



House of Commons
Defence Committee

Defence Procurement 2006

First Report of Session 2006–07

Report, together with formal minutes, oral and written evidence

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The Defence Committee

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Summary

2006 has been a landmark year for defence equipment procurement. The Defence Procurement Agency (DPA) met, for the first time ever, all its Key Targets and was on course to meet the Public Service Agreement Target relating to defence acquisition. In July, the Ministry of Defence (MoD) announced that the DPA and the Defence Logistics Organisation (DLO) were to merge.

The performance of the DPA in getting to grips with cost overruns and in-service date slippage is to be welcomed. However, the reduction in cost growth is partly explained by a reduction in the number of equipments ordered. Re-assessing equipment requirements is sensible, but only as long as our Armed Forces do not lose out because of the need to meet cost growth targets.

The merger of the DPA and DLO should improve the management of acquisition on a through-life basis. Sufficient investment in staff training must be committed so that the expected improvements are delivered. The merger will result in substantial job reductions and the MoD needs to provide support to all those employees affected.

Problems are still being experienced on several key equipment programmes: unlimited financial liability on the Astute submarine; a price still to be agreed on the Future Carrier; assurances yet to be obtained from the US that the UK will get all the information it requires to operate the Joint Strike Fighter independently; and eight Chinook Mk 3 helicopters, which are desperately needed by our Armed Forces, sitting in hangars and unlikely to be in operation until early in the next decade. These problems need to be resolved.

It is essential that our Armed Forces on operations should have the equipment they need to carry out the task given to them and the Prime Minister's promise that commanders on the ground will get the equipment they want is welcome. While requests from the front line will need to be evaluated, the MoD, the DPA and the Treasury need to ensure that requests are processed with urgency; and the Treasury must recognise that the MoD will need additional funding to support new equipment once in service.

The four smaller-size projects we examined have generally performed well, particularly in terms of their performance against approved costs. Important lessons for larger equipment projects can be learned from the procurement of smaller-size equipment projects and equipment procured for operations through the Urgent Operational Requirements route.

1 Introduction

1. Defence equipment procurement accounts for a major part of defence spending. The Defence Committee visited the Defence Procurement Agency (DPA) in January 2006 and were told that the DPA managed some 500 projects and that the value of the forward programme was £75 billion. In 2005–06, some £5.9 billion was spent on equipment procurement.¹ Following the pattern established by our predecessors, we have decided to undertake an annual broad defence equipment inquiry. Our inquiry this year examined the performance of the DPA, and the progress on several equipment programmes which our predecessors had monitored:

- Astute submarine
- Future Carrier
- Joint Combat Aircraft (Joint Strike Fighter)
- Chinook Mk 3 helicopter

2. The MoD has four categories of defence equipment:

- Category A—procurement cost above £400 million
- Category B—procurement cost of £100 million to £400 million
- Category C—procurement cost of £20 million to £100 million
- Category D—procurement cost of under £20 million²

Parliamentary scrutiny of defence procurement projects has generally focused on the major defence projects, given their financial size and impact on the defence budget, and their importance to the armed forces. We examined two key defence projects—the Future Carrier and the Joint Strike Fighter programmes—in late 2005³ and our predecessors undertook regular inquiries into the progress of major equipment projects and the performance of the DPA in managing these. The National Audit Office (NAO) produces an annual report on the progress of the top 20 major defence projects. While the procurement of smaller-size equipment projects, particularly those procured as Urgent Operational Requirements (UORs), have been examined as part of inquiries into operations, scrutiny of smaller-size defence equipment projects has, to date, been limited.

3. This year we decided to examine four smaller-scale defence equipment projects as part of our inquiry:

- General Service Respirator

1 Defence Procurement Agency, *Annual Report and Accounts 2005–06*, HC (2005–06) 1164, p 21

2 Ev 33

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

- ASUW Littoral Defensive Anti Surface Warfare
- Maritime Composite Training System Phase 1
- Thermal Sighting System for the Self Propelled High Velocity Missile system

4. During our inquiry, the Ministry of Defence (MoD) announced the merger of the DPA and the Defence Logistics Organisation (DLO). We examined the aims of the merger and the progress being made.

5. In undertaking our inquiry, we took oral evidence on 27 June 2006 from three directors from the DPA: Mr Jonathan Lyle, Operations Director, Air and Weapon Systems; Dr Andrew Tyler, Director, Land and Maritime; Dr Iain Watson, Operations Director for Information Superiority; and Lieutenant General Andrew Figgures, Deputy Chief of Staff, (Equipment Capability), Ministry of Defence.⁴ On 10 October 2006, we took evidence from Sir Peter Spencer KCB, Chief of Defence Procurement (CDP), DPA.⁵ We received a range of written evidence from the MoD and others.⁶

6. We are grateful to all those who contributed to our inquiry including our specialist advisers.

4 Ev 1–14

5 Ev 15–32

6 Ev 33–56

2 Performance of the DPA

Stocktake of Smart Acquisition and DPA Forward

7. When the current CDP took up post in May 2003, he commissioned a wide-ranging review of how the DPA was performing. This ‘Stocktake’ review found that the principles of the ‘Smart Acquisition’ initiative introduced in 1998 had not been applied consistently. The DPA introduced process and organisation changes arising from the ‘Stocktake’ in April 2004. In October 2004, the DPA launched a single, overarching programme—‘DPA Forward’. The emphasis of ‘DPA Forward’ was on greater consistency in implementing the principles of ‘Smart Acquisition’. The programme focused on four key areas—Performance, People, Projects and Partnering. Each covered a series of specific initiatives with the overall aim of enabling the DPA to deliver effective military equipment capability to time and budget.⁷

