheed Martin design the final production aircraft, and then we will order, I hope, the production of aircraft at the end of this process. Let us say we order them in 2014: the earliest we could get them would be 2016. Hence, 2016 I have already referred to. We are totally committed to this programme, Mr Borrow, and, as you rightly say, a lot of people in Lancashire are very dependent on it, and I can reassure them entirely so long as at least this Government remains in power. I have the greatest fears about what would happen to the whole carrier programme if, by some mischance, we lost the election and the Conservative Party were to be elected, and I do not know whether if there was a Liberal government the prospects would be any better either. That is an important proviso. Other than that, the Lancashire skilled workers and engineers who are focused on this programme, we are looking forward to them having a lot of work quite a lot of the time. I cannot be more precise about the numbers than saying it probably will not be anything more than 150.

**Q556 Mr Borrow:** Our biggest defence company have also got a lot at stake, because they are currently investing £800 million in the factory to make our bit of the JSF. Obviously that will be undermined if we did not go ahead with the order.

**Mr Davies:** Quite right. This is a wonderful piece of good news for British industry. I think there are reasonable grounds for expecting that the British content in this programme will be between 10 and 15%. That is enormous. Probably Lockheed Martin will end up building 3,000 aircraft. Can you imagine, 3,000 aircraft, make an estimate if you will: something less than \$100 million, but not much less,

per aircraft. You can see the scale of this programme. We are talking perhaps a quarter of a trillion dollar programme, and if we had, in this country, 10 or 15% of it, that is an enormously important factor for the very, very high skill, high-tech industries which are focused on aerospace and military aerospace.

**Q557 Mr Borrow:** In terms of this being ready to come in 2016, are you confident that our existing carriers and aircraft will be capable of operating until we are ready to phase in the new carriers?

**Mr Davies:** Let me get you a professional naval opinion on that question.

**Vice Admiral Lambert:** The aircraft are capable of flying, operating until at least the end of the next decade, so, yes.

**Q558 Chairman:** And the carriers?

**Vice Admiral Lambert:** The carrier programme: we are still looking at the fine detail of that.

**Q559 Chairman:** That sounds rather depressingly like a, no, you are not confident that the existing aircraft carriers will be capable of operating until the end of the decade.

**Vice Admiral Lambert:** It is still part of work that we are conducting at the moment.

**Q560 Chairman:** So you do not know the answer.

**Vice Admiral Lambert:** No, it is still part of work we are conducting.

**Q561 Chairman:** So there might be a gap.

**Vice Admiral Lambert:** At the moment I cannot say whether there is gap or not; it is still part of work we are undertaking.

**Mr Davies:** We have got one refit.

**Q562 Linda Gilroy:** When we spoke about the *Illustrious* carrying on before, we were told that there would not be any additional cost because it was due for a maintenance refit anyway.

**Mr Davies:** That is right.

**Q563 Linda Gilroy:** Is that under reconsideration?

**Mr Davies:** No.

**Q564 Linda Gilroy:** So what would be the problem about continuing?

**Vice Admiral Lambert:** As I said, the full capability planned for Carrier Strike is we are making sure, as we plot out the capabilities right across the piece, that there is not going to be a gap, but I cannot give that assurance at the moment.

**Q565 Chairman:** Minister, do you remember telling this Committee that there was going to be no defence cost to the country whatever by delaying the carriers?

**Mr Davies:** Yes, I do, and I said "defence capability cost". I remember we had an exchange about that. I did not say "financial cost". I would have recognised if we had a financial cost, but there is no defence capability cost.

**Q566 Chairman:** What about this gap that we have just heard about?

**Mr Davies:** You must not interpret Admiral Lambert's remarks as being to say that there is going to be a gap. He has not completed the procedures to make sure that there is not going to be a gap. As Mrs Gilroy has just said, before we had an issue about delaying the new Carrier Programme, we had already factored in a refit for *Illustrious*, which takes forward capability for several years, and so I am confident that we will be able to reassure you once Admiral Lambert has completed his studies, but, as a cautious individual, until he has completed his study he does not want to give you a more definite response. Is that correct?

**Vice Admiral Lambert:** That is absolutely right. It is the first time we have looked at all the lines of development for both the current carrier programme and the future carrier programme, and within that there is a complicated programme of transition between different aircraft, different ships, and until we have completed that work I would not like to say that I can guarantee there would be no gap. It is working away at the moment.

**Mr Davies:** The purpose of conducting these studies is, by definition, that until you have completed them you cannot give a certificate saying, "I am certain that there will not be a gap."

**Q567 Chairman:** Do you not think this is something you ought to have considered before the decision to delay the carriers was taken?

**Vice Admiral Lambert:** Yes, but—

**Q568 Chairman:** Did you not consider it?

**Vice Admiral Lambert:** Yes, we did, but, again, as I said, we are looking at all the lines of development and until that work is complete I cannot give that assurance.

**Q569 Chairman:** Can you?

**Mr Davies:** Chairman, I have already said that I believe that the *Illustrious* refit, which is already in the programme, or was in the programme (it was already provided for financially), will carry forward *Illustrious*' life for quite a number of years, and that will take us, certainly, beyond the time at which we are expecting to bring the new carriers into service.

**Q570 Chairman:** You have just heard the Admiral unable to give that assurance.

**Mr Davies:** He has not completed his procedures, but I am reasonably confident that will happen.

**Q571 Chairman:** Why should you be if he is not?

**Mr Davies:** I do not think he is unconfident, but he has not completed his procedures. It is a little bit like a doctor who will not issue a death certificate until he has carried out an autopsy even though you may have a pretty good guess as to why the patient died.

**Q572 Mr Crausby:** If there is a gap, will you rethink the programme? I know you do not want to issue a death certificate until you know why the patient has died, but what a doctor is there to do is prevent the patient from dying.

**Mr Davies:** Absolutely.

**Q573 Mr Crausby:** So it seems to me sensible that you would want to prevent the gap.

**Vice Admiral Lambert:** If at the end of our analysis we find that there is a gap, we will look to see what it is, what the risks are and whether we can cover those risks. Our premise is that we want to ensure that capability is maintained throughout that transitional period.

**Q574 Chairman:** Why on earth did you not complete this analysis before making a decision to delay the carriers?

**Vice Admiral Lambert:** The initial analysis was done. What I am saying at the moment is we are doing some deeper analysis to ensure that I can give that reassurance that across all the lines of development there are no risks which are likely to come good that could cause a gap, and that is working away.

**Q575 Chairman:** What was the purpose of the initial analysis?

**Vice Admiral Lambert:** The initial analysis will look at individual programmes.

**Q576 Chairman:** What was the purpose of the initial analysis that gave you some confidence of which you are now not able to assure the Committee?

**Vice Admiral Lambert:** The initial analysis will look just at single programmes. What we are doing here is looking at a complicated transition of a number of programmes across a whole series of lines of development, and it is normal work that we would do with a complicated programme.

**Q577 Chairman:** It is perfectly normal, is it, to have a gap in capability of something as large as aircraft carriers?

**Vice Admiral Lambert:** No, it is not, but I have said before our normal process, once we have made any changes, is to go back and revisit the decisions to make sure that we have not missed anything out, and that process is being undertaken at the moment.

**Q578 Chairman:** But your default position, then, is that you think you may have missed something out, because otherwise you would say, "We are just double checking this, but, no, we can give you that confident assurance." But you have not said that.

**Vice Admiral Lambert:** I have said that we are conducting the work at the moment.

**Mr Davies:** I think it does fall into the category of, "We are just double-checking this." Is that not the case?

**Chairman:** Perhaps you could conduct your discussions back in the Ministry.

**Q579 Mr Hamilton:** The only point I make—and I am looking at the route programme here, the schedule that is in there (and Linda asked the question)—is that apart from the gap that may or may not happen, there will also be a cost implication if that is delayed again. Was that considered when you decided to knock back the carrier again?

**Vice Admiral Lambert:** If there is a risk, we will see what we need to do to cover that risk. There may be a cost implication. There are other ways of covering risks other than using finance.

**Q580 Linda Gilroy:** You have referred to the defence lines of development again, and it is well-known what these headings are, they are in the report. Is it possible for you, either now or in a note to the Committee, to give an idea of how many of the defence lines of development are at risk in relation to the future carrier programme and which ones they are?

**Vice Admiral Lambert:** We have a senior responsible owner who is managing all the risk across all the lines and the risks change daily. He is at the moment conducting a fundamental analysis to make sure that there is not going to be any gap during the transition stage.

**Q581 Mr Havard:** The capability gap is not the fact that you will not have the capability, but how you manage the capability might change. Are we going to see a lot of sailors having a lot more shore leave; are we going to see a lot less fuel burned; are these things just not going to be sweated as assets and used out at sea? Is that what we are going to see? We are going to see the existing carriers parked up a little bit in order to extend their life. Is that where we are going?

**Vice Admiral Lambert:** I did not say that there is a problem with the carrier life. All I am saying is that we are conducting fundamental analysis.

**Q582 Mr Havard:** These are the other ways you can avoid it. You do not spend the money because you just do not send the ships out.

**Vice Admiral Lambert:** There are lots of ways of covering risks if there are risks across a whole complicated transitional programme.

**Q583 Chairman:** How much are these carriers going to cost?

**Mr Davies:** About £5.2 billion for both of them.

**Q584 Mr Havard:** We are having two, are we?

**Mr Davies:** Only two, yes.

**Q585 Mr Havard:** We are having two?

**Mr Davies:** Of course we are.

**Q586 Mr Havard:** That is all right then. There was a suggestion on the wireless this morning we might only be getting one. I just wanted to check we are still getting two.

**Mr Davies:** That is complete rubbish, Mr Havard. I do not know where that came from.

**Q587 Mr Havard:** The trusty old BBC.

**Mr Davies:** In defence of the Government, there are an amazing number of false stories circulating all the time. It is just part of the world we live in.

**Chairman:** We will move on to the MARS programme.

**Q588 Linda Gilroy:** I asked General Sir Kevin about this last week and at that point looking at the issue about the MoD having an exemption to operate single hulled tankers after 2010, but, of course, ports are not exempt and many will ban visits by single hulled tankers. So, Minister, are you able to give us a picture of how this could restrict the continued use of the single hulled vessels that we have got?

**Mr Davies:** We have no such indications at the present time. As you said, we have an exemption from the ban because they are military tankers. Do remember that we have—and I know you know this—two double hulled militarily specified naval tankers (the Wave Class tankers) and those could always be used in circumstances in which it was absolutely necessary to have a double hulled tanker. We are addressing this need, this requirement. I know you are aware that I cancelled the original competition. I simply felt that the original design was over specified. That is to say, not over specified but very fully specified and we did not quite need the full capabilities and the amount of money that I was being told we would have to spend on buying six tankers at that specification seemed to me to be excessive in terms of our priorities. So as part of the general process of looking through the Defence Equipment Programme and having to take some difficult decisions I took that one, but in no sense did I say we should not have the capability. I just said we did not want to have quite such expensive capability. What we have agreed subsequently is that we should do what I have said to you I would like to do, and will do increasingly in these days, which is to have a competitive dialogue with industry, and we have invited industry to make proposals to us, not just for new-build but for charter, for second-hand sale, all kinds of possibilities that might exist, and we have got quite a lot of responses to that already and those responses are being assessed and I hope that we will be able to reach a conclusion with a couple of months.

**Q589 Linda Gilroy:** I suppose, from what you have just said, you would not be able to give me an in-service date for the new procurement and, therefore, a timescale for how long you may have to manage the issue?

**Mr Davies:** No, I am afraid not. The consequence of going this way round—I have explained the reasons why I prefer to go this way round (saying to industry, “What can you offer?”)—is that you will reduce the risk of a bad deal, you get a much better knowledge of the situation, you do not miss opportunities you otherwise might miss, but you do not start off and specify, “I want this capability on exactly that particular date.” Therefore, I cannot, in advance of commercial discussions, tell you what the in-service date will be.

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15 December 2009 Mr Quentin Davies MP, General Sir Kevin O'Donoghue and Vice Admiral Paul Lambert

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**Q590 Linda Gilroy:** Astute was part of the Short-term Equipment Programme. The NAO is now telling us that there will be a period between 2015 and 2021 when there will be a shortfall in submarine availability against the Department's stated requirement. What is going to be the consequence of that shortfall?

**Mr Davies:** I do not think it is a very serious gap. I hope it will not be. We will have to see how the rest of the programme develops, but I am hopeful. There is always a big experience curve effect in these matters, you know. The first of class has problems—there always will be unanticipated difficulties because you have never built that particular type before—and then the second of class, the third of class becomes easier and cheaper, less delays, and so on and so forth, but remember that we need seven.

**Q591 Linda Gilroy:** I think what I am more interested in, in any event, is how it impacts on the skills base. When we have looked into this before it has been an issue of saying that there needs to be a 22-month drumbeat in order to maintain the skills base, which is pretty fragile. Therefore, are there consequences to the skills base and what is the health of the skills base at the moment?

**Mr Davies:** I think it is much better than it was. You are absolutely right, the drumbeat is important. I am advised that you really need a drumbeat between 22 and 26 months, and that is what we are going for. The skills base is being improved the whole time. The skills base deteriorated, Mrs Gilroy, because there was a gap between the build of the last Vanguard class and the first Astute class, and what happens then is people go away and they go and get other jobs, and so on and so forth.

**Q592 Linda Gilroy:** That is the historic fragility. I am interested in the ongoing fragility of the skills base and whether extending the drumbeat is going to put that under even greater pressure?

**Mr Davies:** All I can say is I am very conscious of that, and we will not do anything which threatens the skills base. It is immensely important to us; it is an immense national asset. We need to build the Astute class, we then need to build a successor class to replace the Vanguard and so there must be a constant availability of, hopefully, a steadily improving skills base in Barrow-in-Furness.

**Q593 Mr Jenkins:** Minister, what would your reaction be to a statement that foreign suppliers have a distinct advantage over British suppliers, insofar as they have less visits from the suits and uniforms from your Department, who constantly occupy their time changing conditions and appear to infuriate some of the British suppliers but actually add cost to any procurement? Would you say that you will look at how many visits they make to British suppliers as opposed to foreign suppliers and maybe see if there are any implications of your staff not having enough to do?

**Mr Davies:** I am going to give General Sir Kevin an opportunity to answer this in a moment, because, of course, all these people you are referring to work for him. I encourage contact between the IPTs and the military in general and industry. I think it is important for both sides; it is educational for both sides. It is very important. I think it is an advantage for British industry. British industry have more constant contact with their customers and with the requirement setters in the Ministry of Defence, because they then know more about our requirements and there is an exchange of information which is useful to both parties. I encourage that. I encourage our people to go to international exhibitions, for example, when we have them in London, conveniently located, so as to make contact with industry and get a feeling of what is going on in industry, and also to hear from industry what particular new capabilities might be available, what new techniques, what new technologies. I do not read anything sinister or damaging into these contacts and I am surprised you ask the question that particular way round, but I am going to ask General Sir Kevin answer to it because I think you are talking about people largely in his IPTs.

**Q594 Chairman:** I think you had the opportunity, did you not, Sir Kevin, a couple of weeks ago to answer that question? I think you did answer it.

**General Sir Kevin O'Donoghue:** Yes.

**Chairman:** I think you did. Are there any further questions? There are no further questions. Gentlemen, thank you very much indeed for another very interesting session on defence equipment. We will look forward to the statement in the House of Commons this afternoon.

**Tuesday 12 January 2010**

Members present:

Mr James Arbuthnot, in the Chair

Mr David S Borrow  
Mr David Crausby  
Linda Gilroy  
Mr Mike Hancock  
Mr Dai Havard

Mr Bernard Jenkin  
Mr Brian Jenkins  
Robert Key  
Mrs Madeleine Moon

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*Witnesses: Mr Bernard Gray, author of *Review of Acquisition for the Secretary of State for Defence*, and Mr Iain Evans, Chairman, LEK Consulting, gave evidence.*

**Q595 Chairman:** Good morning and welcome to the Defence Committee. We have been taking a lot of evidence about the state of equipment acquisition and, specifically, about your report as well, but I would like to begin, if I may, by asking you to introduce yourselves, if you would.

**Mr Gray:** My name is Bernard Gray and I am, in my day job, the Chairman of two companies, TSL Education, which is an educational publisher, and Group GTI, which is a graduate recruitment business, and I have been running TSL for about five years and GTI over the last few months. In my non-day job, I have worked over the course of the last 12 months on this *Review of Acquisition* at the behest of John Hutton.

**Mr Evans:** My name is Iain Evans. I am Chairman of LEK Consulting, which is a corporate strategy consulting firm. We worked with Bernard on this report, providing him with the analytic support from the team that I ran, investigating all the data at the Ministry.

**Q596 Chairman:** Were you paid for your work?

**Mr Gray:** No, barring travel and accommodation expenses, where appropriate.

**Q597 Chairman:** Were you employed by the Ministry of Defence?

**Mr Gray:** No.

**Q598 Chairman:** But, after the report was produced, you worked with the Ministry of Defence to bring some conclusions to it?

**Mr Gray:** Yes.

**Q599 Chairman:** When did you stop doing that?

**Mr Gray:** In December.

**Q600 Chairman:** At the same time, you took up some form of position advising the Conservative Party, did you? What was that about?

**Mr Gray:** I was asked in December by the Shadow Chief Secretary to form part of also a *pro bono* board to advise the Opposition on efficiency in Government across the board, not specifically in relation to the Ministry of Defence.

**Q601 Chairman:** We will have various questions to ask you about whether that diminishes the value of

your report or whether it could be perceived to do so. Are you a member of the Conservative Party?

**Mr Gray:** No, I am not a member of any party.

**Q602 Chairman:** Do you think it does diminish the value of your report?

**Mr Gray:** Well, I think that the facts in the report speak for themselves, so it is a piece of objective analysis which I did not produce for party-political reasons in one direction or the other under either set of circumstances. I was asked to do a piece of work by John Hutton, I did it to the best of my ability and you see the results in front of you. I have been asked to do a piece of work by Philip Hammond, which has not yet substantively started, and I have to judge that in combination with a group of other people who have been asked to do that work when we come to see the results of that.

**Q603 Chairman:** I want to cover this issue of the politics of it to the extent that the Committee wants to right at the beginning to get this out of the way, so are there any other questions that the Committee wants to ask about this issue? No. Now, this may seem an unfair question, but, if you had to identify the key nugget of your report, what would it be?

**Mr Gray:** Well, interestingly, when we went round taking evidence, at a very early session, and I am reluctant to say it, the Treasury actually offered us an observation which proved quite accurate. They said that they thought there were three key weaknesses inside the Ministry of Defence. The first one was that the programme was substantially out of balance, the second was that there was a lack of clarity and leadership within the Ministry of Defence in Main Building, particularly at the head of the organisation, that who gets to decide who is accountable, who is responsible and all of that sort of thing was unclear, and the third key component was that there were insufficient skills inside of DE&S to discharge the job once they had been given it. I think actually, to give credit where it is due, that is a pretty accurate summary of the key points.

**Q604 Chairman:** What do you mean or what did they mean by "out of balance"? How do you balance things?

**Mr Gray:** Well, as you can see from a number of the graphs inside the report, the proposed equipment acquisition by the Ministry of Defence is



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12 January 2010 Mr Bernard Gray and Mr Iain Evans

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substantially in excess of any likely projected future funding, so I do not know any more than anybody else does what exactly the Ministry of Defence's settlement will be in the next CSR Round and beyond that, but I find it hard to imagine that it would be generous enough to fund what the Ministry of Defence currently says its equipment programme is going to cost, and that current estimate itself, if history is any guide, is likely to be an underestimate of what the outturn actually is.

**Q605 Chairman:** So essentially "out of balance" means substantially under-funded?

**Mr Gray:** Or excessive demand, yes.

**Q606 Chairman:** We will come on to that later. The next issue was lack of clarity of leadership. Does that really mean lack of clarity of decision-making?

**Mr Gray:** I think it is both actually.

**Q607 Chairman:** And insufficient skills?

**Mr Gray:** Yes.

**Q608 Chairman:** Now, when the Chief of Defence Materiel was in front of us, and I have to say that it caused me at any rate some difficulty, he said that he did not agree with at least some of your figures.

**Mr Gray:** Yes.

**Q609 Chairman:** What, can you tell us, has been done to resolve those disagreements?

**Mr Gray:** Well, like you, I was surprised by what he, Dr Tyler, and, to a certain extent, Guy Lester said to you. The process that we went through was two-fold or two-pronged, if you like. Iain and I spent the first five months of the year interviewing some 200 people from a variety of different areas, including lots of people inside the Ministry of Defence, people in industry, some of our allies, some people in academia and so on and so forth. At the same time, an LEK team worked extensively with the Ministry of Defence in both Main Building and in Abbey Wood abstracting the data from MoD systems in order to allow us to analyse, statistically speaking, what was going on with the programme, so about five or six people worked on that. We then had a whole variety of meetings, synthesising these two outcomes, in April and May and presented the draft output of those findings to the Department, including to the three individuals who came and gave evidence to you in early June. We then had a significant amount backward and forward about helping people understand things or slight corrections or, in a number of cases, "Would you mind aggregating this, that or the other together?" either for national security or commercial confidentiality reasons so that one could not entirely distinguish exactly which programme one was talking about on a couple of occasions. As far as we are concerned, any questions we were asked and any issues that were raised were answered in that process, which was substantially complete by early July and, to our knowledge, the people who are in charge of numbers inside of Abbey Wood and in MoD Main Building are in agreement with us about our numbers.

**Q610 Chairman:** When you say "to our knowledge", what is the meaning of that phrase? Do you mean that you know that they are substantially in agreement or, as far as you know, they are substantially in agreement?

**Mr Gray:** What I mean is that we held extensive dialogue with them and any issues they raised with us we thrashed out to resolution so that there were no unaddressed questions, so whether they had something in the back of their minds that they never raised with us, I cannot speak to, but, as far as I know, we answered all their questions.

**Q611 Chairman:** And are you satisfied that you had access to the data that you needed and to the people that you needed in order to complete your report?

**Mr Gray:** Yes. We had to push hard in the first two or three months where there was reluctance to give us that access, but we did get it, and there were one or two points made by Dr Tyler that I would like to address at some point in this discussion.

**Q612 Chairman:** Can you identify those by headline now?

**Mr Gray:** Yes, he said that we had picked an unrepresentatively small sample of projects, for example.

**Q613 Chairman:** Fine, we can address that. Anything else?

**Mr Gray:** And that we had deliberately distorted for effect.

**Q614 Mr Hancock:** Distorted what?

**Mr Gray:** That we had distorted the data for effect, and the point made separately by Guy Lester about, what we would tend to refer to as, the "frictional cost", ie, how much does it cost us on this programme and so on.

**Q615 Chairman:** So those are the three headline points, and we can come on to those later. Mr Evans, do feel free to join in, if you want to. So you had access to the people, you had access to the data, you gave your report in draft to Abbey Wood and to the Ministry of Defence in June and they had the opportunity to pore over it and to say, "I agree" or "disagree" here or there and, so far as you know, they did not draw to your attention, at any rate, any agreements or disagreements?

**Mr Gray:** There were a number of detailed points which we thrashed through and resolved, some things where they said, "It's not quite like that", and one or two bits they asked us to aggregate together, so there was a little bit of, as it were, editorial work, but nothing substantive, and that process of dialogue took place over a month which, we thought, pretty well completely covered off any outstanding issues they might have about what we had done.

**Q616 Chairman:** Did you speak to Dr Tyler about it?

**Mr Gray:** We did not speak to Dr Tyler in that process because we were directed to talk to the Chief of Defence Materiel.

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12 January 2010 Mr Bernard Gray and Mr Iain Evans

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**Q617 Mr Hancock:** Were you accused of going further than you should have done?

**Mr Gray:** I am sorry?

**Q618 Mr Hancock:** Were you accused at any time of going beyond your brief?

**Mr Gray:** No.

**Q619 Mr Hancock:** Were you welcome?

**Mr Gray:** In some places and not others.

**Q620 Mr Hancock:** Was there a resistance to you?

**Mr Gray:** In some places.

**Mr Evans:** There were two major pieces of analysis that were undertaken, one in relation to the equipment programme where the data, generally speaking, rests at Main Building, and we worked directly with Defence Capability and his designated junior officer to make sure that we interpreted everything in the equipment programme correctly, and they signed off on all our conclusions on the equipment programme. As a separate exercise that happened at Abbey Wood, which relates principally to the management information systems at Abbey Wood, the most important of which is a system called CMIS where all the big projects are present, we went through every single one of those major projects in co-operation with the individuals down there who were designated to make sure that we interpreted the material correctly. We spent some time agreeing with them which projects were appropriate to include in the analysis and which were not. We gave them the final list on June 2 and they did not have any questions beyond that and, as far as we are concerned, we are agreed with the designated officials who are empowered to check that our work was correct both at Main Building and at DE&S. After we put in our draft report, which I think was actually very early in July, then a two-star at Main Building was given the responsibility of going through the report as a whole and making sure that, if there were any other questions beyond those in the individual piece of analysis which came out of the writing of the report, they were dealt with, and they raised with us 61 separate questions, all of which we answered and went through with them in detail over a period of about a month, maybe slightly longer, and each of those 61 we resolved, as far as we are aware, with the Department.

**Q621 Chairman:** Did any of those questions include the suggestion that there was an unrepresentatively small sample of projects that had been taken?

**Mr Evans:** No, it was never raised with us as an issue at all at any point, and it is manifestly untrue as well.

**Q622 Chairman:** Did any of those questions suggest that you had deliberately distorted the data for effect?

**Mr Evans:** No.

**Q623 Mr Hancock:** But could you have done?

**Mr Gray:** Well, when we came to that point, it was about the methodology about how we ended up with the sample that we ended up with, which will basically answer the question no.

**Q624 Mr Hancock:** But, when you are telling us that the Ministry of Defence gave you people to enable you to interpret the data correctly, to me that means to interpret it to their way of thinking. Were there disputes over the way in which some of this data was relayed to you?

**Mr Evans:** Yes.

**Q625 Mr Hancock:** And did your interpretation vary distinctly from what the interpreter from the MoD was suggesting to you that you should read into it?

**Mr Evans:** These are complicated projects and there is a lot going on, there are lots of moving parts, so our general stance throughout was, if they ever did raise an objection to our including a project, we would tend to exclude it.

**Q626 Mr Hancock:** Why?

**Mr Evans:** Because the analysis was going to be powerful enough without it and there was no need to have an argument about something which was not going to be material to the answer.

**Mr Gray:** If anything, the flattery in the numbers favours the Ministry of Defence because, where there was a grey area, to use a pun, we gave them the benefit of the doubt.

**Q627 Robert Key:** Mr Gray, you said that in some areas you were made welcome and in some less welcome. Where were you made welcome?

**Mr Gray:** Well, I think that inside Main Building, particularly at medium and junior levels, there is quite a lot of recognition of a need for change, so, when you get to more senior levels, I think people become a bit more concerned about the implications of all of this. One very senior military officer said to us, for example, that, what is referred to as the "second floor" which is the programming community, the people who actually put the programme together were very keen for change because they could see the whole system grinding to a halt under current circumstances and something was needed to catalyse that, so groups like that, for example, are keen for change. Other groups, which one might view as vested interests with something to lose as a result of change happening, were less welcoming.