Performance against the Key Targets in 2005–06

8. We visited the DPA in January 2006 to hear about the progress in implementing the ‘DPA Forward’ programme and to meet a selection of Integrated Project Teams responsible for managing different equipment programmes. CDP told us that the DPA’s performance was improving and this could be seen in the performance against the Key Targets set by Ministers. The DPA’s Annual Report and Accounts 2005–06 reported that during the year 2005–06 the DPA had succeeded, for the first time since its formation, in meeting all of its Key Targets. In 2005–06 the DPA was also, for the first time, ‘on course’ to meet the MoD’s Public Service Agreement (PSA) Target for acquisition, which is set by the Treasury.⁸ Details of the DPA’s performance against its Key Targets in 2005–06 are provided in Table 1 and details of its performance against the PSA Target in 2005–06 are provided in Table 2. **We congratulate the DPA on achieving its Key Targets and the MoD’s Public Service Agreement Target for Acquisition in 2005–06.**

7 HC (2005–06) 1164, p 13

8 *Ibid.*, Foreword by the Chief Executive, p 3

Table 1: Performance of the DPA against its Key Targets in 2005–06

Key Target	Target	Performance
Key Target 1	Equipment Performance The target for achievement of projects' core requirements was <u>97%</u> .	Achieved. <u>97%</u> achieved.
Key Target 2	Programme Slippage To achieve this target, average new slippage had not to exceed <u>1.0 month</u> during the course of the financial year.	Achieved. Actual average new slippage recorded was <u>0.7 months</u> , this equates to a total cumulative slippage of 30 months across the project population.
Key Target 3	Cost Growth To achieve the target, average new cost growth had not to exceed <u>0.6%</u> during the course of the financial year.	Achieved Actual cost grew by an average of <u>0.2%</u> .
Key Target 4	Asset Deliveries This Key Target covers the achievement of forecast asset deliveries in-year. The Target required the Agency to deliver greater than <u>90%</u> , by value, of its forecast Asset Deliveries for the year.	Achieved This year the Agency delivered <u>107%</u> of its forecast Asset Deliveries.
Key Target 5	Efficiency The Key Target requires the DPA to stay within the boundary set by each of three ratios: (i) Asset turnover in months. The target level for this measure was set at <u>less than 83 months</u> . (ii) Assets Delivered per £ of Operating Cost. The target for this measure was set at <u>greater than £13.20</u> . (iii) Asset produced per £ of Operating Cost. The target level for this measure was set at <u>greater than £23.16</u> .	Achieved (i) Actual achievement in year was <u>72 months</u> . (ii) Actual achievement in year was <u>£15.23</u> . (iii) Actual achievement in year was <u>£23.83</u> .

Source: Ministry of Defence⁹

Table 2: Performance of the DPA against PSA Target 6 in 2005–06

Target / Performance Indicator	Performance
PSA Target 6: Deliver the Equipment Programme to time and cost	Overall Assessment: On Course
Performance Indicator 1: Achieve at least <u>97%</u> of Key User Requirements for all Category A to C Projects that have passed Main Gate Approval, to be achieved throughout the PSA period	<u>97%</u> of the Customer's Key Requirements have been met
Performance Indicator 2: Average In-Year variation of forecast In Service Dates (ISD), for all Category A to C Projects that have passed Main Gate Approval, to be no more than <u>0.7 months</u> in 2005–06, 0.5 months in 2006–07 and 0.4 months in 2007–08	Average in-year variation of forecast ISD of <u>0.7 months</u>
Performance Indicator 3: Average In-Year variation of forecast costs for Design and Manufacture phase, for all Category A to C Projects that have passed Main Gate Approval, of <u>less than 0.4%</u> in 2005–06, 0.3% in 2006–07 and 0.2% in 2007–08	Average in-year cost increase of <u>0.2%</u>

Source: Ministry of Defence¹⁰

Reasons for improved performance

9. The MoD considers that the 'DPA Forward' programme accounts for the improvements which are being seen. The programme has resulted in the introduction of "new and rigorous processes" right across the DPA's project activity which have helped ensure that estimates of time, cost and performance are sound and take account of risk.¹¹

Programme slippage

10. Key Target 2 covers programme slippage. In 2005–06, actual average new time slippage was 0.7 months which was better than the target of 1 month. Performance against this target used to be assessed on the basis of the 20 largest projects but, from April 2004, had been calculated on the basis of all projects over £20 million. We asked the MoD whether good performance on a large number of smaller value projects could be compensating for poorer performance on the larger projects. The MoD told us that Category C projects (those valued between £20 million and £100 million) experienced similar levels of delays to those projects with higher values. In 2005–06 there were 13 Category C projects in the Key Target 2 population of 46 projects. On average the in-year delay to those Category C projects was one month per project, which was slightly worse than the overall average. The

¹⁰ Ministry of Defence, *Annual Report and Accounts 2005–06*, HC 1394, p 21

¹¹ Ev 50

MoD explained that the increased project population upon which performance was assessed gave a more representative measure of the DPA's performance.¹²

11. The Ministry of Defence Major Projects Report 2006, published by the National Audit Office (NAO) on 24 November 2006, states that the majority of the 19 post-Main Gate projects studied¹³ did not experience any delays during 2005-06, but on average they slipped 1.7 months per project, because of significant delays on five projects: the Beyond Visual Range Air-to-Air Missile, the Next Generation Light Anti-Armour Weapon, the Type 45 Destroyer, Panther, and Trojan and Titan.¹⁴

12. Delivering projects to time can be assisted by setting realistic in-service dates, procuring equipment off-the-shelf and providing incentives for the contractor. The MoD saw all these factors as being relevant. More focus was being given to due diligence and in factoring in more appropriate incentives to deliver on time. MoD acknowledged that off-the-shelf products, where available, reduced risk. The Javelin medium range anti-tank guided weapon was a good example of "mitigating some schedule risk by buying off-the-shelf". MoD told us that "a consistent and robust approach to this procurement, and close co-operation between the DPA and DLO, the US Army programme office, the Javelin Joint Venture, enabled it to be delivered 13 months in advance of the date approved at Main Gate".¹⁵

13. We are pleased to see that the MoD is getting a better grip on programme time schedules. Off-the-shelf procurement, where available, can reduce the risk of programme time slippage. We look to the MoD to ensure that project teams are made aware of the lessons from the off-the-shelf procurement of the Javelin medium range anti-tank guided weapon, as this appears to be a good example of the benefits which can be delivered from this procurement route.

Cost growth

14. Key Target 3 covers cost growth and in 2005-06, actual cost grew by an average of 0.2 per cent which was below the target of 0.6 per cent. The actual cost growth for the defence equipment projects covered by Key Target 3 was £65.7 million.¹⁶ The NAO's Major Projects Report 2006 states that the MoD succeeded in offsetting the potential cost increases on most of the major projects. However, it reported considerable cost growth in 2005-06 on the Type 45 destroyer (£157 million) and the Astute submarine (£164 million – see paragraph 45 below).¹⁷

12 Ev 49

13 The Major Projects Report considers 20 major projects where the main investment decision to proceed has been taken by the MoD. The project overrun figures do not include the Joint Combat Aircraft as the in-service date has not yet been approved.

14 Ministry of Defence Major Projects Report 2006, National Audit Office, HC (2006–07) 23-I, paras 1.17–1.19, and p 11, figure 4.

15 Ev 49

16 *Ibid.*

17 HC (2006–07) 23-I, paras 1.6, 2.2, and 2.27.

15. In its Major Projects Report 2005, the NAO reported that the decreases in forecast costs in 2004–05 were “primarily due to reductions in the numbers or capability of the equipment”.¹⁸ We asked the MoD to what extent reducing numbers of equipment ordered, or reducing the capabilities of equipment, contributes to the DPA achieving Key Target 3. The MoD informed us that:

Re-examining the numbers of equipment ordered and equipment capabilities led us to identify opportunities to reduce cost growth by some £145M in 2005–06.¹⁹

16. The NAO’s Major Projects Report 2006 highlights three major projects in which the quantity of equipment has been reduced significantly as a result of a review by the MoD: the Guided Multiple Launch Rocket System; the Brimstone anti-armour weapon; and the Support Vehicle. In the NAO’s view, trading quantities to remain within cost is “something which the Department must be willing to do to live within its means”. It acknowledges, however, that such trades can be potentially detrimental to military capability, and argues that this re-emphasises the importance of the Department only committing to projects it is confident it can deliver to time and budgeted cost.²⁰

17. While cost growth on defence equipment projects in 2005–06 was below the target, we have concerns that the main reason for this was reduction in the quantity of equipment ordered. Trade-offs between cost, time and performance are part of the Smart Acquisition process, but we expect our Armed Forces to receive equipment in the numbers required and with the capability to do the task required of it. Meeting Key Targets should not be given priority over meeting the requirements of our Armed Forces.

Performance against the Key Targets in 2006–07

18. The DPA’s Key Targets relate to the financial year—1 April to 31 March. MoD told us that half way through 2006–07, Key Targets 3 and 4 were under pressure. Key Target 3, which covers cost growth, was under pressure because of further potential cost growth on the Astute submarine and Type 45 Destroyer programmes. We examine progress on the Astute programme at paragraphs 36–44. Key Target 4, which covers asset deliveries, was at risk because “of the re-timing of deliveries compared with the schedules set at the beginning of the financial year”.²¹ **We are concerned to hear that, in the current financial year, potential cost increases on the Astute submarine and Type 45 Destroyer programmes are putting pressure on the DPA’s Key Target covering cost growth, and that the Key Target covering asset deliveries is at risk. We look to the MoD to monitor performance closely against these two targets, and to seek to limit potential further cost growth on the Astute and Type 45 programmes. We will also be looking closely at the Major Projects Report 2006 to ensure that the cost increases on these two programmes are not symptomatic of wider problems within the MoD’s procurement process.**

18 National Audit Office, *Major Projects Report 2005*, HC 595-I, Session 2005–06, para 1.5

19 Ev 49

20 HC (2006–07) 23-I, paras 1.12–1.14.

21 Ev 50

3 Merger of the DPA and DLO

Enabling Acquisition Change report

19. On 24 January 2006, at our evidence session on the MoD's Annual Report and Accounts 2004–05, MoD's Permanent Under Secretary (PUS), Mr Bill Jeffrey, told us that he thought he needed to apply a lot of attention to the “whole question of how we procure and acquire equipment for defence.... although improvements have been made, there is still a great deal to do”.²² He also told us that:

We are also up for serious and significant improvement in the way in which procurement is managed by the Department, but, as part of the follow-through to the Defence Industrial Strategy, there is a project which I instituted myself shortly after I arrived in which we will be looking hard at the way in which the procurement function operates, how it is structured, how the processes work, and looking at ways in which we can generally make it work better, and I am utterly committed to that.²³

20. The outcome of the review commissioned by the MoD's PUS was published on 3 July 2006—‘Enabling Acquisition Change, an examination of the Ministry of Defence's ability to undertake Through Life Capability Management’.²⁴ The report examines the current structures, organisations and processes with the aim of maximising the MoD's ability to deliver a key objective of the Defence Industrial Strategy (DIS), Through Life Capability Management, which focuses on the costs and capabilities of equipment throughout its life, not just the purchase price.

Merger of the DPA and DLO

21. The Enabling Acquisition Change report recommends the merger of the DPA and the DLO to form a new integrated procurement and support organisation, a single entity responsible for the procurement, maintenance and containment of military capability. The aim is to improve financial planning by ensuring that new equipment and its in-service support costs are planned more coherently. The merged organisation will be known as Defence Equipment & Support (DE&S). On 21 September 2006, the MoD announced that the current Chief of Defence Logistics (CDL), General Sir Kevin O'Donoghue, would become the first Chief of Defence Materiel, the head of the new organisation. CDP and CDL would work together to merge the DPA and DLO on 1 April 2007.²⁵

22 Defence Committee, Sixth Report of Session 2005–06, *Ministry of Defence Annual Report and Accounts 2004–05*, HC 822, Q 1

23 *Ibid.*, Q 31

24 Enabling Acquisition Change—An examination of the Ministry of Defence's ability to undertake Through Life Capability Management, June 2006