**Q628 Robert Key:** And they were the more senior officials and officers?

**Mr Gray:** The more senior officials and officers had something more of a sceptical view about whether there was a problem, and it is natural enough, I suppose, if you have somebody from the outside coming and poking around inside your organisation and that is often an unwelcome thing under any circumstances.

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 12 January 2010 Mr Bernard Gray and Mr Iain Evans
 

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**Q629 Robert Key:** Was there a geographical difference as well? For example, were you more welcome at Main Building than you were at Abbey Wood?

**Mr Evans:** I would say not. If I might add because I do these sorts of studies all the time in my professional life, we were pretty well welcome, I would say. The feelings inside the Department both at Main Building and down at DE&S, an awful lot of people, the vast majority of people, care passionately and deeply about these processes and want to get them right and were well aware that things were not going right and gave us very considerable help in guiding us and helping us. It is true, they were more sceptical at more senior levels, but, I have to say, even there, compared to what I have seen at major corporations, it was a pretty welcoming and friendly environment in which to do our analysis, which was complicated and difficult, and we could not have done it properly without the level of support we got which was widespread, and many of the ideas in our report are ones which came up from the bottom-up from people who know the system as part of their everyday lives.

**Q630 Mrs Moon:** You have painted a very different picture, the two of you. Mr Gray, you have painted a picture of almost antagonism and, Mr Evans, you have painted a picture that it is difficult, that change is painful and that you got a positive response.

**Mr Gray:** I think the distinction I would probably draw here is that in the phase of going round acquiring the data, I think what Iain says is true. If you then look at the period after which emerging conclusions started to come out about what one might do about this, then I think that situation was somewhat different. If I think, Iain, about one senior meeting we attended in mid-June, that was not the most welcoming meeting I have ever been in.

**Mr Evans:** That is absolutely true. I do not think there is a difference of opinion here. If you go down into all the many, many people that went into the extreme detail of each of the projects, in general that process was as good as I have seen in terms of co-operation. As the more controversial or contentious items that we came up with in the report were discussed at more senior levels, naturally speaking, there was some more scepticism and resistance in relation to that, but, if you were to ask me in broad terms were we doing this in the face of opposition, no, we were not. We had high levels of co-operation throughout the organisation and that has helped make sure that the analysis is robust and supported by many people in the organisation. The fact that, as Bernard correctly says, there is a more sceptical view at the more senior level and as the report developed, that is also true, but I would not say that is a particularly unusual event either.

**Q631 Mrs Moon:** I do think that we need to be aware of what you said because what you are saying, Mr Evans, paints a very different picture from what Mr Gray has said, certainly in my mind. One of the things, Mr Gray, that you said was that you had

particular opposition from those who had things to lose. Who were those people and what was it that they had to lose?

**Mr Gray:** Well, the Whitehall machine runs on power structures and, if you propose things which take away power from some individuals, they are probably not going to like that.

**Q632 Mrs Moon:** And who were they?

**Mr Gray:** Sorry?

**Q633 Mrs Moon:** Who are you referring to?

**Mr Gray:** Well, I do not really want to turn it into an *ad hominem* observation on people, but we were proposing significant change inside DE&S, for example, and some of the dislike for what we recommended certainly came from senior levels in DE&S post the preparation of the draft report. There were other people inside, and essentially what we are proposing is a concentration of power within the Ministry of Defence to give power and accountability in tighter hands for the purposes of making effective decisions, and some of the groups who would thereby lose out, for example, some of the single Service Chiefs, were also unhappy with that in some regards.

**Q634 Mr Jenkins:** One of the questions I was thinking to ask I will try and elaborate slightly, but, when you referred to "they", you might be able to help us by saying who actually puts anything into the programme, where did this initiation start and who are the people to deliver it, to deliver it into the programme, not deliver it out of the programme? It is certainly not the defence industries. They cannot roll up and say, "I think we should put this in the programme". It might be the uniforms, it might be somebody in the Civil Service in the MoD, or it might be the political people, but who actually, do you think, takes the decision, "This should go into the programme" because that is where the problem starts, is it not?

**Mr Gray:** Well, there are a lot of people who attempt to get their finger into that pie, which does not help. The group specifically charged with the responsibility is what was the Equipment Capability Group and now, and they keep renaming everything, I think it is called the "Capability Group" now which is run by Vice Admiral Lambert, who was here just before Christmas, so he is the senior officer responsible for that area and he has a team of a couple of people working for him who assemble the various different components of what goes in in generating requirements for the programme and will try to get programmes going, but there will be a lot of other people who attempt to influence that group and then the Defence Board above it about what should or should not go into the programme, and part of our proposal was to try and corral that process more effectively.

**Q635 Mr Hancock:** When you first started, you told us that you had been invited in by John Hutton to do this. This whole system had been creaking for a long, long time, so what was it that finally broke the

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 12 January 2010 Mr Bernard Gray and Mr Iain Evans
 

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camel's back which prompted him to bring you in? What was it that he was trying to sort out which had been allowed to go on for such a long time?

**Mr Gray:** Well, I do not know specifically, you would have to ask John. He did not say to me, "I've asked you in because of X", but, if I were guessing, he had only relatively recently been appointed Defence Secretary, a couple of months prior to asking me to come in, and the so-called equipment examination was going on which was potentially going to produce some unpalatable equipment choices, and obviously there had been longstanding comments by the NAO and this Committee and a whole variety of other people about the performance of the equipment programme and my sense of it, from talking to him, was, "I have asked to be Defence Secretary. I am going to make a good effort to try and sort this problem out while I am in office here".

**Q636 Mr Crausby:** The bottom line is that you concluded that the defence equipment plan is unaffordable, and you appear to believe that that is not as a result of recent problems with the economy, but has occurred over 10 years since the Strategic Defence Review. You are saying that it has substantially overheated and is unaffordable on any projection of the budgets. Now, regardless of what John Hutton thought previously, what do they think now? Do Defence Equipment & Support accept your view and do Ministers accept your view?

**Mr Gray:** I do not think that there is a wholly singular view inside the Ministry of Defence about the answer to that question. There are a substantial number of people, and I believe that includes the Secretary of State and Lord Drayson, for example, who accept the analysis in this report and are intending to do something about it. There are other people, some of whom came and talked to you, who appear, as far as I can tell, to think that there is not a problem, so I do not think there is a single view inside the Ministry of Defence.

**Q637 Mr Jenkin:** Can I just ask for clarification, what is the problem? If it is a problem that the programme is too big for the budget, is that the main problem because a lot of people in the Ministry of Defence think that is the problem and that a lot of these other problems arise from that?

**Mr Gray:** Well, I think that the overheating of the problem arises from some of the structures they have got. As I outlined to the Chairman at the beginning, I would characterise it in three big buckets really, and I do not know whether you would agree, Iain, that the programme is itself overheated, that there is a dysfunctional decision-making process in Main Building for both resolving those issues and keeping the programme under control and then there is insufficient skill within DE&S to deliver the programme, and those three buckets are all important.

**Q638 Mr Crausby:** I get the impression that you do not think that the programme was unaffordable in 1998, but, as a result of organisational change in underlying behaviours, you have made the point

that that is the reason why the programme has effectively become unaffordable over the period. I think the real question is: what should we do about that now? That, I think, is what this Committee should get down to, and you have made the point that you recommend the formation of an executive committee, so why do you think that another committee will make a real difference? Can you give us some insight into your recommendation on the formation of an executive committee of the Defence Board?

**Mr Gray:** Just to address the first point that you made about the growth of the programme, my overall observation would be that this process has happened for a long time and that the reason that Defence Reviews are controversial is that it is the only mechanism the system has for bringing the defence programme back under control, so what you see is a Defence Review which brings the programme back to approximately the right size periodically over the last 40 years and you will see a drift up in the size of the programme to an unaffordable level, at which point we have a Defence Review to bring it back into line, so it is true that it has got further out of line since 1998, but that is just the most recent example of a systemic problem. As far as what can be done to bring it back under control is concerned, the set of proposals that we have put forward, if you take the three buckets, let us have a Defence Review, which is common ground, I think, but let us have a Defence Review which is properly costed and then properly funded in order to bring the programme back into line to address the first issue, and there are a variety of extra things that one needs to do to make sure that the Ministry of Defence is not, in a benign sort of way, lying to itself about the affordability of what it is proposing in the future, and then let us set up a process that keeps that in line, so that is the first set of recommendations around getting the programme into some kind of balance. We then make a set of proposals which are around reforming the way that the Ministry of Defence Head Office makes decisions which tries to constrain people out of wishing for everything, so the attempt to make the Permanent Secretary legally responsible to Parliament for a balanced programme, for example, is an effort on our part to force him to say no to people who want things in the Department that the Department cannot afford, and there are a variety of mechanisms around that. Now, they are, in some sense, bureaucratic and legal frameworks for a bureaucratic and legal system. If this were a private company, you would probably do something different, but they are the best effort that we can think of which tries to put pressure on the Department not to wish things it cannot afford in Main Building. Then the third chunk is around our proposed Go-Co solution for Abbey Wood where we see that as one of the few ways we can imagine that Abbey Wood will actually get the skill that it needs to do the job.

**Mr Evans:** It appears controversial that we state that the programme is unaffordable, though it seems obvious to us that it is, but one of the things we have touched on here which we are much more explicit

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12 January 2010 Mr Bernard Gray and Mr Iain Evans

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about in the report which is a very important matter, I would suggest, for the Committee to focus on is the sort of behaviours in the system which will tend to force the programme out of balance and to become unaffordable over time. Well, this is not a political matter and in fact it is common and, if we talk to our allies, the French, the Americans and so on, they have very, very similar problems and the reason is the competing behaviours across the Services and the fact that things are rarely cancelled, so you get them into the programme, you will get them eventually, which creates a whole set of behaviours which mean that, with the best will in the world, with well-intentioned and smart people doing what they think is the best excuse for their jobs, nevertheless, it will tend to force the programme to be unaffordable. We analysed that, I think, quite carefully and correctly and quite a lot of negatives we put in place, for example the executive committee and also the change to the IAB, are designed to rein in that day-to-day behaviour to make sure that, once the Strategic Defence Review got the thing in balance, it would remain in balance, whereas all the incentives we could see both here and internationally will tend to force it out of balance and that is a very important matter to address.

**Chairman:** Mr Evans, I did not get the impression from this report that this was a problem which started in 1998. There were problems which I recognised very clearly from when it was all my fault.

**Mr Jenkins:** It was! That is where it all started, Chairman!

**Q639 Mr Borrow:** From the evidence session we had before Christmas, I got the impression that, in a way, the MoD think they can put so many particular projects in the programme because then, when they know the money that is available, they simply can delay and stretch out projects and, instead of that being an exceptional thing to do in particularly difficult circumstances, that was just the way you managed the process and also you can put things in the programme and then at a later date, because they are in the very early stages, you can suddenly say, "Well, we don't need to do that, but we've spent £X million on it and we can quietly drop it", and a lot of people did not know it was in the programme anyway, so it has just disappeared. Am I right in that assessment?

**Mr Gray:** Certainly they love these things mightily, so they rarely drop anything and, in fairness to them, they are often criticised if they do. If they have spent some money on a project which they later decide they do not need, then they get criticised pretty heavily for that and sometimes unfairly, I think, but certainly the behaviour of putting things in the programme and slowing everything down is endemic and it is expensive and they do not, systematically at least, understand how much that actually costs them. If you went and talked to any large-scale capital contracting organisation and said, "Suppose I did the same project over an extra 25% of time, would that cost me any money?" they would look straight at you and say, "Of course it will". The Ministry of Defence appears to believe in quite large

quarters that this thing does not cost them significant money and they certainly do not make any effort to cost that, yet in fact it does cost them significant money. For example, somebody asked before Christmas—

**Q640 Mr Jenkin:** Carrier?

**Mr Gray:** Well, certainly Carrier was a big debate, but somebody asked about A400M and the MinDE&S said, "Well, of course it's going to cost more money", so narrowly, when you look at an individual project which is going to be delayed by a period of time, you can see it, but they appear to believe that a rescheduling of the problem overall to slow everything down does not cost them serious money when in fact it does.

**Q641 Chairman:** You said you wanted to address the issue of frictional costs, which was raised in front of us before. How did you want to address that?

**Mr Gray:** Well, Guy Lester said that he intuitively felt that our number was too high in his evidence. I am not one for finance by intuition myself, but, in fairness to Guy, he made known to us his objection to our conclusion in the course of our work, so he had raised that issue with us. The way we approached this was to say that nobody before has tried to produce any estimate of the cost of this behaviour and it is difficult and judgmental to form an accurate view about exactly what all of that delay costs because many of the data do not exist, but we did try to do our best to measure how much this was costing and, if I can just refer to my notes about how we did that—

**Q642 Chairman:** It is 7.71.

**Mr Gray:** Forgive me, I have just drawn out some separate data. To take the largest bucket, which is the direct, what we call, "unproductive programme costs", what we did was we took the largest sample where we had complete data which, as it turns out in this case, was 29 projects and mapped the degree of delay versus the degree of cost increase and we found a statistical correlation for that increase and we measured that, which showed that, broadly speaking, it cost about  $\frac{1}{2}\%$  of the total programme cost per month of delay of the programme and, if you then do the maths from the NAO which says that basically the programme slips by about  $2\frac{1}{2}$  months a year and that the approved programme is of the order of £70 billion, it turns out that that component has a central annual cost overrun of about £875 million. Now, there will be a variety of reasons for the delay. Some of that will be a genuine technical difficulty that Dr Tyler points to, but some of it will be deliberately slowing things down because they do not have enough money in any individual year to do the amount of work that they have proposed to do, and some of it will be as a result of the system deliberately undercosting programmes in the first place, so again running into a cash constraint. That is the example of the first item in our list where we have then put in a range of between £500 million and £1.2 billion per year in cost for that component. Now, Guy does not like our

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 12 January 2010 Mr Bernard Gray and Mr Iain Evans
 

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methodology for that, but then he has not produced another one, and I think our answer to that would be, as it were, in the progress of science in this. We have put the first estimate that anybody has ever tried to put on the table to try and capture the costs of the delay in the system because it is only when you measure things that people start paying attention to them. I am sure that it would repay further work to try and refine this and we would be interested to participate in a debate which did that, but we think that the frictional cost estimate components that we have built up in the way I have just described is a statistically valid approach, and the key point is that, whatever the precise number is, it is a large number of hundreds of millions of pounds at the least which is going to non-productive work inside the Ministry of Defence as a result of the way they organise themselves.

**Q643 Mr Crausby:** You focus in your report on the need for strong programme and financial management skills, and there are some who would argue that you have placed insufficient emphasis on defence expertise. Do you accept that that is a valid criticism? It is a complex question that current operations will always have an effect on, so how do you expect the MoD to deal with this question of strong financial management skills and, at the same time, be prepared to fight a war?

**Mr Gray:** Well, the people responsible for financial management inside the Ministry of Defence are, by and large, not the people fighting the war, and many organisations have to deal with complex financial matters.

**Q644 Mr Crausby:** But there is a need for current operational knowledge, is there not, surely in order to decide what equipment is necessary and what price we are prepared to pay for it?

**Mr Gray:** By and large, our focus was on, what is called, the “mainstream equipment programme” which excluded the UORs, by and large, in our analysis, so the things which are going on for rapid deployment of things to theatre lie outside the scope of this. We are talking about the acquisition of things like Type 45 and Carrier and Typhoon and so on and so forth which are not largely currently operational issues.

**Q645 Chairman:** So you excluded the Urgent Operational Requirements?

**Mr Gray:** Yes, they are not in the statistical part of this report.

**Q646 Chairman:** You excluded pay and rations?

**Mr Gray:** Yes.

**Q647 Chairman:** You excluded pensions?

**Mr Gray:** Yes, so it is around how does one run a complex programme management organisation, and I think we would agree that defence is a complicated business where you have short production runs and individual bespoke skills and so on and so forth, but that says to me that it is all the more important to have the best possible skills doing that job because it

is genuinely difficult. We found, for example, when we went to see the Finance Department of DE&S that half of their management accounting jobs were not filled by a team of qualified accountants and the explanation of the Finance Director for that was that they paid insufficient wages to attract qualified accountants into those jobs, so that is an example where the way that the system works at the moment, which is trying to press down on the operating costs of DE&S and that means pressing down on the cost of, for example, the accountants inside DE&S, is not serving the overall interests because you do not have sufficiently skilled people trying to run the finances.

**Q648 Mr Crausby:** You have talked about independent scrutiny, so how would that work? Would an independent accountant have sufficient defence expertise to deliver that? Tell us about how, you think, that would work.

**Mr Evans:** On that particular point, there is a whole set of science around parametric data which is that these things over time have been built before and they cost certain amounts before and people can reverse-engineer what our current capability is in the context of that, and there is a profession of cost estimation associated with that. Those skills, in general, of the Department have had less emphasis in recent times and we came across examples where the data that you would expect a particular programme to cost have been ignored when the original estimation was put in place. When we talk about improving cost estimation, we want to give more power to that particular function so that right from the beginning the programmes are planned and planned around the very best cost estimates that can be available out there, which is currently not the case.

**Q649 Mr Jenkin:** Can I ask about the effect of Treasury influence in all of this, and we accept that you broadly endorse the Treasury analysis of the shortcomings of the procurement process. But how has the Treasury itself contributed to the amelioration of those problems, or has it actually contributed to the problems themselves by over-complicating approval by trying to extract efficiency all the time, and indeed at the outset of the 1998 Defence Review people like Lord Guthrie now openly say that the programme was already bigger than the Treasury was prepared to fund?

**Mr Gray:** Yes, and I think in relation to that last remark, with the benefit of hindsight, the efficiency target which was set to the Ministry of Defence as a whole in 1998 in order to make the programme balance, which required it to make 3% efficiency savings per year, was excessive, so—

**Q650 Mr Jenkin:** So is the Treasury equally guilty of false optimism?

**Mr Gray:** I think, in a sense, it is on both sides. It is both a force for good and a force for evil in this, and it is one of the reasons I hesitated about attributing that analysis to them because it appears partial. I believe that Treasury officials are actually trying to make the Ministry of Defence do the right thing, by

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12 January 2010 Mr Bernard Gray and Mr Iain Evans

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and large, and are, in their own special way, trying their best to get the right result, so, in that sense, even when they are trying to put a clamp on some of the approvals processes, what they are trying to do is force a measure of realism in the Ministry of Defence which has sometimes been absent. Where they, I think, do not help, because essentially the only power that the Treasury has over the Ministry of Defence is to say no to things, that is the only point at which they can actually make something bite, so they try to use that power sometimes, whether that is locally legitimate or not, in order to force the Ministry of Defence to face up to things. In my view, they are trying to do the right thing about that. Where the Treasury is unhelpful, and this would apply across public spending as a whole, I suspect, if the Ministry of Defence did the right thing which led to a greater efficiency inside of the system, there would be a tendency by the Treasury to claw that back and to say, "Well, you've made the process of delivering the same output more efficiently, so we'll take that", and the reason that is a bad thing is because it does not encourage anybody to do the right thing. If you think that you are going to lose all the benefit of making painful change, downsizing your own staff and doing all of those kinds of things and handing away power and the only person who is going to benefit is the Treasury and the size of our approach to the gilt market is slightly smaller than it otherwise would be, you are disinclined to do that, whereas, if you think, "If I make this efficiency gain, I can turn it into more military output for my people", then you might be more inclined to do it, so I think, in that sense, the way that the Treasury system works is unhelpful.

**Q651 Mr Jenkin:** I get the point about perverse incentives, but in any business, if the Ministry of Defence were a subsidiary and the Treasury were the head office, the chief accounting officer of the holding company would have his own accounting officer in the Ministry of Defence fully engaged with the decisions being made and the accounting officer in the Ministry of Defence would report to the chief accounting officer of the company as a whole. Is that not something that is completely lacking in Whitehall?

**Mr Gray:** It works in different ways in different companies and, largely, the embedded management accounting chain, which is what we are talking about here, in the organisation of companies is a sort of double agent. It both works for the operating unit and it works for the finance department and it has to balance those two responsibilities.

**Q652 Mr Jenkin:** But how do we get the Treasury to take more responsibility for some of the perverse effects of their behaviour?

**Mr Gray:** Well, I would set up the rules so that they were not clawing back the gains of good behaviour.

**Q653 Mr Jenkin:** As simple as that?

**Mr Gray:** That is probably the best way. If you just perch somebody on the Ministry of Defence Board from the Treasury in order to try and get them to see

sense, as it were, my suspicion is that the decision-making will just migrate to some other body which does not have the Treasury in it.

**Q654 Mr Jenkin:** Presumably, the Treasury has encouraged more and more steps and hurdles to be put into the approvals process. Did you identify some of those steps and hurdles that should be taken out because they themselves make the approvals process more expensive?

**Mr Gray:** No, what I was referring to is that I have observed in recent times that, when a specific programme comes up which requires under the rules Treasury approval, that approval has sometimes been slow in coming, not that there is a process by which they have inserted extra steps, but more that the Treasury dragged their feet in an effort to press the Ministry of Defence to change the way they do things.

**Mr Evans:** There is an important recommendation which is that the Department should get a sort of 10-year budget or agreement or outline plan agreed between the Treasury and the Department. We grappled with this question of perverse incentives and how do you get them efficiently which seemed a benefit to the group, and our conclusion on that, was that, that was quite hard to do, but, if there were a much longer-term budget framework, however exactly that was defined, that did not mean that everything was measured on a year-by-year basis, and that would seem to us to encourage more efficient behaviour. Second, with complex programmes like this which go over multi-years, inherently year-by-year accounting is pretty unhelpful because you cannot switch things between years to optimise things, so, whilst I think it may be imperfect in the sense it does not address all the points you are making, there is a very important recommendation there about giving a much longer-term planning horizon agreed between the Department and the Treasury, which certainly, I think, is one of the better-supported recommendations at the Department—

**Q655 Mr Hancock:** But in your executive summary you used this paragraph: "Unfortunately, the current system is not able to flush out at an early enough stage the real costs of equipment". Now, when George Robertson came here after the Defence Review and sat in front of this Committee in 1998, he said, "SMART Procurement is with us and from now on we are going to do just this". In your report, you do not even mention SMART Procurement and the results of it, but the truth of the matter is that SMART Procurement has not delivered what it said because your opening paragraph virtually says that that is not the case, so why did that fail when we were told that they were going to get it right before they actually embarked on these long programmes?

**Q656 Chairman:** I think we are going to come on to that later actually.

**Mr Gray:** Well, the one-sentence answer is: because it has not been implemented.

12 January 2010 Mr Bernard Gray and Mr Iain Evans

**Q657 Mr Hancock:** It has not been implemented?

**Mr Gray:** That is right.

**Q658 Robert Key:** Chairman, it was good to hear Mr Evans confirming that in the Ministry of Defence employees are well-motivated and determined to do their very best to deliver, and then we heard Mr Gray say that there are deficiencies in qualified accountants because the Ministry of Defence will not pay proper wages to attract that skill. What other skills, do you feel between you, are lacking at a senior management level in the Ministry of Defence? Accountancy clearly is one, but what other management skills, do you think, are missing?

**Mr Evans:** Well, I would say it goes beyond accounting to general financial planning disciplines and the seniority of people responsible for that is insufficient and too low, so that whole side of things does not have enough weight in the system. The second is we are concerned about the project management capability of the DE&S in part on two of the ventures, and one is absolute capability and the second also is the turnover and the relatively short longevity of people in position on multi-year programmes where it seems a lot of people responsible do not stick with projects for long enough, so there is a tenure problem as well as a capability problem. I think many of the systems that underlie those things, such as the management information systems, do not seem to us to be very strong, so I suspect that there is an underlying system architecture set of questions and capabilities there as well. I think those would be the three that I would refer to initially.

**Mr Gray:** We highlight in the report where we are concerned about a lack of engineering skills, project management skills, general management skills and indeed general management freedom of action and some of the constraints, so, for example, the senior management at DE&S are not necessarily able to select their two-star appointees, which is a circumstance that I, as a senior manager in industry, simply would not tolerate. I would not have wished on to me somebody in a senior sort of two-star position that was somebody else's choice and I had to make the programme work with that. If I am going to take responsibility, I am going to pick the people who are going to do it, for example. As well as the systems weaknesses, when we came to look at this to digest some of the previous evidence, one of the interesting parts is that the equipment programme plan produced by Main Building and the programme as managed by DE&S through the system called CMIS do not match and they are not reconciled to one another, for example, as an example of the system weaknesses. One has to go through and do a manual inspection to try and work out from the programmes in CMIS how they relate back to the programmes inside the Ministry of Defence Main Building, so there are skills weaknesses and information systems weaknesses.

**Q659 Robert Key:** But the Ministry of Defence is the purchaser of products from the defence industry. I wonder if the same concerns apply to the defence

industries. Do the defence industries promise things they cannot deliver? Is their risk assessment adequate? Is their costing structure adequate, or are they just making up the numbers in order to sell their products to the Ministry of Defence? We cannot just blame the Ministry of Defence for this, can we, because a lot of the time the Ministry of Defence is second-guessing the pricing of products by the defence industry?

**Mr Gray:** Sure. There is a well-known phrase, *caveat emptor*, and we are all sometimes victims of suppliers who promise us things which they are unable to deliver. I think Mr Hancock made a similar point in previous evidence sessions, that we did not mention the defence industry in this context, but it is a fair point, that they are a contributor to this conspiracy of optimism, but it is, in a sense, the Ministry of Defence's responsibility to try to see through that and sort it out. I will give you two specific examples where one at least could get a better answer. The parametric data which Iain referred to earlier suggested that both the A400M and the Carriers were going to cost more than the Ministry of Defence had originally estimated and yet that parametric data was ignored in the case of the A400M because we had a contract with Airbus. Therefore, Airbus were on hook to deliver at a certain price, except of course that now they will not and presumably governments will share some part of the burden of that increased cost as well as Airbus suffering some losses, and in the case of the Carriers we all know the story. So, if one had only looked at the parametric data and taken that parametric costing as a guide, whatever industry said and whatever the Navy programmers said or the Air Force programmers said in either case, one would have got a better answer than we have today.

**Q660 Robert Key:** So this all led you to your conclusion that equipment project performance was relatively poor with delays of around 80% and cost increases of around 40% against initial estimates, and you said that DE&S' management of risk appears to be relatively poor. In our last session on 15 December, I did indeed refer to the A400M, and the NAO report which had just been published pointed out that the risk differential was six times what it should have been, so, when it comes to these issues, particularly where foreign purchase and collaboration is concerned, is there enough attention paid to potential fluctuation in exchange rates because I suspect not? General Sir Kevin O'Donoghue said that foreign exchange was responsible for a big chunk of this mismatch here.

**Mr Gray:** Yes, I would ask for that to be quantified, if I were you. We heard similar things and a single-digit percentage was accounted for by that when we looked, but I think it is not just a problem of international products, it is a general problem that, for a whole variety of incentive reasons, most people inside the system choose to take an optimistic view of the likely outcome of project X and assent to over-optimistic cost assumptions which are then not validated. If you took the A400M as an example, they have data going back to the Second World War



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12 January 2010 Mr Bernard Gray and Mr Iain Evans

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which tells you how much it costs to build a transport aircraft and it is a pretty straight-line graph which would tell you that the A400M was going to cost substantially more than we had it on contract for. Now, if you are the Ministry of Defence, you turn round and you say, "Well, we've got it on contract for this and, therefore, we've got a great deal", or you take my view all the way through this programme that gravity will assert itself and this programme will end up costing what it should have cost on the line here and somehow or other everybody is going to have to pay to that, whether that is some combination of Airbus and governments. So they chose to take the optimistic view which is, "We've got Airbus on the hook for a programme at this cost and, therefore, that's what we are going to put it in the programme at".

**Q661 Robert Key:** I did ask General Sir Kevin to quantify that and he answered, at question 547, "I do not know". The Minister then came in and said, "Quite a large amount. What I can tell you is that for the last couple of years, foreign exchange losses have cost us about £300 million which is a significant factor".

**Mr Evans:** But £300 million is not a large amount in the context of what we are talking about and you do tend to have people talk about foreign exchange losses where the exchange rate goes against us, but over periods of time going back four or five years we really have to tell you about the consequences of exchange rates going in our favour.

**Q662 Mr Borrow:** Just going back to this conspiracy of optimism issue and how things get in the programme. Would I be wrong in assuming that both from industry's point of view and from the Service Chiefs' point of view, there is a strong incentive to actually get projects into the programme with perhaps a back-of-an-envelope estimate. But, once you have got it in the programme, whatever Parliament decides in terms of the budget overall for MoD and whatever Treasury decides, it is in the programme at a figure less than it would realistically cost, but, as long as you are a Service Chief or somebody from the defence industry and you have managed to get it in that programme, eventually it will arrive and you may get more money out of the Treasury because at some point in the future you can turn round and say, "We need this bit of kit, but you're not providing enough money to do it". Therefore, the Treasury have got to open the purse a bit more than they would have done had the whole project been controlled properly in the first place?

**Mr Gray:** That definitely happens and they definitely hope they are going to get more money into the system as a result of over-programming, and whether they do or not depends on the circumstances, but the other problem that it generates is that it means that all programmes are run more slowly than they otherwise would be, which leads to substantial costs for keeping everything going for longer because you are trying to

build things slowly because you can only afford, for argument's sake, two-thirds of what you have ordered.

**Q663 Mr Hancock:** Before I ask my next question, I want to just go back to the question you were answering just now when you said that they took the optimistic view. If they took the real view, they would then have to answer the question, "Do we continue or not?" would they not, so surely the answer is that they avoided that because they did not want to make that bad decision and to tell people that they were going to scrap the Airfreighter or the Carriers, for example?

**Mr Gray:** "Bad" as in difficult?

**Q664 Mr Hancock:** Well, Ministers have to make very difficult choices and they have avoided making choices, have they not, by distorting the information to give this optimistic view, so in fact it helped no one?

**Mr Gray:** Well, there tends at this point in the conversation to be a lot of focus on Ministers and I do not think that Ministers are the primary and certainly not the sole source of the problem here because everybody wants to avoid taking the difficult decision.

**Mr Hancock:** Of course.

**Mr Gray:** So the Service Chiefs and the Civil Service also wish to avoid the unpleasantness of difficult, controversial and headline-grabbing decisions, so what often gets served up to Ministers of whatever party and whatever government will be a recommendation to carry on with things, so it is not the case that the system is sitting there gagging to cancel projects and Ministers are saying no; that is not the way it works. The way it works is that everybody up to and including Ministers have an interest in the system carrying on the way it is.

**Q665 Mr Hancock:** Why do you believe that all of your recommendations need to be implemented and, given the fact that the MoD have already rejected some of them, how do you feel about your report surviving?

**Mr Gray:** Well, there is both: do they say they are going to do them and do they actually do them? Therefore, there is a following through of the intent as well as the letter of the proposals that they have assented to, and I think it is not obvious that they will all get followed through, but I think people are making good efforts. As far as DE&S are concerned, we recommended that the Go-Co option be explored and we did not say, "Do it straightaway" but we said, "Do the work to understand what would be involved" because we wanted to solve all of the skill problems and the framework management action problems that DE&S has which we do not think it can solve under being on the vote in its current structure.

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 12 January 2010 Mr Bernard Gray and Mr Iain Evans
 

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**Q666 Mr Hancock:** But you do not explain, do you, in your report how that would operate, how that would deliver what you want it to? It says the things, but it does not actually explain how the benefits could materialise from that, does it?

**Mr Gray:** Well, I am conscious of time. What we are trying to do with it is to create an entity which was capable of taking management decisions, probably to employ fewer people at higher skill to manage that project and with the people able to take the management decisions required to put the skilled people on projects and to import the management information systems and so on that we have talked about, and we were sceptical that that could be done in the current on-the-vote structure, so what we have said is that, looking across the range of models to DE&S that we can imagine, our central assumption is that the Go-Co would be the best operating model for this, but that we should all do more work over 12 months in order to understand the implications of that.

**Chairman:** We will come on in just a moment to the alternatives.

**Q667 Mr Hancock:** I asked just previously about why SMART Procurement did not work. You, in your review, looked at previous attempts at reform. What did you learn about why they did not succeed in particular and, despite all of the promises, you never hear it now in the MoD, nobody ever mentions SMART Procurement now. Drayson will not mention it, but he mentioned it enough in previous evidence sessions, but why did it not get implemented?

**Mr Gray:** One of the reasons why we proposed the answer that we did was that we think the vested interests against change in the Ministry of Defence and in probably most other departments are very strong, so, to a certain extent, putting things outside the control of the status quo vested interests is one way of attempting to achieve the necessary change, so, unless you have a strong body which is motivated and incentivised to give rise to that change over time, the danger is that initiatives fritter away. I was not there for the intervening period, but over the implementation period I think Peter Spencer, for example, made a good effort to try to implement SMART Procurement, but that initiative was then lost in the merger of DE&S.

**Q668 Mr Hancock:** He was pushed away, was he not? He was surplus to requirements.

**Mr Evans:** I think there are several problems that come before SMART Procurement and, unless they are solved, SMART Procurement itself will not solve the problem.

**Q669 Mr Hancock:** But you have got to have SMART people, have you not, and does the Ministry of Defence—

**Mr Gray:** Iain is right that, to a certain extent, one of the things that we do here which was not done previously is identify that DE&S is being asked to answer an impossible question.

**Mr Hancock:** My last point to you then is that you must be very pessimistic then about the chances of your report doing the breakthrough that is necessary. They have already rejected the one thing that you say is critical, so what chance have these proposals got of success, honestly?

**Q670 Chairman:** I do not think you do say that it is critical.

**Mr Evans:** We do not say it is critical. In fact, we do not actually recommend it, but we recommend that it is looked at. The sequence of recommendations that are the most important ones to follow are the ones relating to the planning and control of the programme at the centre, so the DE&S is asked a sensible question. Unless that is a necessary condition that the system will operate properly that that is brought under control, I think probably one of the insights from this project has been that that is laid out in a way which I do not think has been done before and that is, in my personal view, the single, most important thing to do. There is a set of lead recommendations associated with that and that includes the Strategic Defence Review, the new executive committee for decision-making about what stage is the programme, the control of the IAB and a budget framework with the Treasury which allows this programme to be managed over an appropriate time-frame.

**Mr Gray:** Necessity is the mother of invention. They are in a very tight corner and, therefore, one is more optimistic that they will take some difficult decisions when they are under that much pressure, particularly as I think Paul Drayson and the Secretary of State are keen for them to do something but, I agree, it is a hard challenge.

**Q671 Mr Jenkin:** Should the Treasury allow more flexibility for money to be switched between programmes in the context of that 10-year budget horizon?

**Mr Gray:** I think the focus of effort should be on balancing the programme properly and making sure that those systems work well. I think that is a second-order issue probably and they are going to die of something else before they die of that.

**Q672 Mr Jenkin:** But it is about giving responsibility to the people who have actually got responsibility.

**Mr Gray:** I just think there are only so many things you can focus on and I would focus on those other issues first.

**Q673 Mr Jenkin:** Can you just explain what alternative model you might be considering and what are the benefits and drawbacks of changing the status of DE&S to a trading fund?

**Mr Gray:** Well, obviously there are next-steps agency, trading fund, outright privatisation, leaving it on the vote and Go-Co which are, I think, the five principal types of business model that we have considered for it. A trading fund would have the advantage of ensuring that there was clarity between the requirements community and the head office on the one hand and DE&S, as the deliverer of the

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12 January 2010 Mr Bernard Gray and Mr Iain Evans

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programme, on the other. I think over recent years the Ministry have accepted that that clarity which was supposed to be delivered out of SMART Procurement has been blurred significantly, but the trading fund would give some management freedom of action to the trading fund chief executive, but not as much as a Go-Co would, so it would be a step in the right direction, in my view, but maybe not far enough.

**Q674 Mr Jenkin:** Thank you for rescuing my incoherent question with such a coherent answer. Can I also ask about PFIs. Some of these PFIs are extremely large and complex. The Future Strategic Tanker Aircraft, where the Australians got the same model airborne and operational before we had got our project approved, should we be revisiting this whole idea of very complex, large PFIs? Are they really risk transfer or is it just a way of off-balance sheet financing?

**Mr Gray:** Well, you mentioned earlier that the Treasury are not terribly helpful in this. It must be economically rational for us to be flying modern aircraft in the tanker transport role, and why do I say that? Because there are not any airlines that I know around the world that are still flying Tristars and VC10s on a regular basis and, presumably, they are making economically rational decisions about flying more recent aircraft. The difficulty that the Ministry of Defence has is that, unlike the airlines of the world, there is some significant retrofitting of these, but, by and large, they are built by Airbus, and the Treasury do not like them to borrow money, whereas British Airways or anybody else will ease these aircraft and spread the cost of ownership over the lifetime. The problem for the Ministry of Defence, with the Gladstonian cash accounting that we do, they have to expend the acquisition of the aircraft upfront, so the full cost of an A330 arrives in the Ministry of Defence's bill in the year of acquisition and that is a problem for the Ministry of Defence affording to make an economically rational decision because it spends more money maintaining VC10s and Tristars than it would do, by a large margin, maintaining A330s, but it cannot get access to the capital that allows it to replace the airplanes, so PFI is an inelegant solution in some ways. We did not look in detail at PFIs in this, but my question back to you would be: it may be overly complex, and I might agree with you, but how do we allow the Ministry of Defence to get into a position where it can make a rational choice?

**Q675 Chairman:** So it is the Treasury that is economically irrational?

**Mr Gray:** The Treasury believes that it has the lowest cost of capital—if you look at the gilt yield versus what would be required to lease from a bank, that is true—but the problem is those three or four percentage points of interest are more than offset by the additional cost of the Ministry of Defence flying old aircraft rather than new.

**Q676 Mrs Moon:** Mr Evans, I would like to ask you about where we stand in comparison to other countries. We have heard that there are vested interests opposed to change and that they are very strong but, equally, looking at your sector on international comparators, it seems to be an international problem. Actually nobody seems to be getting this right, so what can we learn from the changes that other countries are trying to introduce? Everyone seems to be trying to push this forward and make these changes. Are there lessons that we can take that will show us how to deal with those vested interests opposed to change and bring the changes into place?

**Mr Evans:** I think you are perfectly correct, as we state, that forms of these problems, and of course fairly similar forms of these problems, appear to occur in many different countries systematically over time and, I think, in talking to them, one of the things that helped us realise was that we had to look beyond any particular short-term period, or whatever, to look at more systematic behaviours and incentives as part of that. I do not think we have uncovered anyone who has got a magic solution to this. There is not a set of things, I think, you can look at internationally and bring here. Having observed all that, we then tried to think through carefully the individual recommendations, particularly in relation to planning and changing the essential incentives, to try and overcome problems that others have grappled with but not solved, and our recommendations are our best attempt to do that.

**Q677 Linda Gilroy:** Mr Evans, just now you mentioned that two of the four linked recommendations to achieve the sort of sensible questions from central planning were the Strategic Defence Review, the requirement for that, and also the 10-year budget; so my questions are on that. First of all, on the Strategic Defence Review, possibly to Bernard Gray, how far are the recommendations you have made in your work being co-ordinated with the work of the Green Paper and the Strategic Defence Review, as far as you are aware?

**Mr Gray:** I think that for a variety of independent reasons people have ended up in a similar place about that. As far as I am aware, they are taking it forward as part of that process.

**Q678 Linda Gilroy:** But you are not involved in any shape, way or form yourself?

**Mr Gray:** I have not been involved in the Green Paper process.

**Q679 Linda Gilroy:** On the 10-year budget your recommendation was quite clear, but the Secretary of State talked in terms of a 10-year indicative planning horizon for equipment spending agreed with the Treasury. Is that going to be sufficient to improve defence capability planning?

**Mr Gray:** I would go further. One of my concerns here is that, if one chips away at parts of all this all the way round, you end up in the situation that Mr Hancock described where we will be sitting here in

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 12 January 2010 Mr Bernard Gray and Mr Iain Evans
 

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10 years' time saying, "Why has this not happened?", and the answer is because we only did all of the individual components in a half-blooded way.

**Q680 Chairman:** What is the difference then between a 10-year rolling budget and a 10-year indicative planning horizon?

**Mr Gray:** If I told you that you had a 10-year budget, Chairman, and I told you I will agree an indicative planning horizon for you about the money you can spend over the next 10 years, we would probably recognise the difference, would we not? I would not necessarily myself go out and commit myself on the basis of an indicative plan. It is a sort of promise with one's fingers crossed.

**Q681 Linda Gilroy:** To go back to where we began, does how we do the politics get in the way of that? Are there any international examples that you came across in your studies that would show us any way forward on that, because 10 years is a long time?

**Mr Gray:** I think politics does get in the way. In my view, this is not largely a party-political issue, it is a managerial issue which has spanned governments of all stripes over a long period of time and applies in all countries. The bureaucratic policies, in a sense, the power structures within the Ministry of Defence between the Civil Service and the individual Services, between the Services themselves, between

those politicians, between political parties, are all unhelpful. I think in an unlikely world where we were able to achieve a more bi-partisan approach to these things we would be more likely to tackle the problem, but that is not the nature of our system unfortunately.

**Mr Evans:** The recommendation that we should have a Strategic Defence Review in the first year of each parliament is an attempt to take the politics out of that. The Americans do this every four years, and it is invariably very controversial. We would like to make that process less controversial because it is an important reset mechanism. If then, on top of that, we layered over proper multi-year planning on the budgets that came out of that, that would be a substantial improvement. The stronger that is, the more we welcome it. The weaker it is, the less likely it is to succeed.

**Mr Gray:** There is an example from the Americans.

**Q682 Chairman:** I am afraid we have to move on.

**Mr Gray:** Bi-partisan base closures would be an example.

**Q683 Chairman:** We have to move on because Lord Drayson is coming in front of us now. Thank you both very much indeed for coming in front of us and for giving us helpful evidence and for writing a fascinating and very useful report.

**Mr Gray:** Thank you.

**Mr Evans:** Thank you very much indeed.

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*Witnesses:* **Rt Hon Lord Drayson**, a Member of the House of Lords, Minister of State for Strategic Defence Acquisition Reform and **Sir Bill Jeffrey KCB**, Permanent Under Secretary, Ministry of Defence, gave evidence,

**Q684 Chairman:** Good morning. I am sorry to keep you waiting. To both of you, in your different ways, I say welcome back. It is good to see you back, Lord Drayson, Minister. Sadly, you did not win the race but, nevertheless, it is good to see you back. Would you mind beginning by setting out what your responsibilities are in relation to procurement reform and how you integrate those responsibilities with the Minister for Defence Equipment and Support, please?

**Lord Drayson:** Yes. Thank you, Chairman. I am delighted to be back in front of this Committee. My responsibilities relate to the reform of the acquisition process, specifically within that, the implementation of the recommendations which came out of the Bernard Gray review and, in addition to those responsibilities around acquisition reform, I am responsible for science and technology within the Ministry of Defence. In terms of the dovetailing of that with the responsibilities of the Minister for Defence Equipment and Support, he is responsible for the procurement processes that are taking place today. I am responsible for implementation of the reform processes to improve the way acquisition is done in the future.

**Q685 Chairman:** How much time do you spend in the Ministry of Defence and how much time in your other department, would you say?

**Lord Drayson:** It has obviously waxed and waned since my appointment back in June in terms of the intensity of focus. For example, a real peak around the time that we were working with Bernard and the LEK team in terms of the recommendations of the report, but I would say, approximately, 25%—around that figure.

**Q686 Chairman:** 25% in the Ministry of Defence. Will the Chief of Defence Materiel and the Minister for Defence Equipment and Support also be involved in the Acquisition Reform Strategy, and how?

**Lord Drayson:** Yes, Chairman, they have been involved, in the sense that they have been, in particular, in the case of Sir Kevin O'Donoghue, CDM, in terms of the process by which the Bernard Gray review took place and then the discussions that took place relating to the recommendations which came out, the first instance coming out in July with the draft report, and then, through the process, as we have responded to the review and have committed to the implementation of an eight-point plan which the Secretary of State announced in October, clearly they share, as does the whole ministerial team, the recognition of the central importance of making sure that these improvements are implemented with full vigour. We are, I think, fortunate in that we have

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12 January 2010 Rt Hon Lord Drayson and Sir Bill Jeffrey KCB

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clear ministerial focus around the reform process. This is my job to make sure it has happened and I am very, very clear, in part because of my previous experience of having done the Min DES ministerial role. I know that for this to be successful it has to have the buy-in of Min DES and CDM.

**Q687 Chairman:** Can you really achieve that in the run-up to an election with only 25% of your time, given how much vested interest there is in maintaining the status quo?

**Lord Drayson:** I am optimistic, I would say realistically positive, that the acquisition reform process which the Department is on now will be effective. I am sure we will discuss why I believe that, but I think that, actually, being in the run-up to a general election and given the level of pressure which is on the Ministry of Defence because of the intensity of operations, for one thing, provides an opportunity to get clarity around the importance of these issues and to get a focus on tackling some of the problems, which are very longstanding problems and not unique to the United Kingdom; a recognition that they have to be addressed and they have to be solved if we are to make a significant further improvement in defence acquisition. I believe actually the pressure helps people take tough decisions, make the changes that need to be made, and I can point to evidence, I think, where I can say the progress that we have made to date on the implementation of this eight-point plan, which I am happy to give an update to the Committee on, provides evidence that that optimism is justified.

**Q688 Mr Crausby:** In what way was the Gray review an independent review? Who paid for the work that was done and who set the terms of reference?

**Lord Drayson:** It was independent in the sense that the terms of reference were set, the Review was asked for and kicked off, by the previous Secretary of State, and he asked for a very thorough review by Bernard Gray. It was paid for by the Ministry of Defence, but it was described to me when I was appointed as a full pulling up the carpet and having a good look. Therefore, I think the stark conclusions and clarity which come out of the review show that that is exactly what was done. When the present Secretary of State was appointed in the summer and when I was appointed, it was clearly about maintaining that policy and making sure that Bernard Gray and the team had every opportunity to gather the data that they needed to look in the nooks and crannies that they wanted to, to be able to come up with a full and frank analysis of what they saw the problems were.

**Q689 Mr Crausby:** The Chief of Defence Materiel, when he gave evidence to us, did not seem that impressed with some aspects of the review; in fact he said that he did not react to every review that was done. Industry representatives expressed a fear that the Gray review would live as a document but not as a reform programme. Do you see it this way and, if that is the case, how will the main reform work this time?

**Lord Drayson:** I am committed, as the Minister for Acquisition Reform, with that clear point of responsibility, to making sure that the reforms do take place in my time as a minister. I think some of the comments which have been made by CDM and others reflect the fact that this was a very tough review, and we can all take comfort in the fact that there is the evidence that it was a tough review in that some of the reactions to the conclusions have been—how can I put it—reflected in the scrutiny which took place. You would expect, if a proper review were done, not everyone to like it. I think that is a good sign. The way in which the Ministry of Defence asked for this thorough review to be done and then, when receiving the report (which was a pretty stark report), accepted the report and accepted all but one of the recommendations of the report, I think, shows that, as a whole, the Ministry of Defence has fully embraced this, and I believe that from the Secretary of State and from the Permanent Secretary down the Department is determined to make this happen.

**Sir Bill Jeffrey:** Could I add to that, Chairman. I do not know who the vested interests determined to resist change in this area are, but they certainly do not include the Permanent Secretary. I saw this review as an opportunity. I thought that it would give us a chance to look carefully at the work we have been doing over the last three years to improve the capability end of this, the professionalism of the project teams and all the work that CDM is responsible for in particular. In fact, I think Bernard Gray and his team came up with a very insightful report that touches on something that had been concerning me for some years, which was the manageability of the equipment programme and how we could improve that. Whatever the result of the General Election, I think it will be the responsibility of, if you like, the permanent team in the Department to carry the spirit of these changes through in exactly the way that the Minister has described.

**Q690 Chairman:** The pair of you seem a lot more enthusiastic about it than the Minister for Defence Equipment and Support. Do you wish to comment on that?

**Sir Bill Jeffrey:** A lot of weight has been put, I think, on the fact that the CDM talked about not recognising some of the figures. I think by that he had in mind in particular the assessment that the view made of the potential cost, so-called frictional cost, of delaying—

**Q691 Chairman:** No, what he was referring to at that stage was the change in the integrated project teams and the change of personnel within those teams. I think he would also like to have extended that to all the other figures which were inconvenient, but that was what he was actually referring to at the time.

**Sir Bill Jeffrey:** He can speak for himself, but I think in the area for which he is principally responsible, which is the upskilling element of this within DE&S, and the approach that Ministers have taken since Bernard Gray reported, which is to encourage us to look hard at some kind of partnership with private

sector experts, to accelerate the process of building skills in DE&S, is one that very much has the CDM's support.

**Chairman:** It is unfair of me to tease you about a minister's views.

**Q692 Mr Crausby:** Could I turn to the question of openness. Lord Drayson, you have spoken of the need for greater openness regarding MoD spending. How do you intend to deliver that, and do you see that as crucial?

**Lord Drayson:** Yes, I do see it as crucial. Clearly, it has to be done within the constraints of national security and, in some cases, relating to commercial confidentiality, but the more that we can have transparency about the acquisition process, the more effective I believe it will be. I think it will also help in terms of developing a better understanding of the complexity of the acquisition process. This is not easy, and it is fair for us to be subject to absolute scrutiny from the press, and so forth, but when one looks at the benchmarking of the United Kingdom against other countries, we are no worse. We are not materially better, but we are no worse than others. We need to look to improve our performance, but that transparency, I believe, is a critical component of a reform package. It is about us recognising the importance of the framework, within which acquisition decisions, specific project decisions, have to be taken, and having a commitment to a regular strategic defence review once every parliament to make sure that we are keeping alignment between the defence needs in equipment with the strategic priorities and foreign policy of the nation, and then having the transparency of an annual audited assessment of the affordability of the equipment programme carried out by the Permanent Secretary which is then made public, available for scrutiny, to ensure that, as we go through the years between the SDRs, we have fixed a fundamental problem which, I believe, does dog all defence procurement internationally, and certainly has dogged it here in the United Kingdom. That is that, as it stands at the present, our system does not make a clear linkage between the long-term cost and time of a project and the short-term decisions which are made to balance the near-term budget. This is what we have to achieve. I believe that the reform project, the recommendations which the Gray review has led to, will fix that central problem, and that is why I am optimistic about the reform process.<sup>1</sup>

**Q693 Mr Crausby:** Do you accept that the lack of transparency has exacerbated the size of the financial hole in the equipment programme?

**Lord Drayson:** I think, as Bernard Gray has said in his report, good people have made good decisions driven by the system as it stands today. Therefore, that has led to the inter-Service rivalry; it leads to more equipment going into the equipment programme at an early stage and the over-specification of projects as they go forward: it is too easy to get projects into the programme, very few

projects are cancelled. What that means is that over time you get to an over-heated defence programme overall. The only way that the Ministry of Defence can manage to be within its near-term budgets, therefore, is to delay projects. If we look at the latest MPR when the National Audit Office recognised the improvement in project management which had been achieved by the Department, more than 80% of projects delivered on time and to budget, and it recognised the implementation of SMART Acquisition has had an effect, is improving projects, but over £737 million of the overspend net cost change was down to decisions that the Ministry of Defence had taken to delay projects. I believe these reforms go to the heart of that problem. It is a combination of the transparency with the regular strategic defence reviews, with the other initiatives relating to improvement of skills and project management information databases, the sort of nitty-gritty of good management, but really the thing that is at the heart of this, which we must ensure gets fixed as we go through this General Election, is this package of the transparency with the regular reviews.

**Sir Bill Jeffrey:** Also, to reinforce what Lord Drayson has said about the linkage with defence reviews, arguably one of the reasons why we are better at getting projects into the programme than ever cancelling them, particularly when you get further through the cycle, both politically and in the space between defence reviews, is that it is hard to make cancellations whose impact on ultimate defence capability is of a character that one might expect to be preceded by the kind of analysis that takes place in the defence review. Personally I warmly welcome the prospects that we now have of regular defence reviews of the kind that Mr Gray recommended.

**Q694 Mrs Moon:** We have talked about being in a tight corner, and in this tight corner there seems to be the MoD's acceptance of the report. At the same time, we are told there is also a vested interest against change. When you are faced with change and there is resistance and tension to change, what you often get is displacement activity where people try and shift the focus and move the attention away from the change that is required. Is that happening in the Ministry of Defence and are you able to still drive the change, despite attempts to shift the focus into a displacement activity about personalities, programmes, etc., within the Ministry of Defence?

**Lord Drayson:** If I could answer that first and then hand over to the PUS. I do not see a huge amount of displacement activity going on. I do think it is normal to see in a large complex organisation significant resistance to change. It is the nature of human beings within an organisation. It is something I have seen in my business life; it is something I have seen in political life. We should regard this as normal. We should be rigorous in focusing on the implementation of this change in the most practical way that we can, and that means, in part, bringing people with us, persuading them that these changes are in the long-term interest of

<sup>1</sup> Ev 122

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12 January 2010 Rt Hon Lord Drayson and Sir Bill Jeffrey KCB

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defence, which is what motivates people, in my experience, within the Ministry of Defence over everything else, about delivering a better outcome in terms of our military capability for our Armed Forces and explaining why. I think there are some very powerful intellectual arguments which resonate, and have resonated, with people in the Ministry of Defence which have come out of here, but then to balance that also with a pretty clear focus that we are going to get this done, it will be done on time and we are committed to it.

**Q695 Mr Hancock:** Could I go back to where you started, Lord Drayson, when you said that Bernard Gray was given an opportunity of lifting the carpet and going right under it. I thought from your previous existence in the MoD you had been under the carpet and that was your role there. I also found that when the Permanent Secretary said that he welcomed this as being an opportunity to put right things he had seen coming for a long period of time. Why has it taken so long then?