25 Ministry of Defence website, Defence News, *General Sir Kevin O'Donoghue will be first “Chief of Defence Materiel”*, 21 September 2006

Progress on the merger

22. At the evidence session with CDP we asked how the merger of the DPA and the DLO was progressing. He told us that:

The organisation has been set up and announced, and in broad outline we have described the purpose, the aims and the objectives, and we have named the key players that we can who will be in board level positions. There are a number of other work strands which are at varying degrees of completion which are going to focus in on the detail of how the performance metrics will be set, both for the organisation and for Ministry of Defence as a whole.²⁶

23. There are four phases to the project:

- Phase 1 was to define what the organisation would look like and set out in broad principles how it would operate. It was completed at the end of September 2006 on time.²⁷
- Phase 2 had begun and included defining in outline what “two star board members” would be expected to deliver and the changes needed in their areas to deliver the targets set. The completion date for this Phase was the end of December 2006.²⁸
- Phase 3 was to commence after Phase 2 had been completed. Phase 3 is the next level of detailed work of engaging with the workforce in a much more detailed way to explain what it means for them. The completion date for this Phase was 1 April 2007. The new organisation vests on 2 April 2007.²⁹
- Phase 4 was the first year of operation of the new organisation. During this first year “there will then be the first of the post-project evaluations to take a look to see to what extent the organisation is going to be delivering what is needed and then to be prepared to make any further adjustments at the end of the first year”.³⁰

24. Work to merge the Defence Procurement Agency and the Defence Logistics Organisation is underway and, on current plans, the new organisation will begin operating on 2 April 2007. The MoD is managing the merger as a project with four phases and target dates for the completion of each of these phases. Given the importance and scale of the merger, we recommend that the MoD provide us with quarterly progress reports.

Measuring the performance of the new organisation

25. The DPA and the DLO have their own performance targets. Given that the aim of the merger was to improve Through Life Capability Management (TLCM), we were interested

26 Q 113

27 Qq 114–115

28 Qq 116–117

29 Qq 117–118

30 Q 118

in how the expected improvements in TLMC would be tracked and whether there would be new Key Targets covering this. We also sought clarification as to whether the current DPA Key Targets would continue, to allow future performance in equipment acquisition to be tracked. On the issue of measuring performance, CDP said that:

During that first year the intention is to measure the performance publicly by the existing PSA targets for delivery of projects and by the same targets that are in place for the current Defence Logistics Organisation, but to shadow trade in a new set of targets which will be optimised to measure the organisation's ability to deliver year-on-year improvements and through-life capability management and some other performance metrics as well, including agility in terms of responding more rapidly than we do at the moment to the needs of the Armed Forces.³¹

26. A key objective of the new Defence Equipment & Support organisation is to improve the management of acquisition on a through-life basis. We are pleased to learn that there will be new targets to measure the performance in this area and a target covering how quickly the new organisation responds to the needs of our Armed Forces. Given some of the substantial cost increases and time slippage experienced by some equipment programmes in the past, we expect the MoD to continue to monitor its performance at procuring equipment to time, cost and quality, and for the performance data to be published on an annual basis as it is now. Otherwise, there is a risk that poor procurement performance could be buried in long-term project management data.

Training of staff

27. Given that the focus of the new organisation will be on improving Through Life Capability Management and being more agile in responding to the need of the Armed Forces, staff will need to be trained in a range of skills to ensure that the expected improvements are delivered. CDP told DPA staff that:

We need to put our money where our mouth is, invest more in training in important areas like project management but also in finance, commercial skills and certain deep technical specialist skills where we're lacking strength in depth and living on the fruits of a former era.³²

28. CDP acknowledged that there had not been enough training in the DPA. Work was underway to identify the current level of capability among staff and put in place training programmes to increase the ability of the workforce. The Defence Academy was to be used to deliver the training or to act as a portal to direct staff to other providers of training to best meet their requirement. We asked whether the financial commitment to fund the training had been identified. CDP said that he could not answer the question at the time, because he did not have "a complete answer to the gap analysis". He recognised that there

31 Q 118

32 July 2006 issue of Preview, the journal for defence equipment acquisition, p 4

was a risk that enough investment would not be earmarked and this risk had to be managed.³³

29. The MoD has subsequently provided us with details on the progress being made in identifying skills gaps and how these have been, or are being, addressed. This evidence states that the MoD did “not underestimate the substantial change programme required and while the level of investment required to deliver this is still being assessed it is likely to be significant”.³⁴

30. Some posts are to be filled by external candidates. There are to be further competitions to fill some new posts in the new organisation, “so there is ample scope for bringing people in, not only to do the work but also to explain and bring people with them to do things in a totally different way than they have been used to”. One of the big cultural changes for the new organisation would be holding people accountable for their results and a real focus on outcomes.³⁵

31. The success of the Defence Equipment & Support organisation will depend on whether the new organisation has the staff with the required skills to improve Through Life Capability Management and provide more agility in responding to the needs of the Armed Forces. Much work is being undertaken to identify the current skills gaps and to address these through training or external recruitment, and we welcome this. It is essential that the MoD commit the investment required to address the skills gaps identified.

Staff reductions and collocation

32. As a result of the merger, the DPA will reduce from 4,600 staff in October 2004 to 4,150 staff in March 2008, a reduction of almost 10%.³⁶ We asked CDP in what areas staff reductions would fall. He explained that part of the reduction was because there would be fewer new projects to manage in the future. A number of large and complicated platforms had recently been procured, so the main focus in the future would be on technology insertion on such platforms. Also, the DPA had to accept its part of the Gershon efficiency savings.³⁷

33. The DLO will reduce from 27,000 staff in October 2004 to 21,600 staff in March 2008. The combined strength of the new organisation is expected to be smaller than the DLO in October 2004 (25,750 against 27,000).³⁸ On 29 September 2006, the MoD announced that the DLO was to collocate a number of its key activities alongside the DPA in the Bristol and Bath area. The DLO was to withdraw from a number of sites around the country over the next five years.³⁹

33 Qq 137–138

34 Ev 54

35 Q 136

36 July 2006 issue of *Preview*, the journal for defence equipment acquisition, p 5

37 Q 141

38 July 2006 issue of *Preview*, the journal for defence equipment acquisition, p 5

39 Government News Network website, *Defence Logistics move to South West given green light*, 29 September 2006

34. We recognise that collocating the Defence Logistics Organisation with the Defence Procurement Agency is a sensible step, given that the aim of the merger of these two organisations is to improve Through Life Capability Management. The merger will result in a substantial number of job losses and the collocation will have a major impact, particularly on those who work for the Defence Logistics Organisation and their families. We expect the MoD to continue to consult with the Trades Unions during this period of change and to provide appropriate support to those affected.