**Lord Drayson:** I accept that for me, as a former minister for defence procurement and then Min DES after the merger, this report made uncomfortable reading. There is some pretty stark data in this report, but I welcome it because I think that what it does is it goes to a level of analysis which, first, does build on all the efforts that my predecessors and I have made to improve defence procurement, it recognises in the report the good job that it has done, particularly the good job that was done in achieving the merger of the DPA and the DLO during a time of very high operational activity; the way in which the great majority of projects are delivered on time and to budget; the huge complexity, and so on and so forth, but it also says that reforms like SMART Acquisition, Through-Life Capability Management, the merger of the DPA and the DLO have all been steps. Reform is a continuous process of improvement, but the thing that struck me when I first read the recommendations from the review was that, because Bernard went into this from a certain perspective, he put his finger on the central issue relating to the decision framework which had not been addressed previously. I do believe that if that is addressed—if we can get a clear 10-year budget, if we do have in every parliament an SDR, if we do have an annual audited review of affordability—it will make a step-change improvement, because it will make a linkage between the short-term decision making and budgeting and the longer-term. I think it will be uncomfortable for future defence leadership, whoever is running the MoD in the future.

**Q696 Mr Hancock:** Before Bill comes in, could I pull you up on that one point. You said “if we get a 10-year rolling budget”, but you have indicated that you prefer a 10-year indicative planning horizon. Are you now changing your view on that and saying it is better to have a 10-year rolling budget and that is what you will be hoping to get from the Treasury?

**Lord Drayson:** I think that in his review Bernard’s recommendation was a legally binding budget, as the French have. The French have a six-year budget

and, although the French do not do procurement better than we do in the United Kingdom, his analysis showed that there is a huge advantage in being able to have the certainty of knowing over a longer period of time such that you are able to plan your overall defence portfolio more effectively. We have got agreement with the Treasury for a 10-year rolling indicative planning framework.

**Q697 Mr Hancock:** That is not the same, though, is it?

**Lord Drayson:** I accept it is not the same. Certainly it is not the same as a legally binding commitment, but I think it is important progress. Would it be better if it went further? Yes, it would, but within the political system that we have, the way we operate within the United Kingdom, is it possible for us to go further? I do not know. These changes that we are talking about here really go to the heart of the machinery of government. They are not peculiar either, I do not believe, to the Ministry of Defence. If you look at transport, investment in nuclear power stations and so forth, I think a number of similarities also apply but, clearly, having a 10-year planning framework from the Treasury is going to make a significant difference, and I think that is to be welcomed.

**Q698 Chairman:** You are a very refreshing man to have in front of the Committee, I must say.

**Sir Bill Jeffrey:** Just to enlarge on that a little bit, on the last point the important word was “planning”, because (and it is almost a constitutional point) in our system I do not think it would be realistic to expect the Treasury to commit successors over a long period absolutely. What we will have for the first time is the confidence of a set of numbers off into the future within which we can plan. The absence of such a clear planning horizon is one of the reasons why it is often internally hard to back up arguments for restraint because beyond a certain point, as things have stood hitherto, we simply do not know what the defence budget will be; so I think this is a real step forward. On your earlier question, Mr Hancock, like the Minister, I see this as a continuum. I recall, within weeks of taking on this post, coming to this Committee and saying that I thought this was one of the most important areas that I was becoming responsible for. I think, in the continuum (and I somewhat disagree with Bernard Gray over whether we are implementing SMART Acquisition or not) what we have been doing is following through the SMART Acquisition principles, working hard on skills and the merger of the DPA and the DLO, as the Minister said. It is reassuring somewhat, although I would like to have made faster progress, to see that in the last NAO *MPR Report* the analysis is broadly favourable to the trends in project management as such. What I meant by my earlier comment was that the overheatedness of the defence equipment programme has become a concern to me over the last few years, as it has been to Ministers in fairness, and the way in which the Gray report illuminates that and the institutional factors that are connected to it, I think, we should find useful.

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12 January 2010 Rt Hon Lord Drayson and Sir Bill Jeffrey KCB

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**Q699 Chairman:** You said the *Major Projects Report* of the NAO was broadly favourable to the trends. It said that the Defence Equipment Programme was completely unaffordable.

**Sir Bill Jeffrey:** It did, but my point was about project management and programme management capability. Maybe I am clutching at straws, Chairman.

**Q700 Chairman:** I think you may be. Shall we move on?

**Sir Bill Jeffrey:** The report does say that on the performance of specific projects the NAO's analysis suggests signs of improvement in project cost control with innovative decisions being taken to ensure progress.

**Chairman:** Green shoots.

**Q701 Mr Havard:** Could I ask you about this planning horizon as opposed to a budget for a second. Just before you came in, Bernard Gray told us that the question about PFI as opposed to how you spend money in other ways. For example, a large project like the tankers, you might want to buy the aircraft upfront with the money, that is the way the Treasury would force you to go at the moment, to buy the assets all in year one, and you might resist doing that, but it might be the best thing to do because over time you might spend more money by doing it the way they say. Where within this 10-year planning horizon process is this debate about how you could spend the money within that 10-year period, or would they say, "Well, you have spent it all in year one. That is your problem. You are getting nothing for the next nine"? What is the balance between how you could spend the money? Is there something you could say to us about this agreement with the Treasury that might allow us to understand how it would work as opposed to a budget in the old sense?

**Lord Drayson:** I think the central point here is the two dimensions of the planning horizon in terms of the portfolio versus projects and the projects in which one can have confidence are going to undergo relatively little technological or environmental change during that period of PFI, let us say it is 25 years. The fundamental principle of difference is that, where you have a defence capability where you can be reasonably certain that the operational environment or the technology is not going to dramatically change, then you can commit in that project envelope to a PFI programme. Therefore, air tankering is an example where you could have a reasonable degree of confidence that would be right; armoured fighting vehicles, no chance. The 10-year framework is about the whole equipment plan and, therefore, it is about giving the Ministry of Defence the ability to take decisions in terms of the flexibility of spending between projects such that they can cope with the reality of the nature of defence—the enemy changes its tactics, technology changes, inflation may change—but at the same time having the confidence that it can do that within an overall planning envelope for the equipment plan as a whole, which is acceptable. That is not the way it is

done at the moment, it is done by Treasury approval on specific projects, but we have seen the advantages with certain PFIs. The track record of PFIs shows that they come in more often on time and to budget because, on the one hand, of the discipline that has to go in up-front around the planning, but the other very important advantage is this long-term planning process and the confidence that you have up-front.

**Q702 Mr Havard:** Can you say this is a question about, on an individual project, capital spend versus Through-Life Capability, as it were—that sort of issue?

**Lord Drayson:** Yes.

**Q703 Mr Havard:** The protocols that you have got with the Treasury about how this process is going to work: can you reveal some of that to us in the longer-term so that we can understand how these processes will be changed, will be different?

**Lord Drayson:** Yes. We have an agreement in principle with the Treasury. That was announced back in October. We will be presenting, with the publication of our strategy for acquisition reform, more detail on all of these aspects.

**Q704 Mr Havard:** When?

**Lord Drayson:** Shortly.

**Q705 Mr Havard:** Shortly?

**Lord Drayson:** Yes.

**Q706 Mr Havard:** This year?

**Lord Drayson:** In alignment with the publication. It will be done on the same day as the Green Paper.

**Chairman:** On the same day as the Green Paper?

**Q707 Mr Jenkin:** Shortly.

**Lord Drayson:** Shortly.

**Chairman:** Shortly.

**Q708 Mr Borrow:** In the earlier session we discussed for a bit this conspiracy of optimism whereby the industry, Service Chiefs and everybody has an incentive in underestimating the cost of projects, being optimistic about them and getting them into programme and, assuming that eventually they will come out at the other end, even though they may take a lot longer, but at least if they are in programme, you would want a political battle to actually get them underway. There is a reluctance then to recommend to Ministers that this should be cancelled because it does not fit within the budget we have got in a particular year or for a group of years. In what way do you think the changes will stop that happening? I see that as being the core issue that we have got to rein in to a realistic level.

**Lord Drayson:** Yes. A number of the elements in the package, this eight-point plan, all have to be implemented for this to be resolved, I believe. I do



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12 January 2010 Rt Hon Lord Drayson and Sir Bill Jeffrey KCB

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not believe that we can pick and choose. For example, it is important that there is this sub-committee of the Defence Board, chaired by the Permanent Secretary which does not have the Chiefs on it, which is charged with ensuring the affordability of the equipment programme on an annual basis linked to the SDR. That is one element of it. The other element is that up until now projects could come into the Defence Equipment Plan without going through any ministerial scrutiny. At the point that the Minister becomes aware that a project is in the plan, it has already been pregnant for quite some time; therefore, there is a cost of cancelling it. There are two examples. I think the phrase “conspiracy of optimism” is not fair to the individuals, because I do believe that individuals, whether they are Service people, civil servants within the Ministry of Defence or Ministers within the Ministry of Defence, sincerely do try to do what they believe is the right thing—I have seen that in my own experience—but within a framework which is flawed and, if we want them to be able to make better decisions, we need to change the framework. That is exactly what I believe this will deliver.

**Q709 Mr Hancock:** You claimed you changed it. You claimed, Lord Drayson, that that system had changed with SMART Procurement. I was surprised you have actually mentioned it twice already, because most Ministers have avoided mentioning SMART Procurement as if it had failed. Bernard believes that it was not implemented, and I am interested to know how you feel it has been, because if SMART Procurement had been introduced, as it was supposed to have been some eight years ago now, we would not have been experiencing some of the problems we have had that have come out in the last 18 months, for example, on various projects.

**Lord Drayson:** First, I would point to the data. If one looks at the data that was achieved by the DPA under Sir Peter Spencer—

**Chairman:** He told us that SMART Procurement had not been properly implemented.

**Q710 Mr Hancock:** And he went.

**Lord Drayson:** But if you look at the improvement in performance that was achieved under that reform programme, I think you can fairly conclude from that data that it did have a positive effect. I can accept certainly Sir Peter’s view that it could have been implemented more vigorously, but I believe that the challenge of defence procurement, the job that has to be done to do it well, has changed over the last 10 years as the nature of the environment has changed. I believe, therefore, what has happened is that there was a focus around the problems which are identified and solutions found in SMART Procurement. There were then the problems which are identified through the separation between decisions about buying equipment and decisions about maintenance and development, Spiral

Development, which came up with the solution of Through-Life Capability Management and the idea of creating an organisation which was responsible for equipment through-life, from acquisition through to disposal. That is an evolution of the improvement in defence procurement. It is not that the first reform did not work, it is that the first reform took us so far, we recognised that there were further problems, further issues, which had to be addressed and I believe that the Gray review has built on that. Gray review itself says that the merger of the DPA and the DLO was a success and recognises the success of other things, such as the Defence Procurement Strategy.

**Q711 Mr Hancock:** To be fair to the Gray report, he looked historically at the other things that had been introduced from time to time. Nothing could have been more enthusiastically introduced by politicians, George Robertson, John Reid, John Spellar, all of the Ministers, all of whom came here enthusiastically exposing SMART Procurement, and yet there was a resistance within the Ministry of Defence, as Bernard had found in his report, to other methods of change that had been introduced. Sir Bill, why is there this inbuilt reluctance of the Ministry of Defence to both welcome the change rather than actually implement the change?

**Sir Bill Jeffrey:** I do not believe there is, Mr Hancock. The point I would make is the one the Minister made, which is that this is a continuum. This is not an area, nor do any other countries find it to be an area, in which there is a single silver bullet solution. We have been implementing SMART Procurement and the principles that were set out 10 years ago. Indeed, if you look at the Gray report, he finds in the deep analysis that post-SMART Procurement projects are actually performing better in terms of time and cost than those that predate it. We have moved on from there, as the Minister said, and in the last few years have been focusing, in particular, on the fact that we will not manage this business as well as we could if we separate initial acquisition from through-life support; so we have brought the two together. The next issue (and it is the one that the Gray report focuses on) is the fact that if we do not have a well balanced, well managed overall equipment programme, then the endemic tendency to overestimate cost and, therefore, to add to it when projects have to be slipped will get us as well. We have got to address that. I conclude that this is, in a sense, a never-ending task. We just need to keep approaching it from all angles.

**Q712 Chairman:** Can we come on to the cost of slipping, because in the Bernard Gray review—it is paragraph 7.7.1 on page 135—he goes into the calculations that he makes for capturing the full cost of delay to delivery of new equipment, and he comes out with the estimated annual cost of delay of a low estimate of £920 million and a high estimate of £2.15 billion. That is not evidence as such; it is more of a

calculation. Is it a calculation that you accept? If you do, what are you going to do about it and, if you do not, have you got a better one?

**Lord Drayson:** Yes, I do.

**Q713 Chairman:** You do accept it?

**Lord Drayson:** I do accept it. The Gray report does say that this is not an exact science, as you accept, but the point that it makes is a very fair point and I do recognise it and I do accept it. I think, to relate this to the point which we were just discussing related to SMART Procurement, if you have a project and you apply SMART Procurement principles to it and you have a project which is absolutely on time and to budget and then you cannot afford it and you have to delay that project for two years because you have not got the money for the next two years' spend, the suppliers that you are negotiating with throw up their hands and say, "What do you expect us to do with this standing army of people that we have in the ship yards"—if it is a ship—"ready to take the project to the next stage?"

**Q714 Chairman:** I agree.

**Lord Drayson:** And so we have to stop doing this.

**Q715 Chairman:** Yes, indeed, but now we have a problem, because you accept this calculation. Unfortunately, the Minister for Defence Equipment and Support does not. He says there is absolutely no evidence for it. What do we do about that? He said that on the floor of the House.

**Lord Drayson:** I think, in front of your Committee, Chairman, you asked him about the A400M and he said in his answer to the A400M, "Yes, if that project is delayed, because of the fixed costs relating to the programme, the costs will go up", and so I do believe that he has accepted it.

**Q716 Chairman:** Yes, all of that. What we are trying to do here is get into the general cost of delay to the delivery of new equipment, and if you and the Minister for Defence Equipment and Support are saying diametrically opposed things about this paragraph of the Bernard Gray report, I think you recognise it puts us in a bit of difficulty.

**Lord Drayson:** I understand the point you are making, Chairman. I believe that I am expressing in a different way what my ministerial colleague expressed, I think, when he was interviewed, where he expressed the nature of having to make decisions. I think he used the example of buying a family car in terms of having to put off in the future because you do not have the budget today. This is the nature of things. The point is that this has a significant cost to defence. The MPR in the last report recognised that was £737 million of net additional costs. Our system, as it exists today, does not make a linkage between these in-year decisions and the long-term equipment programme plan. That is what has created the so-called bow wave that you and I have both tackled in our roles as procurement minister. This has got to be addressed.

**Q717 Chairman:** I am in full agreement with you. Could we move on to something different, please, the cost in terms of skill loss of staff rotation. The Bernard Gray report says that that is a genuine cost, a key factor affecting the performance of project teams. Do you think that it is a key factor?

**Lord Drayson:** I think that one looks at the data, and the data which I have seen says that the average tenure is something like 39 months. It has been 38, 39, 40 months over the last three years, so it has not been a material change, and so that data suggests that a three-year approximate tenure is not an issue. Anecdotally, in my own personal experience as a minister in the MoD, I did see on occasions, mostly because of the military career planning process, rather shorter tenure of project leaders than would have been ideal and that by the time a person has got up to speed you would see them in a relatively short tenure within a job. I would say that the data is suggesting not so, but I feel this is an issue which we need to look at very carefully indeed. I have asked the Chiefs of the Services to take very seriously the idea that they should be flexible in their career planning within the Services to ensure that those people posted into defence procurement, particularly into the major IPTs, are posted with sufficient flexibility that they can make sure that they are able to effectively carry out that role. That is not a very clear answer, but that is the sense.

**Sir Bill Jeffrey:** Might I add one point, Chairman. Following the exchanges which you heard earlier with the CDM in particular, there has been some further work done on tenure of IPT leaders in particular, and that is the work that the Minister has just alluded to. It does suggest that, when you look at the whole period of IPT leaders' tenure in their post, it has been pretty constant over the last few years at around 36, 38 months—that sort of period—and that material is among material which we will be getting to the Committee as quickly as we can.<sup>2</sup>

**Q718 Chairman:** That would be helpful because Bernard Gray himself says the rapid rotation of managers through jobs was a problem 10 years ago and remains one today, but he suggests elsewhere in the report that it is growing rather than reducing. If you are taking this as seriously as you both say you are, that would be a good thing.

**Sir Bill Jeffrey:** There is some analysis which suggests that it is a steadier picture than. My own view is that we probably need more continuity than we have even now, particularly on the military side, where we have been trying to move in recent years towards two different approaches: short secondments, where what is being provided is military advice based on current operational experience and longer term growing of people with acquisition as an anchor in their military career. In the latter case the sensible thing to do is to attach people to project teams for three, four, even five years, just as their Civil Service equivalents would be.

<sup>2</sup> Ev 122

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12 January 2010 Rt Hon Lord Drayson and Sir Bill Jeffrey KCB

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**Q719 Mr Hancock:** Were you aware of the shortage of skilled accountants within your organisation; that many of the people holding fairly difficult jobs in accounting for this did not have accounting qualifications?

**Sir Bill Jeffrey:** I do not have the figures at my fingertips, Mr Hancock, but certainly we have, within the finance community across the Ministry of Defence, a significant and rising number of people with accountancy qualifications. We still have some who do not.

**Q720 Mr Hancock:** That was not the question. The question was, were you surprised at the large number of people, who were doing fairly responsible jobs of keeping the accounts of the MoD on these projects up to speed and accurate, who did not have any relevant accounting qualifications? Were you aware of that? In fact, the evidence we were given just an hour ago suggested the reason was that you were not paying enough to get the people with the right skills to make sure that the accounting of many of these projects was done correctly.

**Sir Bill Jeffrey:** Perhaps I ought to offer the Committee a note on this, because I can certainly give more information about the extent to which we have accountancy skilled people in these posts and, indeed, whether there is any issue about pay. We are always going to find it quite hard to be completely competitive with the outside world, but the trend in recent years has certainly been towards the professionalisation of the finance function right across the MoD.<sup>3</sup>

**Chairman:** You cannot have been surprised by it, because until recently the Director of Finance did not have the accountancy qualifications that the current one has.

**Q721 Mr Hancock:** I want to ask Lord Drayson about transparency. I was interested in what you were saying earlier about transparency and the need to get more transparency. I was interested to know who your target audience was. It really takes into account the question that David Borrow asked about the issue of over optimism and, consequently, nobody ever getting the true figure out. If you have increased transparency, will that overcome the issue of you always opting for the super optimistic price rather than the realistic price? Does the transparency work you are wanting to do actually help Parliament and the public have a greater understanding of why things go wrong cost-wise?

**Lord Drayson:** I think that making decisions about defence equipment will always be high profile because they will have consequences which can affect people's lives either on the battlefield or in terms of their jobs and capabilities in manufacturing and so on and so forth in the United Kingdom. Therefore, the more that our system requires us to take the politics and other pressures of inter-Service rivalry and so forth out of that process to enable those very difficult decisions to be taken as effectively as possible, the better. I think the key to

that is—we have not had an SDR since 1998—having SDRs more frequently. The SDR process is going to be modelled on the American system, the quadrennial system in America. It is always very difficult and very high profile, but having it more frequently gives you the ability to frame the challenge and keep it in consort with the wider defence environment. Then having the transparency about an annual review of your equipment budget which is public, scrutinised by Parliament and audited, gives, I believe, an effective balance to the pressures which come from these very difficult decisions.

**Q722 Chairman:** Minister, when Guy Lester, the Director of Capability Resources and Scrutiny, came in front of us, he said that Defence Equipment and Support had estimated that there was a 10-year funding gap of £6 billion at the start of this planning round but it had been £21 billion at the start of the previous planning round. Do you agree with those estimates?

**Lord Drayson:** Yes.

**Q723 Chairman:** That is £15 billion savings that were achieved. Do you know how exactly?

**Lord Drayson:** A combination of making decisions to delay projects and to remove certain capabilities. I think a significant decision was the decision to delay the aircraft carriers, for example.

**Q724 Chairman:** As I think you would accept, that added £674 million to the cost of the aircraft carriers, and so that was not exactly a reduction of the funding gap.

**Lord Drayson:** Of course these are estimates because in the budget we do not have a 10-year planning framework at the moment, but I think that the decisions which have been taken to delay projects are at the heart of the increase in the over-budgeting within the Ministry of Defence equipment programme. Whether you call it the bow wave or the over-planning within that, I think the delaying of projects is the key driver of it, but I think that coming up with a 10-year programme which is then visible and committed will be the solution to it.

**Q725 Chairman:** But you have been saying that delaying projects adds to the cost of those projects. We are talking about a 10-year rolling indicative planning horizon now. You are suggesting that £15 billion of savings have been achieved by delaying projects, which adds money to the cost of those projects. I am feeling very simple here, because I do not understand quite how all of this adds up.

**Sir Bill Jeffrey:** The first point to make is that the figures that Mr Lester gave the Committee relate to the whole defence programme. The £21 billion excess of the projected defence budget over the Future Defence Programme was related to the whole programme and included elements like the costs of Armed Forces pay settlements—

<sup>3</sup> Ev 122, Ev 123

**Q726 Chairman:** They are going down, are they?

**Sir Bill Jeffrey:** —to the extent that they exceeded the inflationary assumption in the baseline.

**Q727 Chairman:** Are Armed Forces pay settlements going down?

**Sir Bill Jeffrey:** For each of the last three years they have exceeded the assumption about inflation in the underlying figures.

**Q728 Chairman:** But I am trying to identify here this £15 billion worth of savings.

**Sir Bill Jeffrey:** The majority of them were found through the equipment examination, and the main elements of that were announced by John Hutton on 11 December 2008. They included some restructuring of the FRES programme, of which the Committee is aware. They did include the delay to the aircraft carriers, although, as you say, longer-term that added to costs. They included the deferral of the fleet tanker element (MARS) and a reduction in the Lynx Wildcat contract from 70 to 62. As announced at the time, there were some quite significant decisions taken through the equipment examination which helped meet the challenge as identified at the beginning of the 2008–09 period.

**Q729 Chairman:** Could we have a list of them, please?

**Sir Bill Jeffrey:** We can certainly provide the Committee with a note on that.<sup>4</sup>

**Chairman:** That would be extremely helpful.

**Mr Hancock:** Sir Bill, when John Hutton announced in Parliament the delay on the carriers and then at a press conference later said there would be little or no extra cost because of the delay—

**Chairman:** I do not think he did say that.

**Mr Hancock:** Yes, he did.

**Chairman:** He said there would be no defence cost.

**Q730 Mr Hancock:** What does that mean? Who was going to pick up? Somebody must have briefed him. Surely there was some analysis before that decision was made by your officers, Sir Bill, and yourself? You must have been advising the Secretary of State, “Oh, by the way, this is going to cost close to £700 million more.” Yes or no?

**Sir Bill Jeffrey:** Not the precise figure, but the fact that deferral would increase costs.

**Q731 Mr Hancock:** Did you say it would run into hundreds of millions of pounds?

**Sir Bill Jeffrey:** I am sure that Ministers were aware of that. Like the Chairman, I do not recall Mr Hutton saying that the cost would not be affected. I think he meant that, particularly given the expected delivery dates of the Joint Strike Fighter, the impact, in defence terms, would not be as great as might be supposed.

**Mr Hancock:** But it was £600, nearly £700 million.

**Q732 Chairman:** In fact, I think on the same day I put to him on the floor of the House the question: is this going to cost, as I had heard, an extra £600 million—I was £74 million out—and the answer I got was, “We do not know how much extra financial cost it will be, but there will be no defence cost.”

**Sir Bill Jeffrey:** I think by that he must have meant defence capability cost.

**Chairman:** Defence capability. Thank you.

**Q733 Mr Hancock:** Can you write to us, Sir Bill, and tell us what you gave in the way of advice on that decision about the cost overrun by delaying it, because it is fundamental to all that you have been saying about trying to get it right?

**Sir Bill Jeffrey:** I need to be quite careful about protecting the confidentiality of the advice of officials to Ministers.

**Mr Hancock:** Have a go then, would you?

**Q734 Chairman:** I think you are right about protecting the confidentiality of advice by officials, but it would be helpful if you could tell us what Ministers said at the time about the cost of delaying the carriers and precisely what they said in public to ensure that we have that in front of us.

**Sir Bill Jeffrey:** We can certainly do that.<sup>5</sup>

**Q735 Mr Havard:** In this list that you are going to explain of what was deferred or otherwise in the particular accounting period, the accounting process that went on to achieve this notional figure of £15 billion or whatever, will you please explain whether one of the elements in those calculations was the business about the future of Trident? The concept phase for Trident, as I understood it, was due in September. I was then told it was going to be December, and I still see nothing about it. Is the cost associated with the next stage from that and the publication of what has come out of the concept phase part of that list?

**Sir Bill Jeffrey:** I am not sure which list you mean, Mr Havard.

**Q736 Mr Havard:** I thought you were going to try to explain to us what had made up this 21 billion in one area.

**Sir Bill Jeffrey:** Yes, we can certainly provide a fuller note.<sup>6</sup>

**Mr Havard:** If it is not just part of that, can you please explain it anyway?

**Q737 Chairman:** There is a different question. The Minister suggested in the House of Commons in Defence Questions yesterday that the Trident decision was being delayed for a few months. Can you give us any more information about that?

**Sir Bill Jeffrey:** That is certainly the case. The concept phase that we have been going through is really a judgment about when the key early decisions are best made, and the work is certainly not yet well enough advanced for some of the decisions on which more substantial amounts of money than have so far

<sup>4</sup> Ev 123

<sup>5</sup> Ev 123

<sup>6</sup> *Ibid.*

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12 January 2010 Rt Hon Lord Drayson and Sir Bill Jeffrey KCB

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been committed to the assessment phase could be made. As the Minister said in the exchanges yesterday, we are some months away certainly from what would be called in conventional programmes the Initial Gate decision.

**Q738 Chairman:** It sounds inevitable that that decision process will have to be taken after the General Election?

**Sir Bill Jeffrey:** It is more likely than not, yes.

**Q739 Chairman:** Will it not fall foul of “purdah” before the Election?

**Sir Bill Jeffrey:** Were it taken in the immediate weeks before the Election and were there to be a necessary public statement connected with it, it would be caught by “purdah” because, as you know very well, Chairman, the “purdah” conventions are to do with public statements during the immediate pre-election period.

**Q740 Chairman:** As a matter of interest, when are you considering that “purdah” starts?

**Sir Bill Jeffrey:** I will be guided on that by the Cabinet Secretary. It is not a completely flippant response because there is a common approach to this across government. It depends, I think, on when the Prime Minister calls the Election.