Efficiency savings

35. The MoD expects the collocation of the DPA and DLO to release around £200 million for the front line over a 25 year period.⁴⁰ The MoD Annual Report and Accounts 2005–06 provides details of the efficiency gains relating to ‘procurement and logistics’. As part of the Spending Review 2004, the MoD agreed that it would realise total annual efficiency gains of at least £2.8 billion by 2007–08. £1.66 billion relates to procurement and logistics, including £374 million from equipment procurement and £951 million from the Defence Logistics Transformation programme.⁴¹ We asked whether these efficiency gains took account of the merger of the DPA and the DLO. The MoD told us that “the future planned efficiency gains for procurement and logistics do not take account of the DPA and DLO merger.... Although the merger is likely to bring about more effective and efficient working, it is too early to predict the efficiency gains”.⁴² **We would expect the merger of the Defence Procurement Agency and the Defence Logistics Organisation to deliver substantial efficiency gains. We look to the MoD to identify what efficiency gains are likely to be delivered, and to monitor whether these gains are achieved.**

Status and scrutiny of the new organisation

36. The DPA is a Defence Agency; the DLO is an organisation within the MoD and does not have agency status. The Enabling Acquisition Change report recommended that the merged organisation should not have agency status.⁴³ CDP told us that the decision had been taken that the new organisation would not be an agency, but a “top-level budget arrangement”.⁴⁴

37. One of the requirements of agency status is that the agency has to produce an annual report and accounts, which allows Parliament to scrutinise the agency’s performance. The Defence Procurement Agency was a major business spending some £6 billion a year and we found its Annual Report very helpful. The new Defence Equipment & Support organisation will be a huge organisation, in terms of manpower and expenditure. We asked if the new organisation would be required to produce an annual report. On 24 October 2006, at our evidence session on the MoD’s Annual Report and Accounts 2005–06, the MoD’s Permanent Under Secretary, Mr Bill Jeffrey, told us that:

40 July 2006 issue of Preview, the journal for defence equipment acquisition, p 3

41 Ministry of Defence, *Annual Report and Accounts 2005–06*, HC 1394, p 23

42 Defence Committee, Second Report of Session 2006–07, *Ministry of Defence Annual Report and Accounts 2005–06*, HC 57, Ev 22

43 Enabling Acquisition Change Report, June 2006, p 31

44 Qq 129–130

Its activities will certainly constitute a very substantial element of the report that we have before us here [MoD's Annual Report and Accounts 2005-06]. I do not think we have finally decided whether or not there should be a free standing annual report.⁴⁵

He added that:

it is no part of the purpose to reduce parliamentary scrutiny.... We need to arrange ourselves so that, whether or not there is a free-standing annual report, there is a full and informative account of the business and activities of the new organisation.⁴⁶

38. The new Defence Equipment & Support organisation will be huge, in terms of both manpower and expenditure. Its roles of procuring equipment and managing equipment through-life are key to ensuring the effectiveness of our Armed Forces. We are concerned that, as the organisation will not have agency status, its activities may lose transparency. We recommend that the new organisation publish an annual report so as to allow proper public accountability, and parliamentary scrutiny in particular.

45 HC (2006-07) 57, Ev 15

46 *Ibid.*, Q 112

4 Progress on key programmes and equipment for operations

Astute Submarines

39. The Astute Class of Attack Submarines is the replacement for the existing Swiftsure and Trafalgar classes of nuclear attack submarine. The contract with BAE Systems covers the design, build and initial support of three Astute Class submarines. There is an option for four more submarines. Our predecessors examined the progress on the Astute programme in 2003 as the programme had experienced problems. The MoD had to increase its funding for the programme by £430 million and BAE Systems, the prime contractor, had to increase its funding by £250 million. The contract for the Astute programme had to be renegotiated because of the problems on the programme which stemmed from poorly managed risk. The prime contractor had been over-ambitious about the technical risk and agreed with the MoD fixed price contracts which held the contractor to prices and delivery deadlines which under-estimated the risks.⁴⁷

40. In September 2006 we visited BAE Systems at Barrow-in-Furness where the Astute class submarines are being built. We went inside HMS Astute and saw HMS Ambush in production. We were shown the new methods of production which were being introduced in order to reduce costs. We were told that the programme was now progressing well and that the first of class, HMS Astute, was expected to be delivered to the revised approved cost and in-service date. We were also told that the prices for boats 2 and 3 had still to be agreed between the MoD and BAE Systems.