**Q741 Chairman:** Does that mean the “purdah” cannot start before the Prime Minister calls the Election?

**Sir Bill Jeffrey:** I am not sure technically whether it can or not, but it is precisely the kind of important issue for which we keep the Cabinet Office, because we ought all to do the same thing.

**Chairman:** That is what we have a Cabinet Office for, yes.

**Q742 Mr Havard:** There must be default date, because the Election has to take place by a particular time.

**Sir Bill Jeffrey:** Indeed; yes.

**Q743 Mr Havard:** What is that default date?

**Sir Bill Jeffrey:** I do not know offhand whether that could precede the calling of the Election. I will check that.

**Chairman:** Let us get on to Bernard Gray’s recommendation about the Government considering a government-owned, contractor-operated institution to run Defence Equipment and Support.

**Q744 Mr Hancock:** Why did you turn it down?

**Lord Drayson:** Because I believe that it is vital that the military are fully involved in the process of defence acquisition. I do not believe that buying defence equipment should be seen as a semi-detached activity from defence. I believe that in the modern environment in which we operate equipment is absolutely vital to defence capability. To ensure that equipment is fit for purpose, you need people who really understand the challenge that equipment is going to go through, those are military

people. Particularly when we are faced with operational pressures, like we have been in Iraq and are now in Afghanistan, in my view—and it is the view that we came to in the Ministry of Defence as a whole—that a Go-Co structure, whilst providing advantages which I accept in terms of improvements relating to skills, project management and so forth, which you would get from a private contracting model, would lead to an increased detachment of the military from that process. I believe that that would be very bad. Therefore, I believe that what we should do, and what we are doing, is implement the changes to get the advantages that you would get from a Go-Co structure: common project management tools, improved skills, a clear project management charging structure between the people responsible for the projects and the people who are the customers for the project. I learnt as Minister for defence procurement myself that when the military have real ownership of a piece of equipment—I am very much going to the operational bases in Iraq and Afghanistan, and there was a real difference between those projects where the military personnel felt that they had been fully involved in that procurement process—they felt it was their piece of kit, they were proud to show it to you. Where that kit had disadvantages they felt that they owned those problems too. This created an optimum, a working relationship, between the civil servants and the military. You need a blend of skills, and I believe that the Go-Co would have put a split between that and that would have been a problem. I believe that Bernard Gray and LEK accept that point.

**Q745 Mr Hancock:** What about the idea of the DE&S being a trading fund?

**Lord Drayson:** I think this is an idea which is still on the table but which would have also some of those disadvantages in terms of putting it slightly at arm’s length. I think it would be wrong for the Ministry of Defence to go down a road which said that the procurement of equipment was not core business for the MoD. If we look at the data which we have been generating for the Green Paper, for example, about the drivers of the costs of defence, the long-term trends around the amount that we have to spend on capital equipment today for every individual member of our Armed Forces, whether they are in the Air Force, the Navy or the Army, that is going up and up. The leverage that you get from that equipment means that we need Armed Forces which have more and more equipment in the future and, therefore, we need to make sure that our military personnel are fully involved in that process. If you privatise this or if you go down a structure which would prevent that, I think that would be a mistake.

**Sir Bill Jeffrey:** If I might add, the corollary of keeping the procurement function inside the tent, which for all the reasons the Minister gives personally I would support, is that we have to be clear, and, indeed, clearer than we have tended to be, about exactly what the respective roles and responsibilities of the central capability response, on the one hand, and the providers of procurement services on the other are. One of the points is to

achieve much greater clarity about the business relationship between the centre and the DE&S organisation.

**Chairman:** You have to go in five minutes, I know.

**Q746 Mr Havard:** Could I just be clear then. What Bernard Gray says is that, as a minimum, you should do the trading fund. That is basically what he says in his report. What you are saying is that you do not need to do either the trading fund or the Go-Co because the reform process that you are putting in place deals with all of the other process issues that are said by Gray a trading fund or a Go-Co would stimulate you to do, which are really the important things.

**Lord Drayson:** Yes.

**Q747 Mr Havard:** Is that right?

**Lord Drayson:** That is right. I think that we should adopt a mindset that says if a Go-Co was structured and you had a competition and a company won it (and you can think of the type of company that might win it), what would the management of that company do? They would do things like make sure that everybody who is running a management information system within DE&S is using the same system; you would make sure that the people have the necessary skills, these are the sort of things. I do believe that if you went down the route of this separation, it would not happen immediately, but after a while there would be this detachment because you would not have the integration of the military career structure into the Go-Co. You would have people seconded, but they would not be people who just six months ago had come back from the latest HERRICK tour, and that would be a real disadvantage. One of the things which I think we can point to is how that has got a lot better. We have seen this in terms of the effect that we have had on UORs where I think we have a really excellent track record.

**Q748 Mr Hancock:** One of the issues is the skill issue, is it not? The report recognises that within DE&S there is a skill shortage. Industry—when they have given evidence here—are concerned about how they are going to maintain skill levels. How are these reforms going to help counter the lack of skills you have got? How are you going to recover or keep hold of those skilled people you desperately need and that industry needs to attract, because you are going to give them a fairly settled vision of the next 10 years of defence spending?

**Lord Drayson:** I think, first, we have to make sure that we have got a sufficient number of talented, highly skilled people coming from industry into DE&S. Dr Tyler is a good example. He is a very effective manager, he has a huge amount of experience; he came from industry and he has had a very positive impact on defence procurement. We need more people coming from industry. We need a clear process whereby people can come in and out of the defence procurement part of the Ministry of Defence. Also we need to develop recognition within the military of the central importance of defence equipment procurement to the delivery of military capability and the mindset that a modern, young officer would be expected to have a high degree of technological competence, because he or she is going to have to be responsible either in the operation of such equipment, or in the development and procurement of that equipment, in the future and regard that as a central part of their development and leadership training.

**Q749 Mr Hancock:** But they are different things, are they not?

**Lord Drayson:** Yes, they are complementary.

**Q750 Mr Hancock:** You could have a good operational officer but he would not, by necessity, have the sort of skills that is actually going to refine equipment or develop new equipment. How are you going to survive?

**Sir Bill Jeffrey:** I would say on skills that we have seen some improvement in recent years; we need to accelerate it. One of the points in the announcement that the Minister mentioned that relates to this proposes something that we are very keen to follow through, which is some of kind of active partnership between procurement experts and DE&S to build DE&S' capability internally. I also think, and I hope the Committee agrees with me, that, although we keep self-critically looking at this issue, we must not forget that we have some very highly skilled people working for us doing a very good job. Any time I visit there I am greatly impressed by the quality of what I hear and the effectiveness with which people are deploying their own skills.

**Q751 Chairman:** That is a point that Bernard Gray makes right at the beginning of his report.

**Lord Drayson:** He does.

**Chairman:** I think we would certainly agree with that. I am going to draw this to a close, because it is near one o'clock and I think you have had enough and we have had enough. Thank you very much indeed for some, as I say, very refreshing and very helpful evidence which is going to take us further in drafting our Report.

# Written evidence

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## Memorandum from the Ministry of Defence

1. *Please provide an outline of the organisation and work programme for the implementation of the Gray report recommendations and the preparation of the Strategy for Acquisition Reform which is due to be published in the New Year.*

1.1 Following the Review of Acquisition by Bernard Gray, a Defence Acquisition Reform Project team has been established. This is led at Director level, and reports to a senior Steering Group chaired by Lord Drayson, and including Bernard Gray. The team is developing a Strategy for Acquisition Reform which will build on the eight-point approach set out in the Defence Secretary's statement to the House on 15 October,<sup>1</sup> together with existing business improvement initiatives in the acquisition sphere.

1.2 The intention is to publish this Strategy in the New Year. Implementation of some central aspects of the Strategy, notably the creation of a Defence Board sub-committee on Equipment, has already begun.

2. *How is the implementation of Through Life Capability Management (TLCM) being monitored and what progress has been made over the last 12 months? Is implementation proceeding to the MoD's satisfaction? Please provide some examples of benefits identified through adopting a TLCM approach.*

2.1 A number of mechanisms exist to monitor and guide the implementation of TLCM. The principal one is the TLCM Governance Board. As part of this governance structure, the Deputy Chief of Defence Staff (Capability) and senior 2\* and 3\* representatives from across Defence meet monthly to review progress and ensure that the strategic risks to implementation are being managed effectively. Industry is represented on the TLCM Governance Board and through joint strategy and working groups as part of the National Defence Industry Council (NDIC) structure.

2.2 The Department remains committed to the continuously improving the provision of capability to our Armed Forces. Over the past 12 months, we have improved the capability planning structures introduced as part of TLCM, including more effective engagement with the Front Line "User". We have also made progress in our engagement with industry and have established new mechanisms for involving industry earlier in our planning processes. This will lead to greater realism and improve our understanding of the options available to meet the future needs of our Armed Forces. We have also made good progress in implementing the programme approach to the delivery of capability, further details are set out in the answer to Question 3.

2.3 Specific examples of benefits arising from the programme approach include the rebalancing of resources across the Maritime Platforms Programme by cancelling planned enhancements to the Type 42 Destroyer and reinvesting the freed-up resource in the Type 45 Destroyer. For the same Programme, the coherence and greater visibility delivered by a broader programme view across all major maritime platforms, both current and future, has given much earlier visibility, by some four to five years, of the overall manpower implications for the Royal Navy, thereby allowing better informed and proactive manpower planning. The programme approach has also been beneficial in how the Department responds to the delay in the A400M project. Faced with a potential gap in our tactical air lift capability, the Programme Board has been the primary means to examine opportunities to enhance the delivery of capability from existing fleets by improving the flexibility of personnel, the quality of support infrastructure, the capacity of logistic support organisations and whether doctrinal changes—the way we operate the aircraft—will reduce the maintenance burden on the existing fleets. The recommended mitigation action is a combination of these measures and demonstrates the greater benefits of a broader programme approach, along with a the more rigorous examination across all of the Defence Lines of Development as advocated by *Through Life Capability Management*.

3. *What progress has been made with regard to the implementation of programme arrangements for acquisition activities? The Government Response to the Committee's Defence Equipment 2009 Report stated that the programme approach would be "embedded across the MoD acquisition community" by March 2010: will this be achieved? What metrics are in place to ensure that individual projects do not under-perform in a "programme managed" system?*

3.1 Implementation of a Programme Approach to Capability Delivery, and the establishment of Capability Programme Boards began in November 2008 and implementation is focussed on achievement of four staged outcomes:

- Programme Stand-Up (April 2009—Achieved): The MoD has formed Programme Boards to take a consistent approach to the delivery of capability through grouped projects across Defence Lines of Development (DLoDs).

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<sup>1</sup> Official Report Column 34WS.

- Programme Coordination (September 2009—Partially Achieved): The MoD consistently coordinates the delivery of capability through grouped projects and DLoDs, and has tested how we can use the programme approach to improve coherence in the Planning Round (PR).
- Programme Balance (target March 2010): The MoD consistently achieves balance in the through-life delivery of capability across projects and DLoDs including managing risk within programmes.
- Programme Optimization (target March 2012): The MoD Acquisition system delivers a stable, affordable capability programme, balanced with defence policy and with the agility to adapt to changes in the operational environment, by optimising the management of risk across delivery programmes.

3.2 These outcomes are embodied in the Programme Approach Maturity Model which is used to monitor progress on a six-weekly basis. The latest Maturity Assessment (as at the end of September 2009) showed that overall programmes are making good progress in areas where they have control, with 97% of programmes assessed as Good or Satisfactory against Programme Stand-Up.

3.3 Against the Programme Coordination maturity measures, 53% of programmes are assessed as Good or Satisfactory. This represents a 25% increase since August 2009 due to improved availability and maturity of pan-DLoD information and increased ability of Programmes to consider programme issues and decisions. Over 75% of Programmes are forecast to reach a satisfactory level of Coordination maturity by the end of 2009, although we do not expect full achievement of this milestone due to the shortened timescales for Planning Round 2010 which limited Programme Board input.

3.4 The majority of programmes achieved the September Programme Coordination milestone and remain on track for the March 2010 balance maturity level. It should be recognised that Programmes Boards are at different levels of maturity which will be reflected in the proportion achieving the Balance milestone.

3.5 Under the programme approach, the role of the Head of Capability is to sponsor the delivery of a set of related projects and associated Lines of Development that form a programme. The Head of Capability acts as the programme sponsor, ensuring coherence across all Lines of Development and that the programme requirement output is met. Responsibility for individual project and Lines of Development performance remains with the MoD Top Level Budgets (TLB) and delegated officers delivering the projects. Existing metrics at project level, for example Performance, Time and Cost, are set and monitored by each TLB and remain in force to ensure project delivery in accordance with the agreed programme direction.

4. *Please provide a progress report for the staff restructuring programme in DE&S, explaining what efficiency savings have been made. What have been the effects on service delivery of the efficiency savings and what safeguards are in place to ensure that these savings do not have an adverse impact on the equipment programme? What scope remains for further efficiency savings?*

4.1 Defence Equipment & Support continues to reduce its numbers under the PACE (Performance, Agility, Confidence, Efficiency) programme. Currently DE&S comprises some 22,500 military and civilian personnel, a reduction from around 27,000 at the formation of DE&S in April 2007, and HM Treasury efficiency reporting cited the efficiencies from PACE to June 2009 as over £190 million. The drawdown in staff has happened more quickly than envisaged at the beginning of PACE, but DE&S maintains support to operations as its highest priority, exemplified by the fact that it has around 800 people diverted from established funded-roles to the activity of delivering essential new Urgent Operational Requirements. Many DE&S staff—around 11,700—are engaged in directly supporting the front line, in areas such as the Joint Support Chain and HM Naval Bases. DE&S regularly reviews the best use of available manpower resource to deliver capability priorities but, with substantial efficiencies already in hand, the scope for further such savings is becoming restricted.

5. *The MoD 2008–09 Annual Report (page 95) states that “a review of research programmes has resulted in funds being reprioritised into activities better aligned to Defence’s strategic needs”. What research activities have been stopped or cut back as a result of this review and which are expanding? Please provide an updated version of the research spending table shown on p58 of the Committee’s Defence Equipment 2009 Report, expressing spending in real terms, and adding data for 2007–08 and 2008–09. What were the reasons for the sharp changes in research spending between 1996–97 to 1997–98 and 2003–04 to 2004–05?*

5.1 Research in the following areas has had some specific activities reduced or stopped as a result of strategic reprioritisation: Maritime, Land and Air domains, Weapons, C4ISTAR, ballistic missile defence and climate research. The main area of activity which has been expanded is Counter Terrorism and Support to Operations.

5.2 The table below provides an update on the MoD research expenditure estimates expressed in current and constant 2008–09 prices. Estimated outturns for 2008–09 will not be available until the end of January 2010.



ESTIMATED MoD NET RESEARCH EXPENDITURE  
(CURRENT AND REAL TERMS)

Inclusive of non-recoverable VAT (£million)

<i>Year</i>	<i>Current Prices</i>	<i>Constant 2008–09 prices</i>
1992–93	513	762
1993–94	654	946
1994–95	665	947
1995–96	676	936
1996–97	672	897
1997–98	564	734
1998–99	560	713
1999–2000	552	690
2000–01	566	698
2001–02	557	672
2002–03	515	602
2003–04	524	595
2004–05	639	706
2005–06	598	649
2006–07	632	666
2007–08	635	651

*Notes:*

1. Conversion to constant 2008–09 prices uses the latest available forecast GDP deflator series produced by HM Treasury dated 29 September 2009.
2. Full details of the methodology (including any changes or breaks in series) used by DASA to compile the MoD Research figures are published in DASA Defence Statistics Bulletins Nos 2, 6 and 9.

5.3 The change in research spending between 1996–97 and 1997–98 reflected reductions in the Research Building Block (RBB) outturn between those years following a decision to reprioritise funding across the Department to match strategic priorities.

5.4 The increase in expenditure between 2003–04 and 2004–05 largely reflected the movement into the RBB of a specific Met Office programme and an increase in expenditure related to nuclear research between 2003–04 to 2004–05.

6. *What have been the most significant consequences of the short examination of the equipment programme? Was the examination a successful exercise? What benefits have resulted from it? How is the MoD ensuring that an appropriate balance continues to be maintained between supporting current operations and the longer term equipment programme?*

6.1 The main success of the Equipment Examination was in going a considerable way towards bringing the equipment plan more into balance. This has enabled us to focus more of our expenditure on those capabilities of highest immediate urgency, such as those needed for current operations, while also continuing to invest in capabilities needed to respond to future threats. However, we recognise that there is further to go. Ensuring the equipment plan is affordable and has the right balance between supporting current operations and longer term capability requirements will continue to be addressed through our planning process and in the forthcoming defence review. The measures we are putting in place in response to the recommendations of the Bernard Gray report will also help us to maintain the appropriate balance in our programme in future.

7. *What is the MoD's estimate of the extent to which the equipment plan is under-funded? To what extent have current economic circumstances affected the affordability of the equipment plan?*

7.1 The Department is currently conducting Planning Round 10 (PR10) which will look at the overall departmental programme against the likely future resources for Defence. The Government's spending plans for Defence beyond 2010–11 have not yet been set. It is not possible to give a meaningful assessment of the extent to which the equipment plan is under-funded in advance of the completion of PR10 (currently planned for December/January) when the cost of the programme and available resources should be clearer.

7.2 Defence, like any other large organisation in the UK at the moment, faces particular pressures including weak sterling, pay increase, increased pension costs, rising costs of utilities and reduced estates disposal receipts. As a result, although the Department's budget has increased in real terms (in line with the Comprehensive Spending Review) our programme pressures have been greater. We have mechanisms in place to deal with these pressures, but we accept that we need to do better at controlling them, as we acknowledged in our response to the Bernard Gray Report, not least because of the severe pressures on public spending generally.

8. Please provide a progress report for the working group which is producing a measure of defence inflation. Is the work on producing this measure still scheduled to be completed by April 2010? Is the work of the group being revised in view of the comments on defence inflation in the Gray report?

8.1 The programme of work being undertaken to produce a measure of defence inflation is progressing to plan. Details about the measure and estimates for inflation in total MoD expenditure for financial years 2006–07, 2007–08 and 2008–09 are scheduled to be published in April 2010 in a Defence Statistics Bulletin. Estimates for 2009–10 will be produced in October 2010, when the necessary contributing data and price indices become available.

The status of this work is as follows:

- Estimates for fixed price contracts and high value firm price contracts have been produced and are currently undergoing quality assurance. These estimates account for around £12 billion of annual expenditure through MoD contracts.
- Work on producing estimates for military and civilian pay and labour cost inflation is on schedule to be completed by end of December 2009. These estimates account for around £12 billion of MoD expenditure.
- The remaining work-strands are: estimating effect of currency fluctuations; low-value contracts; high-value miscellaneous contracts; and fuel purchases. These work-strands are planned for completion by March 2010.

8.2 The Bernard Gray report identifies a number of reasons why equipment costs grow. These include: over optimism in initial estimates; real cost growth with successive generations of equipment due to higher specifications; and drift in project completion date. Gray attributes these to behaviours in the defence procurement community.

8.3 The measure of defence inflation adopted captures the increase in pay and prices for all goods and services while holding quality and quantity constant. It is aligned to the measures of inflation produced by the Office for National Statistics and is wholly consistent with the Review of Acquisition by Bernard Gray. There is therefore no need for the MoD to revise the definition or scope of this work.

9. Please provide a short progress report on the following equipment programmes:

Astute submarine;  
 Future carrier;  
 Joint Strike Fighter (JSF);  
 Type 45 Destroyer;  
 Future Rapid Effect System (FRES);  
 Military Afloat Reach and Sustainability (MARS);  
 A400M;  
 Nimrod MRA4; and  
 Future Lynx and Puma refurbishment.

For the above programmes which have passed Main Gate, the progress report to include:

The Current Forecast Cost (against Approved Cost at Main Gate); and  
 The Current Forecast In-Service Date (against Approved In-Service Date at Main Gate).

For each of the above programmes, the progress report to include:

A summary of the key events/decisions over the last 12 months and the key events/decisions expected in the near future (next six months).

*Future carrier*—Was the MoD aware that the procurement budget was tight when it ordered the aircraft carriers? Why was the decision made in December 2008 to reschedule the in-service date for the carriers, given that the award of the contracts had been announced only six months previously? What is the cost penalty of rescheduling the aircraft carriers?

*JSF*—When will the decision be made regarding how many JSFs are to be purchased? Have all of the technology transfer issues with the USA been resolved? Will UK personnel or UK industry be able to carry out repairs, or will this have to be done by US personnel?

*FRES*—What has been the impact of the UOR programme on FRES? What assessment has been made of the ongoing costs of vehicles procured under UORs? What type and numbers of vehicles are still needed, given the extensive procurement of vehicles via the UOR process? What now is the objective of the FRES programme and what capability gap is it intended to address?

*A400M*—What options are being considered as a contingency to mitigate any potential capability gaps that may arise from A400M delays? What is the timetable for making decisions? Do you agree with the assessment in *Jane's Weekly* on 5 October 2009 that “the RAF is faced with a potential gap in capability in sustaining an air bridge to Afghanistan, which is already described as fragile”.

*MARS*—Is it still the intention of the MoD to compete MARS outside of the UK shipyards or is MARS seen as a requirement to maintain UK maritime shipbuilding skills? Why is MARS not already underway when the restrictions on single hulled ships come into force in 2010?

*Helicopters*—Please provide an updated version of the table “Current Platform Numbers and Out of Service Dates” which was provided by the MoD to the Committee in April 2009 for its inquiry into Helicopter Capability.

#### ASTUTE CLASS SUBMARINE

<i>Astute Class Boats 1 to 3</i>	<i>Original MG Approval (90%)</i>	<i>Current Forecast (50%)</i>	<i>Difference</i>
Cost (£m)	2,578*	3,933	+1,355
ISD	June 2005	March 2010	+ 57 (Months)

\* Approval only given at 50% confidence level

#### *Progress Report*

There are four Astute Class submarines under construction at BAES Submarines Solution Shipyard (BAES SS), Barrow-in-Furness; ASTUTE (First of Class), AMBUSH, ARTFUL and AUDACIOUS. Long Lead items have been ordered for Boat five, and the reactor core has been ordered for Boat six.

Over the last 12 months ASTUTE’s programme has been further delayed by six months due to a range of technical and programme issues. BAES SS have had to re-establish the UK’s strategic capability to design, build, test and commission nuclear powered submarines, due to the inexperience of the BAES SS workforce following the 10 year gap between Vanguard and Astute Classes.

ASTUTE has just completed her final stage of testing and commissioning of the reactor, propulsion and ships systems, which is the penultimate major milestone before she is cleared to sail from Barrow to start a comprehensive sea trials programme.

Following delays, the Astute programme is being rebaselined. The full impact of any programme changes can only be confirmed once this work has been completed. Once the detailed cost and schedule implications have been confirmed, IAB, Ministerial and Treasury re-approval will be sought; an announcement will be made in due course.

#### *Key Events/Decisions since February 2009*

- ASTUTE (Boat one) completion of reactor and propulsion system testing.
- AMBUSH (Boat two) initial fill of the primary circuit with reactor quality water and testing of the main coolant pumps.
- Valiant Jetty arrived in Faslane in May 2009.
- AMBUSH final hull weld completed.
- ARTFUL (Boat three) main propulsion machinery tested.
- AUDACIOUS (Boat four) keel laying ceremony March 2009.

#### *Key Events/Decisions expected in the next six months*

- ASTUTE to complete the first phase of sea trails.
- IAB, Ministerial and Treasury re-approval of Boat one to four.
- IAB, Ministerial and Treasury Approval for Boat five construction and Boat six Long Lead Items.
- AMBUSH—Completion of the first phase of the primary and propulsion system tested.
- ARTFUL—delivery of the Command Deck Module (CDM) to the BAE SS Devonshire Dock Hall (DDH) at Barrow.
- AUDACIOUS—second hull unit to DDH.
- Start of construction on Boat five.
- Order Long Lead Items for Boat six.

## QUEEN ELIZABETH CLASS CARRIER

	<i>Original MG Approval July 2007</i>	<i>Current Forecast</i>	<i>Difference from 2007 MG approval</i>
Cost (£m)	4,359 <sup>1</sup> (70%)	5,133 <sup>2</sup>	+ 774 <sup>3</sup>
ISD	October 2015 <sup>4</sup> (60%)	May 2016 <sup>2</sup>	+ 7 months <sup>5</sup>

<sup>1</sup> 50% confidence figure of £4,085 million (includes CDEL and iRDEL).

<sup>2</sup> Current Forecast at 50% confidence level.

<sup>3</sup> The differential between Main Gate 50% figure and the current 50% forecast is £1,070 million (with adjustments)—as reported in the 2008–09 ARAC.

<sup>4</sup> 50% confidence date of July 2015.

<sup>5</sup> 19 months when set against announcements at Main Gate which assumed July 2007 Contract Award. In the event contract award was July 2008.

*Key events/decisions over the last 12 months*

- As part of the 2008 Equipment Examination it was decided to delay the carriers by one to two years, recognising this would add cost.
- The Departmental Annual Report and Accounts 2008–09, published earlier this year and the MPR 2009 show a cost growth of £1,070 million against the Main Gate most likely cost (50%), which equates to £774 million against the approved (70%) not to exceed cost.
- Updated cost and time estimates are currently going through the Department's approval process, and, as is normal, this information will only be set and announced once the formal re-approval process has completed.
- The Aircraft Carrier Alliance announced a revision of the QE Class Build Strategy on 2 March 2009.
- Construction of the ships commenced with pre-fabrication of steel at Appledore Shipyard, North Devon in late 2008 and a major milestone was achieved with the first cutting of steel at Govan, Glasgow in July 2009.
- The first sponson unit was delivered from Appledore to Rosyth in August 2009, and work is now under way in four UK shipyards—Babcock Marine at Appledore and Rosyth, BVT at Govan and A&P Tyne.
- Significant progress has been made on infrastructure preparations at Rosyth, including completion of No 1 dock in September 2009, where the ships will be assembled.
- The Aircraft Carrier Alliance has, to date, placed sub-contracts for some £1.1 billion for materials and equipment required to build both ships.

*Key Events/Decisions expected in the next six months*

- A&P Tyne contract Signature for manufacture of the Centre Blocks (November 2009).
- Prince of Wales dock naming ceremony at Rosyth (March 2010).
- IAB submission (Apr 2010) to set Final Target Cost by June 2010.
- Goliath crane delivered to Rosyth (May 2010).
- Delivery of Steering Gear and Rudders (May 2010).

*Was the MoD aware that the procurement budget was tight when it ordered the aircraft carriers?*

The QE Class project was considered broadly affordable when approval was given to order the two carriers in 2007. The Alliance commercial model was expected to drive out cost over time on a stable programme. Although costs have increased on the programme as a result of the Equipment Examination decision and other economic factors, these additional costs will be managed by the Department. In conjunction with the ACA, we continue to work hard to drive down costs in order to agree the Final Target Cost for the Carriers in mid 2010.

*Why was the decision made in December 2008 to reschedule the in-service date for the carriers, given that the award of the contracts had been announced only six months previously?*

In order to best manage resources and address affordability issues across the Department, the Equipment Examination reprioritised investment to deliver the most important and urgently needed capabilities, while continuing to invest in capabilities needed to respond to future threats. The decision to reprofile the QE Class programme allowed resources to be diverted to more urgent projects. The carriers will deliver wider benefits as part of the Defence Industrial Strategy and we have worked closely with the Aircraft Carrier Alliance to find workable solutions.

*What is the cost penalty of rescheduling the aircraft carriers?*

The direct impact of the Equipment Examination re-profiling measure to reprioritise cost in the first four years and to delay each ship by one and two years respectively, was in the order of £700 million. Although costs have increased on the programme as a result of the Equipment Examination and other economic factors, the Department is working with the Aircraft Carrier Alliance to find ways of reducing them.

#### JOINT STRIKE FIGHTER (JSF)

	<i>Original MG Approval</i>	<i>Current Forecast</i>	<i>Difference</i>
Cost (£m)	2,874	2,451	– 423
ISD	No formal ISD will be set until the programme is sufficiently mature.		

#### *Key events/decisions since 2008*

- March 2009—Secretary of State announced the approval to purchase three JSF to allow the UK to participate in the Operational Test and Evaluation of JSF in the USA.
- June 2009—Contract negotiations completed for the UK 2 Short Take Off and Vertical Landing (STOVL) jets for Operational Test and Evaluation.
- September 2009—Production of first UK STOVL aircraft commences at Rolls Royce in Indianapolis.

#### *Key Events/Decisions expected in next six months*

- December 2009—First transition to full STOVL mode flight.
- February 2010—Initial Gate for the UK Main Operating Base at RAF Lossiemouth.
- March 2010—First flight of the Carrier variant (CF-1) of JSF.
- March 2010—Conclude contract negotiations for the 3rd UK STOVL jet.

#### *JSF Progress*

JSF programme is progressing to plan with both the CTOL and STOVL variants completing in excess of 100 sorties to date with better than expected predicted results.

*When will the decision be made regarding how many JSFs are to be purchased?*

JSF numbers are driven by a range of factors including training needs and pilot numbers, the anticipated airframe life, attrition considerations and, of course, the number of JSF we might anticipate deploying in a range of operational scenarios.

The JSF programme gives us considerable flexibility in the timing and numbers of aircraft to be purchased and we do not intend to make final decisions until the programme has matured further and we have completed successful operational evaluation of the Air System. This will not be before 2015.

*Have all of the technology transfer issues with the USA been resolved?*

The UK has all the information it requires at this stage of the programme however the UK continues to work closely with the US to secure the commitments it requires with regards to operational sovereignty—that is to say the ability to operate, repair and maintain UK assets at a time of its choosing and through life. Progress is being made in this area by the UK's inclusion in the JSF Operational Test and Evaluation (OT&E) development planning, continued presence and increased access of UK SME's within the JSF programme in the USA and proposals to increase the level of access to JSF information for UK Industry

*Will UK personnel or UK industry be able to carry out repairs, or will this have to be done by US personnel?*

The most cost effective solution for maintaining our JSF fleet will be under a common support solution that is being designed to meet the needs of all nine nations engaged in JSF who are collectively planning to buy 3,173 aircraft. It is our stated intention to maintain sovereign capabilities to train our pilots and maintain and repair our aircraft at our Main Operating Base at RAF Lossiemouth. These facilities will be operated primarily by UK personnel in a Government/Industry partnership using the lessons learned from current fast jet fleets.

*JSF is a US led product—what does UK Industry get from it?*

Under a “best athlete” procurement strategy, UK industry has won a significant role in the development, demonstration, production and sustainment of the JSF, with more than 100 UK companies delivering approximately 15% by value of the aircraft. UK industry orders for the system development and demonstration phase are over USD 4 billion, with production orders expected to generate over USD 40 billion for UK industry based on the 3,173 aircraft that JSF partners expect to purchase. Key UK suppliers

include BAE Systems, Rolls Royce, Martin Baker, GE Aviation, Goodrich and QinetiQ with many contributing cutting edge skills and technology and benefiting from involvement on a highly advanced fighter programme.

#### TYPE 45 DESTROYER

	<i>Original MG Approval</i>	<i>Current Forecast</i>	<i>Difference</i>
Cost (£m)	5,475	6,464	+ 989
ISD	November 2007	July 2010	+ 32 (months)

#### *Key Events/Decisions since the Committee last examined Type 45*

- November 2008—DRAGON (Ship 4) was successfully launched on the Clyde.
- December 2008—DARING (Ship 1) was accepted off contract from the Prime Contractor, BVT Surface Fleet Ltd. She sailed into Portsmouth, her base port for the first time on 28 January 2009.
- December 2008—DAUNTLESS (Ship 2) completed her first set of Sea Trials. These confirmed the performance of the power and propulsion system. Initial Combat System testing was also successfully completed.
- February 2009—Sea Viper (PAAMS) successfully test fired from the Longbow trials barge for a second time.
- July 2009—DARING commissioned into the Royal Navy.
- July 2009—DAUNTLESS completed her second set of Sea Trials, which focussed on testing the ship's Combat system. The entire radio and satellite communication suite was also tested using RN shore communication stations, aircraft and other RN vessels; all trials were successful and confirmed system flexibility and performance.
- September 2009—BVT Surface Fleet Ltd were awarded the contract to provide in-service support to the Type 45 Destroyers for a period of up to seven years, commencing from 1 January 2010.
- October 2009—DIAMOND (Ship 3) Sea Trials commence (due to conclude 4 November). DEFENDER (Ship 5) was launched on 21 October.

#### *Key Events/Decisions expected in the next six months*

- A further test firing of the Sea Viper system is due to take place in early November.
- In late November DAUNTLESS will leave the Clyde and sail to Portsmouth. She will be Accepted off Contract soon after arrival (planned for 3 December).
- The In-service Date for DARING is being targeted for February 2010, some five months ahead of the forecasted in-service date.
- The first set of Sea Trials for DRAGON are planned to begin in July 2010.

#### FUTURE RAPID EFFECT SYSTEM (FRES)

##### *Specialist Vehicle*

The Specialist Vehicle element of the FRES programme is in the Assessment Phase and continues to make good progress, with the competition process proceeding at pace. The programme's Invitation To Tender was issued in July 2009 following Departmental approval of the Specialist Vehicle programme's Acquisition Strategy. Tenders are due to be returned at the end of the year. We are now working to an aggressive schedule for a Main Gate decision and entry into a Demonstration Phase with the down selected bidder next year.

##### *Utility Vehicle*

In May 2008, General Dynamics (GD) (UK) were awarded the provisional preferred bidder status for the Utility Vehicle Design competition based on their Piranha V design. This status was provisional because it was recognised that more work was needed. Following earlier discussions with GD (UK), the MoD had good reason to believe a mutually satisfactory solution could be found. Unfortunately, this was not possible and GD (UK)'s provisional preferred bidder status was withdrawn in December 2008 after a period of intensive negotiations that failed to reach agreement on the commercial conditions required to enable further progress. Separately, the Department's examination of the Equipment Programme concluded that, in the context of current operations and the recent investment in protected mobility, the highest priority should now be accorded to delivering the Warrior Capability Sustainment Programme and the FRES Scout vehicle as quickly as possible. FRES Scout is part of the FRES Specialist Vehicle family. Against this background we decided to restructure the FRES programme, giving priority to FRES Scout over the FRES Utility Vehicle. Although this will mean a delay to the FRES Utility Vehicle, we recognise the importance of this programme and are now looking at the best way to take this procurement forward.

*What now is the objective of the FRES programme and what capability gap is it intended to address?*

The objective of the FRES programme is to deliver a medium-weight armoured vehicle fleet with higher levels of deployability and protection than the current in-service fleet, and the potential to accommodate new advances in technology. FRES will replace a number of vehicles that have reached or are reaching the end of their service lives, such as CVR (T) Scimitar and FV430, in addition to introducing new vehicle roles.

*What has been the impact of the UOR programme on FRES?*

The MoD's approval of over £1.2 billion for new vehicles under the Urgent Operational Requirement process shows the Department's commitment to supporting our Armed Forces on operations, but FRES has not been made redundant as a result. Unlike the Protected Patrol Vehicles procured as UORs, FRES is not designed for one specific theatre, such as Afghanistan. FRES will operate across the whole spectrum of operations, including rapid intervention, peace keeping/peace enforcement and support to high intensity war fighting. Ultimately, FRES will provide a superior capability with greater longevity than UOR vehicles.

*What assessment has been made of the ongoing costs of vehicles procured under UORs?*

For procurements made under the UOR procedures, the speed of delivery of life-saving equipment is the absolute priority and the capability may be so specific to the threat that we would not expect to retain it beyond the operation. In these cases, while support costs are considered, predicted whole life costs are generally not calculated as a pre-cursor to the procurement. An initial twelve month support solution is approved before the UOR vehicles are procured, giving the Department time to negotiate a more comprehensive solution without impacting detrimentally on the time taken to deliver the capability to the operational theatre. While the equipment is deployed on operations in Afghanistan the support costs are met by the Treasury Reserve.

*What type and numbers of vehicles are still needed, given the extensive procurement of vehicles via the UOR process?*

Our success in delivering UOR vehicles has not changed our need for the numbers and types of vehicles the FRES programme will deliver. Our success in delivering UOR PPVs for current operations was taken into consideration during the Department's examination of the equipment programme and led to a restructuring of the FRES programme, giving priority to FRES Scout over the FRES utility vehicle.

#### MILITARY AFLOAT REACH AND SUSTAINABILITY (MARS)

*Key Events/Decisions since Initial Gate approval (July 2005)*

- July 2005—Entry into Assessment Phase announced via Written Ministerial Statement. The Procurement Strategy at the time was the formation of an Alliance, comprising the MoD, an Integrator, a Design, Outfit and Build Alliance Partner and a Through Life Support Partner.
- May 2007—The Minister for Defence Equipment and Support (DE&S) approved a decision to review the Procurement Strategy to take account of changing market conditions and the opportunities generated by the delivery of the Defence Industrial Strategy (DIS).
- December 2007—Following approval of open competition by the Minister (DES), advertisement placed in the Official Journal of the European Union (OJEU) seeking expressions of interest from companies who wish to compete for the design and build elements of the MARS Fleet Tanker (FT) programme.
- May 2008—The Minister (DE&S) approval to down select to four bidders (Fincantieri, Navantia, Hyundai and a consortium of BVT/BMT/DSME) to enter into Competitive Dialogue over the MARS FT programme.
- December 2008—Equipment Examination announcement concluded that there was scope for considering alternative approaches to the procurement of elements of the MARS Programme. The Fleet Tanker competition was 'paused'.
- March 2009—The Minister (DE&S) decided that the Fleet Tanker competition should be cancelled. A review of the procurement strategy and requirement continued.
- October 2009—The Minister (DE&S) approved revised Procurement Strategy to consider a range of possible solutions which takes account of market conditions and is more likely to secure best value for money.
- October 2009—Advertisement placed in the OJEU and the Defence Contracts Bulletin seeking expressions of interest from companies who wish to compete to deliver solutions for the MARS Tanker programme. Interested companies will be asked to submit a Pre-Qualification Questionnaire (PQQ).

*Key Events / Decisions expected in the next six months*

- 2010—Following evaluation of PQQ responses, approval for a short list of companies will be sought in early 2010.

*Is it still the intention of the MoD to compete MARS outside of the UK shipyards or is MARS still seen as a requirement to maintain UK maritime shipbuilding skills?*

The Defence Industrial Strategy is clear that projects within the maritime programme that exceed core workload requirement may be competed more widely, and potentially undertaken offshore if to do so would not prejudice key capabilities. The UK shipbuilding industry is benefiting from a sustained period of MoD investment of some £14 billion over the next 10 to 15 years in both new and far more capable ships, such as the future aircraft carriers, the Type 45 destroyers and the Future Surface Combatant. In view of this, a competition for the MARS Tanker requirement was originally competed internationally in late 2007. Following the examination into the Department's equipment programme that was carried out in 2008, which concluded that there was scope for considering alternative approaches to the procurement of elements of the MARS Programme, the competition was cancelled in March 2009. Since then work to review the procurement strategy has continued and has concluded that a more open procurement strategy considering a range of possible solutions, including commercial solutions, and which takes account of current market conditions, is more likely to secure best value for money for the Department. A new open and international competition to deliver the MARS Tankers has, therefore, recently been approved and, in accordance with EU and MoD commercial policy, expressions of interest from industry are currently being sought through advertisements in the Official Journal of the European Union and the Defence Contracts Bulletin. The closing date for these is 4 December 2009. The later ship classes, Fleet Solid Support and Amphibious Combat Support, remain uncommitted at this stage. The extent to which they will contribute to the sustainment of key UK design and build skills will continue to be evaluated in the MARS Programme's Assessment Phase.

*Why is MARS not already underway when the restrictions on single hulled ships comes into force in 2010?*

The International Maritime Organisation and EU legislation bans the operation of non-exempt single hulled tankers of any age from 2010 onwards. The UK has agreed to implement legislation to meet the requirements of the Maritime Pollution (MARPOL) Convention. Vessels to which this convention does not currently apply include naval auxiliary ships operated and manned by the Royal Fleet Auxiliary. These ships are maintained in accordance with Lloyd's Register and the Maritime Coastguard Agency as the UK's classification and statutory certification organisations. The Department is working closely with these bodies to ensure that operation of our single hulled tankers is not impaired whilst working towards achieving full compliance as soon as is practicable.

The age of the current in-service tankers does not significantly affect their ongoing operability, or the current levels of sustainment that they provide. The risk of continuing to operate single hulled tankers is mitigated by careful programming, operating outside sensitive geographical areas and additional training for the crews. Additionally the tankers are subject to a detailed structural inspection every two and a half years.

## A400M

	<i>Original MG Approval</i>	<i>Current Forecast</i>	<i>Difference</i>
Cost (£m)	2,744	3,285	+ 541
ISD	December 2009	December 2015	+ 72

*Progress Report*

A400M remains a key element of the UK's future defence capability, providing both tactical (intra-theatre) and strategic (inter-theatre) airlift capabilities.

Airbus Military, responsible for the design and manufacture of A400M, announced delays to the programme in late 2008. Challenges have included development of the engine, leading to delays to first flight, and also a reappraisal of overall programme risk for the transition from development into the production phase. Airbus informed the Partner Nations that first flight would be delayed (from January 2008) until the end of 2009 or early 2010. Airbus also announced that aircraft deliveries would be significantly delayed, with UK deliveries not expected to commence until 2013 at the earliest.

The Partner Nations subsequently agreed to enter a "Standstill Agreement" (which ran from April 2009 until the end of July 2009) with Airbus Military, which protected the rights of all parties under the existing contract, in order to facilitate exploratory discussions. At a Ministerial meeting on 24 July 2009, the Minister (DE&S) agreed that the UK would join Partner Nations in a negotiation phase with Airbus Military to determine a way ahead for the A400M programme.



*Key Events/Decisions since March 2009*

- Ministerial agreement to enter into negotiation phase with Airbus Military in July 2009 in Le Castellet.
- Successful completion of the Flight Test Programme for the A400M Engine Flying Test Bed in October 2009, conducted at Marshalls Aerospace in Cambridge, UK.

*Key Events/Decisions expected in the next six months*

- First Flight of the A400M prototype MSN001.
- Ministerial agreement on way ahead for the programme in December 2009, with a view to a revised contract being in place by March 2010.

*What options are being considered as a contingency to mitigate any potential capability gaps that may arise from A400M delays?*

The delay to the delivery of A400M causes strategic and tactical capability gaps for future operations; there is no effect on current operations. The tactical airlift capability gap due to the A400M programme delay will be met, where possible, by the existing fleet of 24 C-130J aircraft. We are thoroughly assessing our ability to sustain current operations and exploring options to enhance our capabilities.

*Do you agree with the assessment in Jane's Weekly on 5 October 2009 that "the RAF is faced with a potential gap in capability in sustaining an air bridge to Afghanistan, which is already described as fragile"?*

The airbridge is absolutely critical for the success of current operations. We have invested significant effort and resources into maintaining and improving the current airbridge. Given the operational context, which does not apply to commercial airlines, we believe the airbridge is performing to a high standard. However we are not complacent and the performance of the airbridge is kept under constant review. In 2008 we received an additional two C17s; in 2008 we also signed the contract for the Future Strategic Tanker Aircraft, which in due course will deliver Air Transport capability. Beyond that, we are looking at what further measures we might need to take to sustain the current airbridge. Options being considered include buying one or two more C17 aircraft.

## NIMROD MRA4

	<i>Original MG Approval</i>	<i>Current Forecast</i>	<i>Difference</i>
Cost (£m)	2,813	3,647	+ 834
ISD	April 2003	December 2010	+ 92 months

*Key Events/Decisions since March 2009*

- Design and Development flight trials programme has made good progress and is expected to complete at the end of December 2009.
- The first production aircraft (PA04) completed its first flight from BAES Woodford on 10 September 2009 and is expected to be delivered to MoD in November 2009.
- Aircraft production remains on programme to meet an In Service Date of 2010.
- Measures have been identified to reduce the additional cost growth (+£46 million) that will be reported in the MoD's *Major Projects Report 2009* (as shown in the table above).

*Key Events/Decisions expected in the next six months*

- A Main Gate submission proposing the strategy for the support of MRA4 is planned for early 2010.

## LYNX WILDCAT

	<i>Original MG Approval (50%)</i>	<i>Current Forecast (50%)</i>	<i>Difference</i>
Cost (£m)	1,966	1,669	- 297
ISD (Army)	August 2014	January 2014	- 7
ISD (Navy)	August 2015	January 2015	- 7

*Programme Update*

The UK commitment to the Wildcat programme was re-confirmed in December 2008.

The programme remains on target to deliver a new Light Helicopter for the Army and Royal Navy from 2014 and 2015 respectively.

We have worked closely with AgustaWestland to identify significant savings to Wildcat equipment and support programme and have reduced the number of aircraft we are planning to acquire from 70 to 62.

The reduction in aircraft numbers is the result of a review of our Light Helicopter requirement and of our work with AW to establish increased commonality between the Army and Royal Navy variants of Wildcat and their training and support arrangements, which will give the fleet as a whole greater versatility and flexibility.

The Army Wildcat will perform a range of tasks on the battlefield including reconnaissance, command and control, the transportation of troops and materiel, and the provision of force protection. The Royal Navy variant will be an important element of ship defence against surface threats as well as acting as a light utility helicopter.

*Key Events/Decisions since the Committee last examined Lynx Wildcat*

- 9 September 2009—Delivery of TI#3 Airframe.
- 31 August 2009—Receipt of Technical Proposal for Training and Support Solution.

*Key Events/Decisions expected in the next six months*

- October 2009—Flight Trials Readiness Review.
- November 2009—Wildcat TI#1 First Flight.
- March 2010—Achievement of block 1 Trials Flying.

PUMA LIFE EXTENSION PROGRAMME (LEP)

	<i>Original MG Approval (50%)</i>	<i>Original MG Approval (90%)</i>	<i>Current Forecast (50%)</i>	<i>Difference</i>
Cost (£m)	339	359	339	Nil
ISD	October 2013	March 2014	October 2013	Nil

*Programme Update*

Puma LEP will deliver a series of modifications to extend the life of 28 or more RAF Pumas from the current Out of Service Date of 2012 to at least 2022. The resulting aircraft will be known as Puma Mk2. The LEP will address obsolescence, legislative and safety issues and enhance capability. Upgrades will include a digital cockpit, more powerful Makila engines and an up-rated tail rotor.

The engine upgrade will provide a significant enhancement in performance terms and would allow Puma to operate effectively all year round in Afghanistan.

The contract was awarded to Eurocopter (UK) on 18 September 2009. The programme remains within the approved performance, time and cost envelope.

*Key Events/Decisions in the last six months*

- August 2009—Main Gate approval.
- September 2009—Demonstration and Manufacture contract award.
- October 2009—First aircraft delivered to Eurocopter UK.

*Key Events/Decisions expected in the next six months.*

- December 2009—Preliminary Design Review for Defensive Aid Suite.
- February 2010—Aircraft Comprehensive Design Review.

## CURRENT HELICOPTER PLATFORM NUMBERS AND OUT OF SERVICE DATES

<i>Aircraft type/ mark</i>	<i>MoD Departmental Fleet</i>	<i>Effective Fleet</i>	<i>Non- Effective Fleet</i>	<i>Current Planned OSDs</i>	<i>Comments</i>
Apache	67	67	Nil	2030	MoD expects to have to invest further in this aircraft (eg to address obsolescence and meet emerging requirements) during the next decade, in order to sustain its service life up to 2030.
Chinook Mk 2	32	32	Nil	2015 (2040)	Two Mk 2 ac lost in current conflict reducing Mk2/2A fleet to 38. MoD expects to have to invest further in the remaining aircraft to address obsolescence, to meet emerging requirements and to ensure they can achieve the planned OSD of 2040 during the next decade, although no investment decisions have yet been made. It is expected that 8 Mk3 a/c will be operational by the end of 2010.
Chinook Mk 2a	6	6	Nil	2025 (2040)	
Dauphin (N3)AH Mk 1	4	4	Nil	2029	With effect from July 2009. Replaces Agusta 109.
Gazelle	87	40	47 (see Note 1)	2018	Where there is an enduring requirement for the capability currently provided by Gazelle, MoD is exploring arrangements based on leased aircraft.
Lynx Mk3	32	28	4	2015	It is expected that these aircraft will be replaced by the maritime variant of Future Lynx from 2015. (see Note 6)
Lynx Mk 8	33	33	0	2017	
Lynx Mk 7	77	68	9	2015	It is expected that these aircraft will be replaced by the battlefield variant of Future Lynx from 2014. (see Notes 5 and 6)
Lynx Mk 9	23	22	1	2018	
Merlin Mk 1	42	42 (see Note 2)	Nil	2029	MoD is currently preparing to upgrade 30 (see Note 3) of these aircraft through the Merlin Mk 1 Capability Sustainment Programme.
Merlin Mk 3	22	22	Nil	2030	MoD expects to have to invest further in this aircraft (eg to address obsolescence and meet emerging requirements) during the next decade, in order to sustain its service life up to 2030.
Merline Mk 3a	6	6	Nil	2030	
Puma	43	34	9 (see Note 4)	2025	MoD has now invested in upgrading the Puma aircraft and extending the service life to 2025.
Sea King Mk 3/3a	25	25	1	2017	It is expected that the capability provided by these aircraft will be replaced by a joint PFI service with the Maritime and Coastguard Agency.

<i>Aircraft type/ mark</i>	<i>MoD Departmental Fleet</i>	<i>Effective Fleet</i>	<i>Non- Effective Fleet</i>	<i>Current Planned OSDs</i>	<i>Comments</i>
Sea King Mk 4	38 (see Note 7)	37	1 (see Note 7)	2012	MoD is assessing the future of SK MK4 and how the roles that this aircraft type perform might be best undertaken in the future.
Sea King Mk 6c	5	5	Nil	2010	
Sea King Mk 5	15 (See Note 8)	15	Nil (see Note 8)	2017	It is expected that the capability provided by some of these aircraft will be replaced by a joint PFI service with the Maritime and Coastguard Agency.
Sea King Mk 7	13	13	Nil	2018	MoD is assessing the future of SK Mk7 and how the roles this aircraft type performs might best be undertaken in the future.

#### *Notes*

1. The Non-effective fleet currently includes 42 aircraft for disposal and five ground training aircraft.
2. Three of these aircraft are in storage and have been cannibalised heavily; one has been extensively modified as part of a joint MoD/Industry technology demonstrator programme. Recovery to a fully serviceable condition would take significant time and investment. These aircraft are, under today's definitions, classified as effective until such time that a decision is taken to dispose of them.
3. The Department reviewed its investment plans across a number of capability areas during 2008; this review was known as the Equipment Examination. As a result, the MoD determined that, given current defence priorities, it would not take up an option to modify an additional eight Merlin Mk1 aircraft and that its contractual commitment would remain at 30 aircraft. The Department is currently exploring whether it has further use for those aircraft not being modified under the Merlin Capability Sustainment Programme, they will otherwise be disposed of in the most cost effective way (including consideration of sales opportunities).
4. The Non-effective fleet include five "Category 5" plus four "Category 4" damaged helicopters not expected to fly again as Puma Mk 1 aircraft.
5. The Lynx Mk 9 Fleet is currently undergoing a Communications and Engine Upgrade programme that will change the overall capability of the MK 9 aircraft.
6. There is currently a scheduled fleet run down and donor strip programme that is feeding the Wildcat project with high-value serviceable assets for inclusion in the new aircraft.
7. An additional aircraft was returned from QinetiQ to MoD ownership—plus 1 aircraft CAT 4 at HMS Sultan.
8. There is and additional flying Mk5 not included in the total above which is a project team owned asset and is on loan to Qinetiq at Boscombe Down to use for testing. In addition there is also a CAT 5 aircraft at HMS Sultan which not expected to fly again.

10. *Following the Naval Base Review, which concluded that we should retain all three Naval Bases, could you outline the program of work that each will do over the next 10 years. What is the program for the three dockyards and what is the future utility for Rosyth after the completion of the Carrier programme?*

10.1 The Maritime Change Programme (MCP) was established in October 2007 and incorporates the post Naval Base Review (NBR) work. It provides a strategic framework for the cohesive, coherent and sequenced delivery of a number of change initiatives across the maritime domain flowing from the 2005 Defence Industrial Strategy (DIS) and the outcome of the NBR. On the 6 May 2009, the then Minister for the Armed Forces announced the way forward on a number of MCP key areas that will critically shape the maritime industrial and operational landscape well into the next decade. All three Naval Bases (at Devonport, Portsmouth and on the Clyde) have a strong future and will continue to play a vital role in supporting the Royal Navy.

10.2 The announcement confirmed that HM Naval Base Portsmouth will be the home port for the new Type 45 Destroyers and the Queen Elizabeth Class Aircraft Carriers. Subject to main investment decisions, to be made early in the next decade, the most complex war fighting variant of the next generation of Royal Naval frigates—the Future Surface Combatant—will be base ported in Portsmouth to maximise the benefits of the common systems and equipment also fitted to the Type 45s and Queen Elizabeth Class Carriers. This paves the way for Portsmouth to become, in the longer term, the main operating base for our most complex warships. In addition to providing Fleet Time Engineering Support for these vessels, six Type 23 Frigates and the eight Hunt Class Mine Counter Measure Vessels, Portsmouth will undertake sufficient Deep Maintenance activity on an occasional basis to sustain the capability of key skills.

10.3 HM Naval Base Devonport will be the main operating base for Amphibious Shipping, Survey and Hydrographic vessels, for the Type 22 Frigates and for at least the next five years, for seven of the Type 23 Frigates. Devonport will also continue to provide world class sea training through Flag Officer Sea Training and will undertake Fleet Time Engineering support for base ported ships and for visiting sea training vessels. Devonport will also retain and, subject to commercial negotiations, enhance its position as the centre of excellence for Surface Ship and Submarine Deep maintenance activity. Finally, subject to ongoing approvals, Devonport will be developed as the centre of specialisation for Amphibious Operations by moving No 1 Assault Group Royal Marines, including the Landing Craft of 10 Training Squadron and 539 Assault Squadron currently at Poole and Turnchapel to Devonport.