41. We asked CDP whether he was now satisfied that the problems with the Astute programme had been dealt with. He considered that the leadership at Barrow had been outstanding in terms of the focus on the schedule and they were determined to beat the MoD planning date of 2009, and deliver in 2008.⁴⁸ However, he had concerns as:

we have at the moment unlimited financial liability for boats two and three because we have not managed yet to agree the prices for boats two and three and we know that there have been problems in terms of rework in terms of the fragility of the supply chain... I am extremely keen to bring this to a conclusion ideally before the end of this financial year because it is high time we did so.⁴⁹

42. We asked CDP if there was a risk that the MoD might end up “paying through the nose”. He considered that in terms of value for money, notwithstanding the escalation in price because of the disruption to the programme, “the outturn price of these submarines is probably rather less than the prices which the United States Navy pay for their nuclear submarines by a considerable percentage”.⁵⁰

47 Defence Committee, Eighth Report of Session 2002–03, *Defence Procurement*, HC 694, paras 66–77

48 Qq 175–177

49 Q 177

50 Q 185

43. At our evidence session on 24 October 2006 on the MoD's Annual Report and Accounts 2005–06, we asked Mr Bill Jeffrey, MoD's PUS and Accounting Officer, if he was concerned about the unlimited financial liability. He said that:

We have now got provisional prices from BAE System for boats 2 and 3 and we are in a position to have more detailed discussions with them. From the point of view of an accounting officer, I am very keen that we should get a degree of clarity on the cost of the Astute programme that hitherto has not been there.⁵¹

44. The MoD's approach is that there must be agreement on the prices for boats 2 and 3, before considering placing a contract for boat four, but the MoD had "invested carefully in those long-lead items which are necessary to sustain the industry".⁵² CDP acknowledged that retaining the submarine skills base at Barrow was dependent on further orders. On 1 April 2006, the MoD created the post of Director General Nuclear who has oversight of all submarine activity—in-service, technology insertion and new construction. This post includes overseeing the future of the nuclear submarine industry and ensuring that there are plans in place to sustain the industry over time.⁵³

45. The NAO's Major Projects Report 2006 reports that forecast costs on the Astute programme have increased by £164 million in-year, despite many measures taken to reduce cost growth. The current forecast cost is £3,656 million, £1,078 million more than the approved cost at Main Gate. More positively, the NAO reports that the delays on the project have been reduced by one month in-year and there have been both performance efficiency and build strategy improvements.⁵⁴

46. We were impressed during our visit to Barrow in September 2006 with the commitment of BAE Systems' management and workforce to deliver the first Astute class submarine before the revised MoD date of 2009.

47. We are surprised to learn that the prices for boats 2 and 3 have still to be agreed and, as a consequence, the financial liability to the MoD is unknown. We look to the MoD to ensure that the negotiations on the prices for these boats are resolved as soon as possible. Lessons must again be learned from this programme, as letting contracts without pinning down prices, and negotiating prices when equipment is at an advanced stage of manufacture, cannot be considered 'Smart Acquisition'.

48. The delay in agreeing prices on Astute boats 2 and 3 is delaying the placing of a contract for boat 4. This, in turn, has an impact on the submarine skills base in the UK. We are examining this issue as part of our inquiry into the Future of the Strategic Nuclear Deterrent: the manufacturing and skills base and plan to report at the end of the year.

51 HC (2006–07) 57, Q 82

52 Q 178

53 Q 181

54 HC (2006–07) 23-I, paras 1.12-1.14, para 2.2 and 2.9-2.10; and HC (2006–07) 23-II, p 10, section 2a.

Future Carriers

49. The MoD is procuring two new aircraft carriers. We examined the progress on the Future Carrier programme at the end of 2005.⁵⁵ On 14 December 2005, the MoD announced that the Future Carrier programme had entered the Demonstration Phase which would focus on delivering the maturity of design, detailed cost definition, programme risk reduction and contractual framework that would allow a decision to be made to commit to manufacture. The main investment decision—Main Gate—would not be taken until all these elements had been fully developed.⁵⁶

50. Press reports in September 2006 suggested that the companies involved in the programme would have to submit details on the design and cost of the Future Carrier programme by the end of September and that a submission to the Investment Approvals Board which would guide the main investment decision would take place at the end of October.⁵⁷

51. We sought an update on the progress of the project and the likely date for the Main Gate decision. CDP considered that good progress was being made and a lot more work had been done on detailed design. The standards to which the ships were to be built had been clarified. He told us that the industrial arrangements, the alliance between the MoD and the companies concerned, had settled down and were working well. He told us that “we are now at the stage of due diligence...making sure that we really do understand the proposition which is on the table and that we actually understand and believe the numbers”.⁵⁸

52. Several reviews into the programme have been undertaken, including an independent financial review to provide an estimate of what the cost of the programme “should be”. CDP was concerned that there was a risk that when the MoD had to live within a budget, “people call the number they think they want you to hear” and when contracts were signed, the “reality kicks in” a few years down the line. This was the reason why he had refused to go to contract in April 2004, and in his view, there would have been cost escalation of some £1 billion on the basis of the MoD’s knowledge at the time.⁵⁹

53. We asked CDP how close the MoD was to reaching agreement on what the price would be. He admitted that he was sceptical, but that those dealing with the negotiations considered the situation very encouraging. The right point of balance had to be found so that a reasonably challenging cost was agreed and the companies could seek to beat that and earn additional profit.⁶⁰

54. The price for the two future aircraft carriers had yet to be agreed. The MoD has sensibly commissioned an independent financial review to advise on what the carriers

55 HC (2005–06) 554

56 Ministry of Defence website, Defence News, Future Aircraft Carrier project moves to next phase as assembly plans are agreed, 14 December 2005

57 Defense News of 4 September 2006 and Jane’s Defence Weekly of 20 September 2006

58 Q 188

59 *Ibid.*

60 Q 190

‘should’ cost, and it is to be hoped that this will lead to agreement on a challenging contractual price which industry will seek to beat. We look to the MoD to ensure that negotiations on price are moved forward as quickly as possible so that the main investment decision on the future carriers can be taken.