10.4 HM Naval Base Clyde will become the main operating base for all classes of submarines, including the future classes of submarines, such as the replacement for the Vanguard Class, and eight Sandown Class Mine Counter Measure Vessels. Fleet Time Engineering support for these vessels will also be undertaken at Clyde. To reduce duplication of facilities and to provide future stability for submarine personnel we intend to accelerate the move towards a single submarine operating base some six years earlier than originally planned, although there will be no base porting changes for around five years. This decision will see three of the Trafalgar Class submarines transfer from their base port at Devonport to Clyde upon completion of their respective mid-commission major maintenance periods. This is currently expected to be by 2017, while four will remain at Devonport until their planned decommissioning dates (currently 2010 to 2017). We will ensure that the necessary infrastructure to support this move will be put in place.

10.5 Rosyth dockyard, which is privately owned and operated by Babcock, currently has a strong order book of MoD work: it is currently a key location for surface ship upkeep work through the Surface Ship Support Programme and is at the heart of the build programme for the two new Queen Elizabeth Class aircraft carriers.

10.6 As work on the new aircraft carrier programme at Rosyth increases, it is envisaged that deep maintenance surface ship work will be predominately undertaken at Devonport dockyard (which is also owned by Babcock). This is to ensure best use of industry wide resources. Beyond this, the future programme of MoD work with Babcock is still being considered; in particular, the location of future surface warship upkeep packages will be discussed and managed by members of the Surface Ship Support Alliance (MoD, Babcock and BVT Surface Fleet Ltd).

11. *The MoD reported in a Defence News article on 7 October 2009 that Apache was playing a crucial and effective role in operations in Afghanistan and that Integrated Operation Support contracts, such as that used for Apache, were achieving a better distribution of risks between the MoD and its suppliers. What lessons have been learned from the Apache programme? What were the key challenges and how were they overcome?*

11.1 The Defence News article on 7 October 2009 was describing the announcement of award of an IOS contract for the Apache IOS to AgustaWestland. The contract was signed on 29 September 2009 with a full service provision date of 1 April 2010. The anticipated benefit of the Apache IOS contract from full service provision is improved aircraft availability both within the UK and on operations at reduced support cost, through incentivising industry to be fully responsible for delivering the outputs specified in the contract.

11.2 The key challenge in getting to Apache IOS contract award was to achieve an output-based proposal from Industry at better value for money to defence than the current (previous) input-based contract. The challenge was overcome by demonstrating a robust and implementable internal benchmark support solution, which also clearly demonstrated value-for-money in its own right that Industry had to better in terms of value-for-money and effectiveness in order to be awarded the contract.

11.3 The key lesson learned from this was that Industry had to find innovative ways to deliver a better value-for-money solution as a result of the MoD demonstrating that it had developed an alternative feasible/credible support solution against which the Industry solution could be benchmarked.

6 November 2009

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### **Memorandum from the International Society for Human Rights, (British Working Group)**

#### **BACKGROUND**

1. Since the finding in the Court of Appeal in *Secretary of State for Defence v R and HM Assistant Deputy Coroner for Oxfordshire and Equality and Human Rights Commission*, that serving military personnel have the protection by the Human Rights Act. The Ministry of Defence (MoD) must take reasonable steps to ensure that the soldiers it deploys are prepared and that they are kitted out correctly. And that though the MoD presently enjoys immunity for claims brought against it, for incidents that occur in the heat of battle, this may not be found to extend to knowingly putting personnel at risk by the procurement and issuing of substandard or inherently inferior body armour, that is substandard and inferior to that which is readily available.

2. Though it is recognised the MoD seeks to provide the Armed Forces personal with the best levels of protection available, there is a growing consensus of opinion that the Osprey system, regardless of version, is not that.

3. As a direct consequence of this, there are reports of not only a number of deaths due to troops either removing kit or wearing inappropriate gear, but also as a direct consequence of the limitations of the coverage and projectile stoppage afforded by Osprey system issued.

4. There are body armour systems available that already offer lower life cycle costs, are lighter, with greater mobility and more diverse and greater range of potential projectile and multiple impact stoppage, as well as groin and neck protection. Namely Pinnacle Armours Dragon Skin®.

#### THE ALTERNATIVE

5. The advantages of the Dragon Skin® (Flexible Body Armour) system are; It weighs less (having the lightest weight for the ballistic and fragmentation protection capabilities provided); That it can sustain greater amounts of impacts than current monolithic ceramic plate technology (MCPT) such as is used in the Osprey and Interceptor systems—which affords increased soldier survivability and operational efficiency; Has demonstrated 45–52% reduction in average back face deformation/reduced trauma to the body compared to MCPT. (Meaning the wearer can take multiple hits on the vest and keep fighting effectively.); The flexible configuration of the discs allows the wearer to move with greater ease decreasing the level of energy expended on patrol; Greater durability compared to the monolithic ceramic plate technology. (Subject to damage sustained, a lower life cycle cost compared to Osprey’s bi-annual replacement of its four plates.); Demonstrated reduced edge affected zone means increased effective area of coverage; Dragon Skin is also the first body armour system that can be tailored to be mission specific, offering greater amounts of coverage options, and can be tailored to the 97th percentile, of the population, for both genders. In either tactical or concealed configurations; The system also eliminates ricochets’ from obliquity/angled shots up to 60°. (The rigid MCPT’s as used in Osprey have ricochet shots starting at approximately 35°.)

#### CONCLUSION

6. The safety and well being of all service personnel is paramount. As is their, and their families’ perception of their well being and safety. And although it is unfortunately impossible to protect them from every eventuality, providing the Armed Forces personnel with the best levels of protection available—is required.

#### ACTION REQUIRED

7. Osprey is viewed some personnel and families as not being the best available solution, and needs to be independently thoroughly tested and reviewed against competing systems. Namely Pinnacle Armours Dragon Skin®. If for nothing less than to reassure personnel and their families, that it is the best system available.

*15 November 2009*

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#### **Memorandum from The Boeing Company**

In response to the House of Commons Defence Select Committee’s inquiry into the MoD’s Defence Equipment programme, The Boeing Company is pleased to submit the following evidence. In this document, Boeing provides information about, The Boeing Company; Boeing Integrated Defense Systems; Boeing’s C-17 Globemaster III programme and the status of the programme as of November 2009.

#### GENERAL INFORMATION

1. Boeing is the world’s leading aerospace company and the largest combined manufacturer of commercial jetliners and military aircraft, with capabilities in rotorcraft, electronic and defence systems, missiles, satellites, launch vehicles and advanced information and communication systems. The company’s reach extends to customers in 90 countries around the world and Boeing remains the number one US exporter in terms of sales. Headquartered in Chicago Illinois, USA, Boeing employs more than 158,000 people in more than 70 countries.

2. Boeing has a long standing relationship with the UK dating back over 70 years and today the UK remains a critically important market for the company as a supplier base and a source for technology partners. Boeing’s annual spend in the aerospace industry supports thousands of jobs around the UK, in the process generating intellectual property and facilitating exports. There are currently more than 600 Boeing UK employees in locations from Almondbank to Gosport.

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## BOEING INTEGRATED DEFENSE SYSTEMS

3. Boeing Integrated Defense Systems (IDS) combines weapons and aircraft capabilities, intelligence and surveillance systems, communications architectures and extensive large-scale integration expertise across three business profit and loss centres. A \$32 billion business with 70,000 employees worldwide, Boeing Integrated Defense Systems' strategy is to understand the enduring needs of customers and provide capability-based solutions to meet their rapidly evolving requirements. The strategy includes understanding the art of using current and emerging technologies to improve the capabilities of existing products and delivering new solutions.

4. The UK is a critically important market for The Boeing Company, as a supplier base and a source for technology partners. In line with the Ministry of Defence's Defence Industrial Strategy, that calls for the retention of key capabilities within the UK, Boeing IDS established a new on-shore business, Boeing Defence UK Ltd. The business now possesses a broad range of capabilities that have grown organically to include systems engineering, integrated logistics support, modelling simulation analysis and experimentation, amongst numerous others.

## BOEING C-17 GLOBEMASTER III

5. A nation's strategic airlift capability is an essential lynchpin in its national security strategy. Airlift delivers the global reach that allows the United Kingdom to deploy and sustain forces globally to meet their security interests whenever and wherever necessary. The Boeing C-17 Globemaster III is designed to fulfill military and humanitarian airlift needs well into the 21st century. A high-wing, four-engine, T-tailed aircraft with a rear-loading ramp, the C-17 can carry large combat equipment and troops or humanitarian aid across international distances directly to small airfields anywhere in the world. With a payload of 160,000 pounds, the C-17 can take off from a 6,700-foot airfield, fly 2,400 nautical miles, and land on a small, austere airfield in 3,000 feet or less. The C-17 is equipped with an externally blown flap system that allows a steep, low-speed final approach and low-landing speeds for routine short-field landings.

## C-17 STATUS (NOVEMBER 2009)

6. The Boeing C-17 Globemaster III is the Royal Air Force's most flexible, reliable and capable airlift aircraft that flies well above its original planned usage rate. The C-17 continues to be a vital component of the air bridge to Afghanistan and, as the UK's armed forces operate around the globe, the aircraft encapsulates the RAF's enduring requirement for a workhorse that is equally at home in both combat and humanitarian relief missions. In current operations, the C-17 has a proven capability of delivering more cargo, troops and supplies than any other UK aircraft. A strategic asset by definition, the C-17 possesses valuable characteristics that enable it to operate in a tactical environment where smaller, less capable aircraft would typically be found. To date, the C-17 programme has delivered over £650m of value to the UK's aerospace industry through an industrial participation agreement. The UK also benefits industrially with several companies including Cobham Plc and CAV Aerospace, being suppliers to Boeing's C-17 programme.

7. The C-17 is backed by Globemaster Sustainment Partnership (GSP), which is a performance based logistics agreement focused on readiness. Boeing is responsible for all C-17 sustainment activities, including material management and depot maintenance support with the RAF's aircraft being supported by a dedicated team at Brize Norton.

8. Boeing has recently delivered its 190th C-17 to the US Air Force and in total is scheduled to deliver a total of 213 C-17s to the US Air Force. In addition, Boeing has delivered four aircraft to Australia, three to NATO, four aircraft to Canada, two aircraft to Qatar and the company will deliver a total of four aircraft to the United Arab Emirates. The RAF originally leased four aircraft that were converted into an outright purchase in 2006 and following that time they have also received two further aircraft.

## CONCLUSION

9. The C-17 delivers outstanding operational capability to the armed forces. The UK remains an extremely important market for the Boeing Company, as a supplier base and a source for technology partners. Boeing currently works with the Ministry of Defence across a range of programmes and the company looks forward to building on this relationship in the future under a variety of platform, sustainment and network enabled capability programmes. The Boeing Company has a strong desire to continue to provide a reliable and capable airlift aircraft to the Royal Air Force.

*16 November 2009*

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## Memorandum from A D S (Advancing UK AeroSpace, Defence and Security industries)

### INTRODUCTION

1.1 A D S is the trade organisation advancing UK AeroSpace, Defence and Security industries with Farnborough International Limited as a wholly-owned subsidiary. A D S also encompasses the British Aviation Group (BAG). It is formed from the merger of the Association of Police and Public Security Suppliers (APPSS), the Defence Manufacturers Association (DMA) and the Society of British Aerospace Companies (SBAC).

1.2 The UK Defence Industry employs more 300,000 people throughout the UK and makes an enormous contribution to the nation's science, engineering and skills base. Through training thousands of apprentices each year the industry offers high skilled job opportunities and real careers. Defence is a diverse sector with world class multinational companies right through to highly successful small and medium sized (SMEs)—indeed the UK has more SMEs in its Defence Sector than France, Germany, Italy and Spain combined. UK defence equipment is world class and internationally competitive and in 2008 defence exports were worth £5 billion to the UK economy.

1.3 This paper covers the issues arising from the Committee's Report on Defence Equipment 2009, the Third Report of Session 2008–09, specifically strategic capabilities and equipment procurement performance, Progress in implementing the Defence Industrial Strategy, and Defence Research Spending. Finally, the paper also covers industry's reaction to Bernard Gray's report on defence acquisition.

### ISSUES ARISING FROM THE REPORT ON DEFENCE EQUIPMENT 2009

#### A. *Strategic capabilities and equipment procurement performance*

2.1 Industry welcomed the creation of DE&S as it removed the artificial division between procurement and support. DE&S is still a young organisation but what is clear is the problems in the procurement process. As Bernard Gray notes these difficulties stem from the way the entire acquisition process works and several problems exist prior to DE&S involvement in the process. Industry believes that the change programme has had mixed success and that fundamental problems remain.

2.2 The Committee last year commended MoD for its performance in delivering the programme of UORs, but expressed concern that the performance on the longer term programme had declined. Industry remains proud of the contribution it has made, in partnership with MoD, to the delivery of a significant number of urgent improvements to the front line. Lessons can be learned from the UOR process and applied to longer term procurements. But, as the Committee's Report made clear, significant focus and funding is essential for the longer term programme. Affordability of the programme remains a major issue, and it is overwhelmingly clear that that a balanced programme cannot be achieved without a Strategic Defence Review. Industry welcomes the commitment of the major political parties to such a Review and trusts that it will bring a more predictable backdrop to the position of defence companies in the UK.

2.3 Industry considers that an essential element of the Review must be a refreshed Defence Industrial Strategy in order to recognise the nature and extent of the required strategic capabilities. The Committee made the same point in their last Report. The defence industry is an essential element in the delivery of military capability in the UK, and the operational experience of the past few years has demonstrated that beyond doubt. Having a sovereign capability to support and upgrade systems and equipment in an operational environment has been vital to the front line effort, and that lesson should not be forgotten. This aspect is also underpinned by Research and Development. In this respect, joint MoD and industry activity provides the insurance against emerging threats thus allowing specific capabilities to be fielded as operations become a reality. Again, the nation's R&D capacity is a strategic resource and needs to be managed accordingly. Neither Systems Engineering capability nor R&D capacity can be switched on and off and its creation and sustainment does not happen by accident. It is developed over time and can be sustained through a clear strategy and through a partnership between MoD and industry to ensure its delivery.

#### B. *Progress in implementing the Defence Industrial Strategy (DIS)*

3.1 Industry welcomes the implementation of the Defence Industrial Strategy. Progress has been patchy but there is clear evidence that where it has happened, it is delivering the results that the original strategy envisaged. In sectors such as surface ships, munitions, and complex weapons, agreement on what national operational capability is required has led to long term arrangements which will deliver assured capability in return for a transformed industrial landscape, delivering best value for money. That should provide the Model for the future.

3.2 Even in sectors where progress has not been as rapid as the DIS envisaged, there has been success in the application of partnering arrangements. The Integrated Operational Support (IOS) programmes for Merlin, Sea King and Apache and the Tornado ATTAC programme have all demonstrated the value, and better operational performance, which can be achieved through the application of sensible through life capability principles. This approach is now being implemented for other systems, such as Harrier and Typhoon and points the way for the future.



3.3 Less progress has been made in other areas. For instance, uncertainty around the status of the Future Battlefield Helicopter competition jeopardizes a sustainable UK helicopter design and development capability whilst the development of sector strategies, such as that for Armoured Fighting Vehicles (AFV), appear to have placed less emphasis on maintaining a complete industrial capability in the UK. Industry believes, however, that a high level of operational sovereignty on AFVs can and must be maintained by sustaining, at a minimum, a strong systems engineering and platform integration capability able to develop and adapt platforms to meet the specific requirements of particular campaigns. Industry is of the view that the AFV Sector strategy would maintain that if properly implemented.

3.4 The C4ISTAR sector, described in DIS1 as “healthy,” was never such from a business perspective and has become less so as the Equipment Programme has become less coherent due to the disruptive effects of UOR programmes. We encourage the MoD to continue its welcome efforts to clarify thinking in the C4ISTAR area.

3.5 Finally, industry recommends that Government must decide if the wider economic and industrial strategies in regards to defence are to be covered as part of a future Defence Industrial Strategy or to be considered separately as part of industrial policy, supported by the Department for Business, Innovation and Skills (BIS). Industry notes that in considering the defence industrial base, Government must also take account of the interaction between defence and other sectors eg security, energy and transport.

### C. Defence Research Spending

4.1 The Committee’s last Report highlighted its concern about the reduction in R&D spending, and industry shares that concern. Given that the downward trend is continuing, we are not convinced that MoD has got the message, although the funding position once again distorts the picture, and militates against long term decision-making.

4.2 The Defence Industrial Strategy noted the correlation between R&D spending in early years and long term military capabilities, not to mention the wider impact on other high technology sectors of the economy. R&D spending is also the seed corn for future industrial capability that provides the basis for competitive advantage in the export market.

4.3 Industry proposes that Government not only has to continue support of defence R&T but also invests more wisely. The key interest here for industry—and we believe the MoD—is in ensuring that more money is spent in areas where technology can be pulled through to the front line in real operational capabilities. That requires a strong connection between the SIT community in MoD, the capability development organisation, and DE&S.

4.4 The defence industry would have more confidence in its own investments if Government were to demonstrate clarity about the type and scale of its investment and also a stronger commitment to early stage funding.

4.5 Finally, AIDIS is considering the latest changes to the management of science in MoD, announced recently by CSA, in this context. While we have not yet formed a considered view, we would want to be persuaded that MoD can deliver this objective more effectively in the new organisation.

### D. Review of Acquisition for the Secretary of State for Defence

5.1 Industry was consulted by Bernard Gray and welcomes the publication of his report into defence acquisition. The Gray report highlights some of the systemic problems which have given rise to an overheated programme over an extended period, and points to the need for a more stable framework within which long term acquisition decisions can be made. As the DIC’s report, *Securing Britain’s Future and Prosperity* makes clear, we support the need for acquisition reform, and the Gray report is a major contribution to the way forward.

5.2 We do not underestimate the major challenges faced by DE&S in acquiring equipment in the current operational environment, and against the background of the funding difficulties faced by defence in recent years. As the industry made clear in its evidence to the Committee last year, the establishment of the DE&S in these circumstances has been an excellent example of implementing change in difficult circumstances. And, as Gray points out, the challenge of complex defence acquisition is not peculiar to the UK. Industry would contend that equipment acquisition in the UK is at least, probably more, effective, than in the US and Europe. But we should not shy away from the need for reform.

5.3 Much of the Gray report goes to MoD organisational matters. That is a matter for MoD. Industry would support the call for regular Strategic Defence Reviews, as a realistic means of keeping the defence programme in balance over time. The implementation of structural changes which will ensure that the overall affordability of the programme is considered systematically is also to be welcomed.

5.4 On acquisition itself, the industry considers that the future should be based on a system which provides for the earliest possible introduction into service of operational capability, and the development of that capability through incremental or spiral change over time. That seems to be an aspiration shared by Gray and we welcome the changes recommended that would enable this change. Some of this can build on the lessons learned from UOR acquisition, especially the early engagement of industry in the definition and development of the requirement, and an increased focus on the trades between time, cost and performance.

It also requires a more sophisticated understanding of how to manage early collaboration with industry so as to determine the optimum solution to a capability requirement alongside the need to achieve value for money through life. This calls for changes to the MoD's approach to competition, in terms of assessing when collaboration needs to translate into competition.

5.5 Industry also endorses the need for an up-skilled DE&S, which has clearly been the aim for some time, and which currently has the focus of CDM and 2nd PUS in MoD. We welcome Gray's recommendations on this. It is in the interest of industry to interact with a credible, competent acquisition organisation with top class commercial and project management skills. We do not underestimate some of the difficulties of achieving this in a public sector environment, and it may be that there is a need for augmenting the capability of DE&S with private sector capability. But we would accept the Government's decision that it would be a step too far to establish the DE&S as a Go-Co.

5.6 There are two other aspects of Gray on which we would wish to comment. First, is the need for exportability to be a factor systematically taken into account in future acquisitions. Industry wholeheartedly supports this objective. Exportability may not need to influence every acquisition decision, but whether or not changes in the requirement could change our ability to export a capability should at least be considered, and, with increasing modularity and scalability in design, it is more possible to achieve today than it has ever been before. Some good work is already being done in this area, and we welcome the attention that this issue is now receiving.

5.7 Second, is Gray's concern about Through Life Capability Management (TLCM). We understand, and share, some of the reservations expressed about the complexity of its implementation, but the principles of TLCM remain valid, especially at its core, which is the need to consider how best a particular capability can be delivered over a long period. We would not wish to see the baby thrown out with the bathwater. Rather, we would wish to see a more pragmatic approach, building on the success of programmes such as Tornado ATTAC, whereby incentivised availability contracts could be extended to include the incremental insertion of capability. This would require the MoD to challenge the industrial consortium concerned to generate even greater efficiencies so that the resulting resource headroom could be re-invested in that platform or capability according to the Through-Life Management Plan.

5.8 An issue not addressed is the need a more coherent policy on international cooperation. This will allow long-term value for money and secure a volume of orders that ensures the viability of key capabilities in the UK.

5.9 Finally, we note that it is the Government's intention to publish a new strategy for acquisition, based on its response to Gray, and the work of the Defence Acquisition Reform Programme, and we look forward to that in the New Year.

*7 December 2009*

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#### **First supplementary memorandum from the Ministry of Defence**

A Defence Acquisition Reform Project team is currently developing a Strategy for Acquisition Reform, working to a Steering Group led by Lord Drayson.

The Strategy builds on the report of Acquisition, by Bernard Gray, and the subsequent eight point plan response by the Defence Secretary to Parliament on 15 October.

The overarching aim of the Strategy is to develop a planning and management framework that will ensure an enduring affordable Equipment and Support Plan.

It will also detail how the delivery of the Equipment and Support plan will be improved, for instance, by up-skilling and by the production of a clear business-like structure between the Head Office and DE&S.

The various actions in the eight-point approach referred to above are all being progressed. As an example, the newly created Defence Board Sub-Committee on Equipment met for the first time on 23 November. This was a productive first meeting that was used to discuss the equipment programme and the sub-committee's future engagement.

The Strategy will be published alongside the Green Paper in the New Year.

*14 December 2009*

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## Second supplementary memorandum from the Ministry of Defence

The Department's responses for information following the Committee's session with the Chief of Defence Materiel on 1 December 2009 are set out below:

### 1. *A description of the four main areas of skill shortages which CDM started to list in his oral evidence. [Q8]*

DE&S in seeking to continuously improve its skills and is focused on doing so in the following four areas:

1. Cost Assurance, including:
  - (a) Cost Forecasting (develop cost models and forecasts to support decision making around capability options);
  - (b) Cost Engineering (providing cost estimates and contract pricing in the absence of competition to support value for money considerations); and
  - (c) Cost Certification (including negotiating and agreeing rates and verifying contractor payments during and post contract).
2. Technical Assurance (Technological and Engineering advice and support to project teams).
3. Financial skills (in particular Management Accounting skills); and
4. Complex Programme Management (Managing projects in their widest context).

### 2. *How many MoD people are involved in buying helicopters? [Q20]*

2.1 As at 30 November 2009 the DE&S Helicopters Operating Centre had 858 crown servants (military and civilian) in post. Of these approximately 420 directly manage work on Apache, Lynx, Merlin, Sea King and Wildcat helicopters for which AgustaWestland is the main contractor, addressing "buying" issues such as: commercial, engineering, finance, in-service support, core and UOR project management, requirements and safety. The remaining 438 manage similar work with other Companies, such as Boeing, Eurocopter and Lockheed Martin, plus Operating Centre business management.

### 3. *Comments on the data on staff rotation provided in the graph on p184 of the Gray report, including the MoD's own data for staff rotation on project teams. [Qq57-68]*

3.1 Data on staff tenure in project team leader appointments is not held in a form that would permit meaningful analysis or comparison with the graph on page 184 of the Bernard Gray report. Work will be undertaken to produce an analysis and the results will be provided to the Committee in the New Year.

### 4. *A description of the methodology used to calculate the estimates of £21 billion and £6 billion for the extent of over-programming. [Q77]*

4.1 The Defence Budget until 2010-11 reflects the 2007 Comprehensive Spending Review settlement (CSR07). The projected Defence Budget thereafter assumes a level budget in real terms, based on an annual 2.7% increase from 2010-11, adjusted to exclude an element of ring-fenced expenditure which was provided as part of the CSR 07 settlement.

4.2 The future Defence Programme is costed using generic Corporate Planning Assumptions for inflation. Inflation indices for specific industrial sectors are used where it is appropriate to do so. It is assumed that, consistent with the 2006 White Paper, the future strategic deterrent will be funded beyond 2010-11 in such a way that would not be at the expense of the conventional capabilities our Armed Forces need.

4.3 Costs for projects in the forward Equipment Programme are based on analytically generated estimates. Each project is costed at a 50% confidence level. Statistically, those projects exceeding their estimated cost should be balanced by those undershooting.

4.4 At the start of Planning Round 09 the cost of the future Defence Programme exceeded the projected Defence Budget by £21 billion over the 10 year planning horizon. After changes resulting from the Equipment Examination and Planning Round 2009, an excess of £6 billion remained between the costed programme and assumed budget at the end of Planning Round 2009. This is being addressed in the current planning round and the forthcoming defence review.

### 5. *Spend to date on the FRES programme. [Q143]*

5.1 The total spend on the FRES programme to 30 October 2009 was £189 million (inclusive of non-recoverable VAT). None of this money has been wasted. The knowledge gained has refined our understanding of the requirement; reduced technical risk; and up-skilled the project team with specialist management and integration skills. This all continues to have a direct or indirect benefit to the FRES programme as it moves forward. The table below gives the breakdown of this spend for the Utility Vehicle and Specialist Vehicle programmes, and the benefits derived. The table does not include the £6 million spent on the Concept Phase, which established the baseline for all subsequent work in the FRES programme.

<i>Category</i>	<i>Utility Vehicle (£m inc non-recoverable VAT)</i>	<i>Specialist Vehicle (£m inc non-recoverable VAT)</i>	<i>Benefits</i>
Assessment Phase Activities	54	44	The primary outputs of the Assessment Phase so far include: the development of the detailed requirement; technology management; and systems and engineering integration studies. The outputs of this work will enable the Utility Vehicle programme to progress rapidly to Demonstration once the programme restarts. Much of the Utility Vehicle Assessment Phase work was of direct benefit to the Specialist Vehicle programme. These figures also include engineering and technical support to the MoD project team in managing the above activities. These skills were successfully transferred to MoD personnel in the project team and are of significant benefit to the management of the programme as it moves forward.
Systems of Systems Integrator (SOSI)	9	1	The SOSI formed part of the project team and aided the management of the complex multi-platform and wider battle-space integration issues. SOSI personnel were engaged to provide Systems Integration, Engineering Integration and Through Life Capability & Technology Management expertise. Again, these skills were successfully transferred to MoD personnel in the project team and are of significant benefit to the management of the programme as it moves forward.
Technology Demonstrator Programmes (TDPs)	68	5	TDPs are studies into technology that could be used through life on FRES vehicles. These included Electronic Architecture, Protection, Chassis and drive concepts. The output of these studies provides vital technology risk reduction work and technical information of significant value for all the FRES vehicle families.
UV Trials of Truth	2	n/a	These were the assessment of the three contending vehicles for the Utility Vehicle Design role. The results of these trials provided a detailed understanding of capabilities of the vehicles involved, a good insight into the capabilities of industry, and physical evidence of the further work needed to mature the vehicles. This will be of significant value to the Utility Vehicle programme when it restarts.
<b>Total</b>	<b>133</b>	<b>50</b>	

6. *The rationale originally for having 12 Type 45s in the equipment programme [Q218]*

6.1 The requirement for 12 Type 45 Destroyers was first set out in the 1998 Strategic Defence Review. The SDR confirmed the need to maintain plans to modernise the destroyer and frigate force, but reduced its size from 35 to 32. The need to meet a broad range of operational demands required a balanced fleet of Destroyers and Frigates, and it was judged that 12 Destroyers would be sufficient to meet this requirement with acceptable military risk against the planning assumptions and policy baseline at that time.

7. *When will the Type 45s be fitted with close range weapons systems [Q220]*

7.1 The Phalanx Close in Weapon System (CIWS) will be fitted to HMS DARING prior to her first operational deployment. On current plans, this is scheduled to take place during her first maintenance period in the summer 2010.

8. *What examination has been given to the lack of accommodation in the Portsmouth area prior to the base port changes to accommodate additional vessels and also to the security considerations of having most of the fleet in one location? [Q231]*

8.1 Work continues to greater understand the implications of any potential future change to warship base porting arrangements at Portsmouth and Devonport. A number of key stakeholders, including representatives from Portsmouth and Plymouth City Councils as well as Naval Base staff, are involved in this work and have been invited to join a Working Group to support Warwick University in developing a socio-economic model on behalf of MoD. On current plans, the aim is to have the model ready in early 2010 which will then be used to inform debate and the decision making process. Separately, but coherent with this modelling work, the likely impact that base porting changes might have on accommodation and infrastructure at the two Naval Bases is also being assessed.

8.2 Security measures are constantly reviewed to take into account the prevailing threat conditions and number of assets to be protected and, as such, appropriate security measures will be implemented accordingly.

9. *When will the full capability of the Nimrod MRA4 programme be available? [Q236]*

9.1 On current plans, the ninth aircraft is due to be delivered by the end of 2012. As the Secretary of State announced in the House on 15 December, however, we are planning to slow the rate of introduction of the MRA4 force by reducing flying activity in the early years following delivery of the aircraft. We will be discussing with industry how this can best be managed, and until this work has been completed we cannot give a definitive assessment of when Full Operating Capability will be achieved.

10. *Are any UK subcontractors working on the Puma LEP? [Q242]*

10.1 There is a total of 8 UK sub-contractors working on the PUMA Life Extension Programme. They are: Qinetiq, Thales Avionics Ltd, Selex Sensors and Airborne Systems Ltd, Thales UK Ltd, Chelton Ltd, GE Aviation Systems Ltd, Rockwell Collins UK Ltd and HR Smith (Technical Developments) Ltd.

16 December 2009

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#### **Letter from Quentin Davies MP, Minister for Defence Equipment and Support**

At the end of this morning's session of the Committee, Admiral Lambert surprised the Committee—and indeed myself—by suggesting that there might be a gap in our Carrier Strike capability before the entry into service of HMS Queen Elizabeth.

I am now formally writing to you to let you know that Admiral Lambert has discovered that there was an error in the paper that he saw yesterday and which prompted his remark, which was made in good faith and conscientiously in order to ensure that he concealed nothing from the Committee.

In fact studies have revealed that there could be an insufficient number of all-weather pilots trained to fly the JSF at the moment of transition, but having identified this risk we shall be taking steps to mitigate it.

I would be grateful if you would transmit this to other members of the Committee. In order to avoid any public confusion on the point I am releasing this letter to the press.

15 December 2009

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#### **Third supplementary memorandum from the Ministry of Defence**

1. *What was the competition referred to by CDM in his response to Q242? What was the requirement and what criteria were used? Did it include new-build helicopters? [Q242]*

1.1 As Eurocopter are the Original Equipment Manufacturer (OEM) of Puma and Eurocopter had conducted a very similar programme for the United Arab Emirates (UAE), the approved procurement strategy for the Puma Life Extension Programme (LEP) was a sole source contract with Eurocopter. The Department did, however, “market test” the Navigation and Communications solution for the Puma LEP and, as a result, this work also went to Eurocopter.

1.2 The Department examined a range of options to sustain the medium lift capability provided by the Puma Mk1 fleet, including procurement of new-build helicopters. Against the criteria of programme delivery, technical risk, affordability and value for money, the conclusion was that the best route to meeting the capability was to invest in the existing platforms with the OEM to extend their life.

2. *Dr Tyler said that the Puma LEP was going very well. Against what criteria? [Q243]*

2.1 The programme is performing well against the contract schedule. The first aircraft was inducted into the programme on schedule on 1 October and contract milestones due to date have been met on time.

3. *Why does Dr Tyler consider that the Puma LEP has low technical risk and that the Puma is a known quantity, given that experience has shown that new engines, new avionics and other unique equipment never make for low risk, and that the Puma Mk2 will be a unique helicopter?* [Q244 and 247]

3.1 Eurocopter has previously undertaken similar modifications to those in the Puma LEP for other operators; notably the airframe, engine installation and Navigation/Communication suite. The changes that we are planning to make to UK Puma aircraft are substantially the same (~75% common) as a Puma upgrade programme that was successfully prosecuted for the UAE. The features specific to the RAF platform are largely those associated with achieving the UK Theatre Entry Standard and ensuring interoperability with international partners.

4. *How does CDM's comment that there is nothing wrong with the Puma aircraft reconcile with the Dixon/Moss report on crashworthiness?* [Q246]

4.1 The stability and general crashworthiness of the current RAF Puma is comparable with similar medium helicopter types in-service with other countries around the world. The introduction of modern avionics, a Digital Automatic Flight Control System and enhanced engines of the Puma HC Mk2 all improve the intrinsic safety of the platform.

4.2 The Dixon report undertaken after recent Puma accidents concludes that Human Factors (Aircrew) issues predominate with notable contributory causes being the potential distractions of a busy operational mission, whilst operating the aircraft close to its performance margins, and the handling characteristics of the aircraft. The hazards associated with these handling characteristics are mitigated on the Puma HC Mk1 through training.

4.3 The introduction of more powerful and responsive engines, a modern avionics suite (including Digital Automatic Flight Control System) and expected lower Centre of Gravity will further help improve the handling characteristics and reduce aircrew workload on the Puma HC Mk2.

5. *Can the CDM provide further information to support his comment that you can get more helicopters into operation quicker by going down the Puma LEP route than by buying new helicopters?* [Q248]

5.1 To procure new helicopters with an equivalent level of capability as offered by the Puma LEP would have required an additional £500 million – £800 million over the next four years. This additional funding could not be found without detrimental effects elsewhere across the Defence Programme.

5.2 Within the current funding profile assigned to the sustainment of the Puma and Sea King Mk4 and the delivery of the Future Medium Helicopter project, we could only afford to buy a maximum of seven new helicopters by the end of 2012, with up to 18 helicopters delivered by mid-2015. This approach would create a substantial gap in lift helicopter numbers from 2012 until at least 2017 that, at its worst would reduce support helicopter Forward Fleet numbers by up to 40%. Such a shortfall would reduce the numbers of support helicopters we could deploy on operations from 2013 for at least five years and would create a significant shortfall against the current requirement in Afghanistan.

5.3 We concluded, therefore, that within available resources we needed to sustain either the Puma or the Sea King Mk4 if we were to avoid an unacceptable impact on operations. Of these two types, the Puma LEP will deliver a much more capable aircraft with significantly improved performance. We now plan to retire all marks of Sea King during 2016 and the planned investment in the Sea King Mk4 has been substantially curtailed.

6. *Can the CDM explain the numbers he quoted in response to Q250—where does the figure 44 come from? Does this figure include Sea King Mk4? How will Puma be replaced and by when?* [Q250]

6.1 To clarify, it was the view of AgustaWestland that 44 new Merlin helicopters could, when operated alongside our existing fleet of helicopters, deliver the same operational effect as the current Sea King Mk4 and Puma fleets. Our analysis suggested that 49 new Merlin would be required to meet Defence Outputs.

6.2 As part of the Rotary Wing Strategy announced on 15 December 2009 we anticipate replacing Puma with a niche fleet of small medium helicopters aimed specifically at troop insertion and extraction in confined urban environments for which larger helicopters such as Chinook and Merlin are not well suited.

7. *Which has greater lift, the Merlin or the Puma?* [Q251]

7.1 A single comparison of the performance of different aircraft types is not possible as they respond differently to variations in altitude and temperature. We do however employ a methodology devised by the National Audit Office in 2004 (termed a Capability Equivalence Exchange Ratio, CEXR) to describe the relative performance of aircraft types against standard reference missions.

7.2 This approach shows that Chinook is the most able lift helicopter that we operate, being able to lift two and three times more than either the Merlin or Puma. It is for this reason that our new strategy focuses our investments towards buying new Chinook helicopters. It also shows that for maritime operations the Merlin has about twice the lift capability of our current Puma fleet and offers slightly better performance

than the upgraded Puma—this is why we want to focus our investment in Merlin on delivering our maritime requirement. Analysis also indicates that the upgraded Puma will exhibit particularly strong lift performance in the higher temperatures and altitudes in environments such as Afghanistan.

7.3 Furthermore, Puma is physically smaller and its rotor disc generates a lower downwash, making it much better suited for operations in urban environments than both Chinook and Merlin. Our current and planned investments in Chinook, Merlin and Puma is therefore focused on building solutions that are well matched to the different tasks we require of our lift helicopters; it also helps ensure we sustain the required levels of capability.

*14 January 2010*

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## Fourth supplementary memorandum from the Ministry of Defence

## STRATEGY FOR ACQUISITION REFORM—PROGRESS AGAINST EIGHT POINT PLAN

<i>Ser</i>	<i>Commitment</i>	<i>Future milestones</i>	<i>Status</i>
1.	Undertake a Strategic Defence Review (SDR), and establish a legislative mechanism for keeping our Strategy current and aligned.	— Prepare underpinning support for SDR (especially costing, management information, audit) by Summer 2010 — Establish an appropriate legislative mechanism for future SDRs; ideally utilising the Armed Forces Bill. Proposals to Minister by Jan 2010 — Begin to adjust our equipment programme to bring it into balance.	— On track. Positive progress on underpinning elements. — On track. Proposals being developed.
2.	Bring the Equipment Programme into balance	—	— On track. Planning Round reduced equipment programme budget deficit; final decisions ongoing.
3.	Establish a 10-year planning horizon and increase transparency	— Agree 10-year planning horizon with HMT to support SDR — Seek NAO agreement to auditing our assessment of affordability of the Equipment Programme	— On track. Ministers, HMT and Cabinet Office have agreed that MoD will annually share its assessment of affordability with the HCDC. — On track. NAO happy in principle to conduct audits (starting with SDR and are working up proposed approach)
4.	Create the Defence Board Sub-Committee for Equipment (DBSCE)	— Agree sub-committee role and composition by end September 2009 — Sub-committee in operation by end November 2009	— Complete. Committee role agreed and the first meeting occurred on 23 November 2009.
5.	Improve our costing and management of risk	— Develop stronger approach for Cost Estimating. Assessment Phase complete by December 2009 — Establish a Way Forward to improve the management of risk across the programme by May 2010	— AP complete. Way Forward and Funding being addressed in Planning Round. — Way Forward being scoped.
6.	Establish stronger mechanisms for initiating projects and controlling project changes	— Develop Proposals for “Project Initiation” by March 2010 — Building on the above, develop a full Change Control Mechanism (date TBC)	— On track. Proposals being developed.



<i>Ser</i>	<i>Commitment</i>	<i>Future milestones</i>	<i>Status</i>
7.	Sharpen the relationship between MOD Head Office, Defence Equipment and Support (DE&S) and Front Line Commands, and improve visibility of DE&S costs.	<ul style="list-style-type: none"> <li>— Produce internal Terms Of Business Agreement (TOBA) to strengthen roles and business rules by January 2010.</li> <li>— Allocate DE&amp;S project-related manpower costs to the Equipment Programme. Pilots to commence Apr 2010 (subject to HMT discussions)</li> </ul>	— On track. TOBA going through final approval
8.	Improve key acquisition skills	<ul style="list-style-type: none"> <li>— Seek to partner with the private sector to improve key acquisition skills in DE&amp;S. Assessment Phase complete by December 2009.</li> <li>— Skills audit for Capability Sponsor organisation by February 2010</li> <li>— Commercial Skills Way Forward developed by January 2010</li> </ul>	<ul style="list-style-type: none"> <li>— On track. HMT agree in principle.</li> <li>— AP complete. Way Forward and Funding being addressed as part of Planning Round.</li> <li>— On track.</li> <li>— On track. Way Forward developed; funding being addressed.</li> </ul>

### Letter from Ian Godden, Chairman A D S

In giving evidence to the House of Commons Defence Select Committee on 8 December 2009, I was asked about the proportion of research and development on defence equipment that is funded by industry while Ian King referred to the difference between MoD salaries and those in industry. You requested that our panel follow up on these two questions.

Please find below information below on R&D investment by industry as well as data on salaries in BAE Systems and how these compare with MoD.

#### RESEARCH AND DEVELOPMENT

Annual survey data from A D S in 2008 showed that the industry in the UK invested £1.4 billion in defence R&D. This is in fact a conservative estimate of the amount the industry contributes in this respect for two reasons. Firstly, the data was collected as part of the then SBAC aerospace survey, so it covers only defence aerospace. Secondly, it does not include the entirety of the defence industry, but a sample from the A D S membership. Following SBAC's merger with the DMA, we are considering how to include further aspects of the defence industry as part of the survey.

#### BAE SYSTEMS

Below is BAE Systems' benchmark data for the following functions:

- Project/Programme Management;
- Commercial;
- Procurement; and
- Engineering (this includes all Engineering roles as Systems Engineering is not split out specifically).

These relate to the company's new grading structure—known as Watson Wyatt or WW grades—which is progressively being introduced. It has not yet been introduced in the more junior executive grades, which are referred to as Exec grades 3 and 4. An explanation is below:

- WW17—Management Committee level of business;
- WW16—Leader;
- WW15—Leader;
- Exec3—Manager; and
- Exec4—Senior Professional.

It is difficult to be precise about analogue MoD grades, but we would estimate that WW17 probably equates to the first rung in the Senior Civil Service. The lower grades knock on in consequence, but there is no direct read across to lower civil service grades.

Against that background, the data below gives the approximate salary ranges (in £1,000s) for roles within BAE Systems.

#### PROJECT MANAGEMENT DATA

<i>Grade</i>	<i>Lower Quartile</i>	<i>Median</i>	<i>Upper Quartile</i>
WW17	105.5	114.5	121
WW16	82.5	90	103.5
WW15	66	72.5	82.5
Exec3	49.5	54.5	60
Exec4	40.5	43	47

#### PROCUREMENT DATA

<i>Grade</i>	<i>Lower Quartile</i>	<i>Median</i>	<i>Upper Quartile</i>
WW16	75	89	113
WW15	68	71	80
Exec3	48.5	53.5	59.5
Exec4	39.5	41.5	45

## COMMERCIAL DATA

<i>Grade</i>	<i>Lower Quartile</i>	<i>Median</i>	<i>Upper Quartile</i>
WW17	95	103.5	120
WW16	81	86.5	91.5
WW15	63	72.5	80
Exec3	47	50.5	55.5
Exec4	39	41.5	45

## ENGINEERING

<i>Grade</i>	<i>Lower Quartile</i>	<i>Median</i>	<i>Upper Quartile</i>
WW17	100.5	111	122
WW16	79	82.5	91
WW15	67	70.5	80.5
Exec3	53	57	62
Exec4	44	47.5	51.5

19 January 2010

**Letter from Quentin Davis MP, Minister for Defence Equipment and Support**

I am writing to provide an update on a key maritime project, the Military Afloat Reach and Sustainability (MARS) Programme.

As you are aware, MARS will replace a number of existing Royal Fleet Auxiliary ships and provide new capabilities to support the Royal Navy from the middle of the next decade and beyond. Under the Programme strategy, three classes of ship will be delivered; the MARS Tankers (formerly known as Fleet Tankers), Fleet Solid Support and Amphibious Combat Support (formerly known as Joint Sea Based Logistics). In order to comply with International Maritime environmental standards, which require all tankers to be double hulled and for existing ageing ships to be replaced as quickly as possible, priority has been placed on the Tankers element of the programme.

I decided to cancel the previous competition in March 2009 and to look for a less highly specified solution. Since then work to review the procurement strategy has continued. This has concluded that a more open procurement strategy considering a range of possible solutions, including commercial solutions, and which takes account of current market conditions, is more likely to secure best value for money for the Department.

I have therefore recently approved a new competition to deliver the MARS Tankers, and in accordance with EU and MoD commercial policy, expressions of interest from industry are currently being sought through advertisements in the Open Journal of the European Union and the Defence Contracts Bulletin. The closing date for these is 27 November 2009.

The later ship classes, Fleet Solid Support and Amphibious Combat Support, remain uncommitted at this stage. The extent to which they will contribute to the sustainment of key UK design and build skills will continue to be evaluated in the MARS Programme's Assessment Phase.

I hope this update is helpful and explains the current position. I will, of course, keep you informed as matters develop.

16 October 2009

**Fifth supplementary memorandum from the Ministry of Defence**

Responses to further questions from the Committee following the oral evidence sessions with Minister (DES), the Chief of Defence Materiel and the Deputy Chief of Defence Staff (Capability) held on 15 December 2009 and with Minister (SDAR) and the Permanent Secretary, held on 12 January 2010.

15 DECEMBER 2009—MINISTER FOR DEFENCE EQUIPMENT AND SUPPORT

1. *With regard to the reduction of the equipment programme funding gap from £21 billion to £6 billion during the previous planning round, what proportion of the reduction was achieved by delaying activities beyond the 10 year horizon of the programme? [Q454]*

We will write to you separately with a response to this question.

2. *Why does the Minister believe that he cannot provide further explanation of how the reduction from £21 billion to £6 billion was achieved?* [Q472]

An explanation of the reduction is included in the response to Question 8.

3. *How can the Minister's refusal to provide an explanation of how the funding gap was reduced be reconciled with the assurance given by Lord Drayson that in the future the affordability of the equipment programme will be open to public scrutiny?* [Q692—12 January 2010]

In response to the Bernard Gray report, the Department is committed to the publication of an annual assessment of the future affordability of the Equipment Programme over the 10 year planning horizon. It is not envisaged that this will include a detailed breakdown of future funding profiles for individual projects as to do so would weaken the Department's commercial position.

12 JANUARY 2010—MINISTER OF STATE FOR STRATEGIC DEFENCE ACQUISITION REFORM

4. *Please provide a copy of the information about staff rotation referred to by PUS.* [Q717]

The data relating to Project Team Leader average length of tenure in 2009 shown in the table on Page 184 of the Bernard Gray report was provided by DE&S, in response to a request by Mr Gray's team. It was based on a trawl of Team Leader post-holders for the 30 projects (20 post-Main Gate and 10 pre-Main Gate) which had featured in the Department's Major Projects Report for 2008.

Further to the recent sessions with Min(DES) and Min(SDAR), representative DE&S Operating Centre data comprising more than 100 Project Teams has been analysed in the table below. For the purposes of this exercise, a Project Team Leader is defined as a substantive officer in post with overall responsibility for the delivery of one or more significant DE&S projects, and who has either completed a tour or has a projected tour end date. For each of the years shown in the table, the average tenure figure is calculated by dividing the total time in post by the total number of team leaders in the sample.

	2007	2008	2009
Average tenure in months	39	39	40

The data presented provides evidence that there has been no degradation in Team Leader tour length or adverse turnover since the formation of DE&S.

Prior to the formation of DE&S, the risk of high turnover of those occupying Senior Posts (including Project Team Leader posts) was identified and a mechanism put in place to minimise that risk; DE&S introduced Succession Planning to Senior Posts as part of its internal HR agenda.

5. *Please provide a note about the extent to which DE&S Financial Management Posts are occupied by Qualified Accountants.* [Q720]

DE&S recognises the need to develop the skills of those working in finance and is actively taking steps to do just that through its Upskilling programme.

Within DE&S there are currently 244 designated Professional Finance Posts (i.e. where an accountancy qualification is essential). The designation is applied to all Finance posts where staff have a financial letter of delegation and are responsible for approval and scrutiny of expenditure proposals and plans. This covers all Project Team Financial Controllers (generally at middle management grades), and in large projects the Deputy Financial Controller. It also includes Operating Centre Finance Team Leaders and deputies, as well as specific posts in the DE&S Corporate Finance team.

At the end of December 2009, 63% of filled professional posts were occupied by a member of staff with an appropriate qualification. This has been increased from 50% when the posts were designated and DE&S introduced its Upskilling programme. The DE&S graduate Trainee Accountant Development Scheme (TADS) is a key intervention to achieve the target of having 90% of posts filled with appropriately qualified and experienced staff by 2012–13. Currently 47 people are on the first stage of the scheme and 19 have graduated. Results have been very successful, with five trainees gaining 10 Top 10 worldwide Chartered Institute of Management Accountants (CIMA) exam results.

For other finance staff (middle and junior management grades) DE&S provides training to gain the Association of Accounting Technicians (AAT) qualification. All finance staff, and all staff within DE&S at Pay Band B1 level and above are required to hold the Department's internal finance licence. We also have 48 designated Professional posts filled by qualified accountants in the Cost Assurance and Analysis Service.

We acknowledge that recruitment of qualified accountants is difficult across the public sector as we often cannot offer salaries to match those that accountants could earn in the private sector. That is why we invest heavily in developing our own skills, through the Upskilling programme and the TAD Scheme. Once qualified, our accountants working in middle management grades receive an additional allowance as recognition of the extra skills gained. They are required to comply with the Continuous Professional

Development (CPD) requirements of the MoD and Professional Institutes to continue to receive this payment. The amount paid is £3,000 per annum for those at the top of the middle management group and between 13% and 15% of their salaries for the lower pay bands.

6. *Which of the decisions taken as a result of the short examination of the equipment programme contributed to the reduction in the 10 year funding gap? [Q729]*

The decisions are set out in reply to Question 8.

7. *What did ministers say at the time about the cost of delaying the carriers? [Q734]*

During the oral evidence session on 12 January 2010, it was suggested by the Committee that the previous Secretary of State, John Hutton, had stated the decision to delay the introduction into service of the Queen Elizabeth Class carriers would incur no cost for Defence. The official record (11 December 2008, Column 66–67 WS) shows that he did not state this. In response to a question asked in the House on 12 January 2009 (*Official Record Column 76W*) Mr Hutton acknowledged that additional costs would result from the decision to delay the in service dates. He advised that “*We have estimated the costs of a delay to in-service dates in close consultation with the Aircraft Carrier Alliance and other stakeholders*”. Mr Hutton declined to give a figure at that stage to safeguard the commercial interests of the Department.

During the Defence Procurement Debate on 20 April 2009 (*Official Record, Column 54*) Minister (Defence Equipment and Support) provided further clarification. He said “*if something is delayed, it tends to cost more in cash terms*”. He also explained that “*When I said that there were no defence costs, I clearly said—the record will prove it—that there was no loss to the nation’s defence capability*”. He was referring to his earlier statement when giving oral evidence to the Defence Committee on 16 December 2008 (Q308).

On 16 July 2009 (*Official Record Column 589W*), Minister (Defence Equipment and Support) advised “*The new cost will be at least £4.6 billion but we are not yet able to provide a final estimate.*”

8. *Please provide the fuller note offered by PUS regarding the make-up of the £21 billion funding gap, and how it was reduced to £6 billion. [Q736]*

At the start of the 2009 planning round, before we undertook the Equipment Examination, we assessed that the cost of the future Defence Programme exceeded the projected Defence Budget by £21 billion over the then 10 year planning horizon. This estimate reflected a number of the cost pressures we have faced over recent years including rising fuel and utility costs, increases in pay and pensions and cost growth on major equipment projects.

As a result of the Equipment Examination and wider 2009 planning round activity, we removed approximately £15 billion from defence spending plans over the 10 year planning period. The Equipment Examination removed much of this excess and included the following measures:

- Restructuring the FRES programme, including delaying the FRES Utility Vehicle, which removed approximately £2.6 billion over the 10 year planning period;
- Delaying the new aircraft carriers by one to two years, which removed £450 million over the first four years of the planning period, though it added £674 million over the 10 years;
- Deferring the fleet tanker element of MARS, which removed approximately £210 million over the first four years of the planning period, though it added approximately £41 million over the 10 years;
- A reduction in the Lynx Wildcat contract from 70 to 62 aircraft which removed approximately £194 million over the 10 year planning period
- The deferment of future increments (B & D) of the FALCON armoured and mobile trunk communications system, which removed £53 million over the 10 year planning period.
- A reduction in the number of Merlin Mark 1 helicopters to be upgraded through the Capability Sustainment Programme, which removed approximately £65 million over the 10 year planning period.

A further approximate £7.8 billion was removed through other programme changes in the Equipment Examination. The 2009 Planning Round delivered a further £3.3 billion of reductions to the 10-year equipment programme. This included savings in the early years arising from the delayed introduction of A400M; and a revised production timetable for Astute, which removed £131 million over the first four years of the planning period, though it added £539 million over the life of the programme. Various other changes to the wider defence programme made up the remainder. Most of these related to changes in internal planning assumptions, on which we do not as a rule comment. Their general disclosure would preclude the full and frank discussion of planning options as well as affecting our commercial negotiations with industry.

After changes resulting from the Equipment Examination and the 2009 planning round, we assessed that an excess of approximately £6 billion remained over the forward 10 year defence programme, assuming the Defence budget remains constant in real terms. This represented the starting position for the current planning round, and although that process continues, we were able to announce a number of measures on

15 December 2009 which have removed some of the cost pressures while finding room for £900 million of enhancements for current operations. Work continues and remaining cost pressures will be addressed in the course of the planning round and the forthcoming strategic defence review.

5 February 2010

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**Sixth supplementary memorandum from the Ministry of Defence**

Further to our responses dated 5 February 2010, relating to the oral evidence session with Minister for Defence Equipment and Support and officials on 15 December 2009, we undertook to write separately with a response to the Committee's question below.

1. *With regard to the reduction of the equipment programme funding gap from £21 billion to £6 billion during the previous planning round, what proportion of the reduction was achieved by delaying activities beyond the ten year horizon of the programme? [Q454]*

In the order of 40% of the £15 billion reduction was achieved by implementing measures involving significant deferral of expenditure beyond the 10 year planning horizon of the programme. Some of these measures also included elements of programme de-scoping, which are included in the 40% figure.

18 February 2010

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