55. The Defence Industrial Strategy (DIS) was published in December 2005 and, as part of our inquiry into the DIS, we examined the maritime sector.⁶¹ A key aim of the DIS was to provide industry with clarity on the MoD’s future requirements to provide industry with a basis on which to invest for the future. CDP explained that in relation to the build arrangements for the carriers:

the whole aim of the strategy here is to give that degree of understanding and the ministerial judgment was that we needed, in the case of Govan and Barrow and Vosper Thornycroft and Rosyth, to give that clarity and to say, “We have got these super-blocks which we will expect to be built in these places”.⁶²

56. During our inquiry into the DIS, we were told that the Future Carrier programme was to be one of the ways to encourage the required changes needed in the UK naval shipbuilding industry.⁶³ CDP told us that “the Maritime Industrial Strategy.... draws in the surface ship build programme, the submarine build programme and also the ship support programmes”.⁶⁴ **Discussions on the Future Carrier programme will be crucial to the future of the UK shipbuilding industry. The programme is a key element of the Maritime Industrial Strategy. We will examine the Maritime Industrial Strategy as part of our inquiry looking at the progress of the Defence Industrial Strategy.**

Joint Strike Fighter

57. The MoD is procuring the STOVL⁶⁵ variant of the Joint Strike Fighter (JSF) to meet its requirement for Joint Combat Aircraft to operate from the future carriers. We examined the progress on the JSF programme at the end of 2005. We considered it vital that the UK was able to maintain and upgrade the JSF independently, and considered it unacceptable for the UK to get substantially into the JSF programme and then find out that it was not going to get all the information transfer it required to ensure ‘sovereign capability’.⁶⁶ We also examined the issue of sovereign capability on the JSF programme in our report on the Defence Industrial Strategy published in May 2006.⁶⁷

58. During our visit to the United States in May 2006, we raised the issue of information transfer on the JSF programme with members of the US Congress and of the United States Administration. During our visit it was clear that the US had concerns about technology leakage to other countries, but there was a political will to find a bilateral solution which

61 Defence Committee, Seventh Report of Session 2005–06, *The Defence Industrial Strategy*, HC 824, paras 28–34

62 Q 195

63 HC (2005–06) 824, para 32

64 Q 199

65 Short Take Off and Vertical Landing

66 HC (2005–06) 554, paras 101–113

67 HC (2005–06) 824, paras 97–99

allowed technology to be passed to the UK. We were assured that a solution would be found and we were led to expect an agreement by the Summer. We raised the matter with the new Secretary of State for Defence, Rt Hon Des Browne, at an oral evidence session on 11 July 2006. Mr Browne told us that:

We in the UK require operational sovereignty of the aircraft and we have made that clear to the United States, that we will not be able to buy the Joint Strike Fighter without the necessary transfer of technology and the information to give, as I say, operational sovereignty.... we are presently optimistic that these discussions [with the United States] will be successful, but I am not in a position here publicly to put a time limit on when they will be successful, but we are confident that they will be successful.⁶⁸

At the evidence session with the Secretary of State, Mr David Gould, Deputy Chief Executive of the Defence Procurement Agency, told us that there was “a very encouraging position with the US at the moment”.⁶⁹

59. In marked contrast to this optimism, we have heard indications from industry that there is little prospect of a deal being reached with the United States.

60. At our evidence session on 10 October 2006, CDP told us:

We made it clear to the Americans that we were going to go through the operational sovereignty principle in considerable detail and test it with a number of examples to demonstrate the extent to which operational sovereignty was understood in the United States and was going to be available. That is important because the point at which the Memo [Memorandum] of Understanding for Production and Sustainment of Future Development is due to be signed, which is by the end of this calendar year, is well in advance of when those undertakings by the United States will be delivered. So there has to be not only huge attention paid to the detail so that we do understand precisely what was meant, but we also need to understand how the delivery of those undertakings is going to be managed and honoured.⁷⁰

61. The issue of technology transfer does not just involve a government-to-government agreement, but also an industry-to-industry agreement. CDP told us that in relation to industry:

One thing which was a great help during the Farnborough [Airshow] week was the fact that Lockheed Martin and BAE Systems.... have now got in place a clear arrangement which identifies that BAES will be the lead in delivering sustainability and support to the Royal Air Force and the Royal Navy in operating these fast jets and identifies the role that Lockheed Martin will play in supporting them to get access to the information that BAES will need to do that.⁷¹

68 Introductory Evidence Session with the Secretary of State for Defence, 11 July 2006, HC 1458-i, Q 56

69 *Ibid.*, Q 60

70 Q 205

71 *Ibid.*

62. CDP emphasised that in defence “a great deal of work gets done not only with the DoD, but also with the State Department”.⁷² He had had a series of meetings with his equivalent within the US to agree a statement of principles and further meeting were planned, which might also involve the Minister for Defence Procurement, Lord Drayson. He did not think “anything could be described as a foregone conclusion here”.⁷³

63. We asked about alternatives, should the issue of sovereign capability on the JSF not be resolved. CDP confirmed that there was a “Plan B” and said that, if the time came, Ministers would explain what it was.⁷⁴ The MoD subsequently informed us that:

we are unable to go into specifics about our contingency plans. The Minister for Defence Procurement has previously made clear that such plans as are needed to maintain a fallback ‘Plan B’ are in place.⁷⁵

64. We have no doubt that the Minister for Defence Procurement, the Chief of Defence Procurement and MoD officials have made considerable efforts to ensure that the United States are fully aware of the information required by the UK on the Joint Strike Fighter to allow the aircraft to be operated independently. However, it is still uncertain whether the United States is prepared to provide the required information. If the UK does not obtain the assurances it needs from the United States, then it should not sign the Memorandum of Understanding covering production, sustainment and follow-on development. Such an impasse on a procurement programme of such strategic importance to the UK would be a serious blow to UK-US defence equipment co-operation, which has hitherto been of such positive benefit to both our nations. If the required assurances are not obtained by the end of the year, we recommend that the MoD switch the majority of its effort and funding on the programme into developing a fallback ‘Plan B’, so that an alternative aircraft is available in case the UK has to withdraw from the Joint Strike Fighter programme. We must not get into a situation where there are no aircraft to operate from the two new aircraft carriers when they enter service.

65. In September 2006 there were reports that the US Congress was considering delaying the production phase of the JSF programme and that this could lead to an increase in price of some 25–35%.⁷⁶ MoD was aware that there had been a change in the “front end” of the JSF programme which would have an impact upon the cost of the aircraft. CDP acknowledged that “we are vulnerable for the early orders if the low rate of initial production quantities change to the extent as to make significant changes”, and this was an area of concern.⁷⁷ **We are concerned to hear that possible changes to the early production of the Joint Strike Fighter aircraft programme could lead to an increase in the price for each aircraft. We look to the MoD to monitor this situation very closely and keep us informed of developments.**

72 Q 205

73 *Ibid.*

74 Q 207

75 Ev 56

76 Aviation Weekly of 18 September 2006

77 Q 206

Chinook Mk 3 Helicopter

66. In our report on the UK deployment to Afghanistan published in April 2006, we examined the airlift package and we noted with concern the small number of UK helicopters dedicated to the deployment.⁷⁸ In our report on UK operations in Iraq published in August 2006, we relayed the concerns expressed to us during our visit to Iraq that the demand for helicopters greatly outweighed supply.⁷⁹

67. Helicopter heavy lift is provided by Chinook helicopters. In July 1995, the MoD decided that eight of the 14 Chinook Mk 2 helicopters that it was procuring should be made to an enhanced Mk 3 standard. The upgrade was to include improved range, night vision sensors and navigational capability. The eight aircraft were to cost £259 million and the forecast in-service date was November 1998. As the NAO has reported, this procurement was a major failure. A key issue was that the contract did not specify that software documentation and code for avionics systems should be analysed in accordance with UK Defence Standards in order to demonstrate the integrity of the software. It has not, therefore, been possible to demonstrate that the helicopter's flight instruments meet the required UK Defence standards.⁸⁰

68. In the MoD's Annual Report and Accounts 2005–06, a loss of £205 million is reported relating to the eight Chinook Mk 3 helicopters. The note on the loss states that while the terms of the contract for the helicopter were met, the helicopters did not meet the operational requirement and could not acquire Military Aircraft Release.⁸¹

69. We asked about the progress in rectifying the problems on the eight Chinook Mk 3 helicopters and specifically how much it was going to cost to fix the problems and when the helicopters were likely to enter service. CDP said that a team from Boeing, the manufacturer of the Chinook Mk 3 helicopters, had come to the UK for what he hoped would be “convergence on the final negotiations for a contract which is both affordable and satisfactory in terms of where the financial risk lies”. The problem with the helicopters had been more difficult to unravel than expected. The original design for the cockpit had not been completed. Other issues to resolve were safety issues and issues relating to certification and airworthiness.⁸² The MoD, at one stage, considered the option of cannibalising the eight helicopters for spares, but this was before a way to resolve the problems had been defined.⁸³

78 Defence Committee, Fifth Report of Session 2005–06, *The UK deployment to Afghanistan*, HC 558, para 59

79 Defence Committee, Thirteenth Report of Session 2005–06, *UK Operations in Iraq*, HC 1241, para 64

80 National Audit Office, *Battlefield Helicopters*, Session 2003–04, HC 486, paras 3.39–3.43

81 Ministry of Defence, *Annual Report and Accounts 2005–06*, HC 1394, p 239

82 Q 158

83 Q 160

70. CDP could not tell us when the eight Chinook Mk 3 helicopters might be operational:

It is so delicate at the moment that I can only risk your irritation by saying early in the next decade remains the current publicly stated forecast.... When the answer does emerge I am sure the Minister would want to tell the House first.⁸⁴

71. The focus of the discussion between the MoD and Boeing was on how much the MoD was prepared to pay the company to fix the problem and CDP was seeking to cap the MoD's liability with a "firm fixed price". MoD was not arguing from a position of strength and the company had a very large order book. CDP had made clear to Boeing that it was "their reputation which is at stake here".⁸⁵ At our evidence session with the PUS on 24 October 2006, we were told that the MoD was "close to agreeing a satisfactory understanding with Boeing".⁸⁶

72. As our Armed Forces on operations require heavy-lift helicopters now, we asked whether it was possible to obtain additional Chinook helicopters from Boeing to meet the requirements, and how long it would take to obtain them. CDP said that it would depend on whether other customers, particularly the United States Army, were prepared to allow an order to be diverted.⁸⁷

73. There has been a long list of defence equipment projects that have experienced severe problems in terms of cost overruns and time slippage, including Eurofighter Typhoon, Astute submarines and Nimrod MRA4 aircraft. The procurement of eight Chinook Mk 3 helicopters is a case which illustrates the impact that poorly managed procurement can have on operations. Our Armed Forces in Afghanistan and Iraq desperately need heavy lift helicopters, yet eight such helicopters are sitting in hangars in the UK and no-one can tell us when they will be operational. We look to the MoD and Boeing to resolve this problem as quickly as possible. The reputations of both parties have already suffered from this sorry episode.

84 Q 159

85 Q 160

86 HC (2006–07) 57, Ev 12, Q 88

87 Q 166

Equipment for operations

74. In addition to the normal process of equipment procurement, the DPA procures equipment needed rapidly for operations by a route known as Urgent Operational Requirements (UORs). In 2005–06, the DPA delivered 27 UORs at an approved value of approximately £80 million to meet the needs of UK Armed Forces deployed on operations.⁸⁸ We and our predecessors have reported on the UOR process during inquiries into UK operations. The NAO has examined the UOR process and reported that it generally works well.⁸⁹

75. CDP considered that the success of the UOR process spoke for itself: 98 per cent of users questioned about the UOR process considered that it delivered what they needed.⁹⁰ Given this, we asked whether there were lessons from the UOR process which could be applied to normal equipment procurement and, in particular, the procurement of major equipment procurement. CDP considered that there were “some very powerful lessons”:

- procuring equipment “off-the-shelf or as close to off-the-shelf as you can get”;
- making sure that the front-line user was involved in defining the requirement; and
- undertaking procurement in an incremental way.⁹¹

76. We asked which “front-line” user was involved in defining the requirement: the soldier who would be operating the equipment or the commanding officer. CDP acknowledged that “not often enough do we get the actual user”, except in the case of Special Forces, and that “when somebody rolls up as front-line user, it is a good idea to make sure that it is a real front-line user”.⁹²

77. The Defence Procurement Agency is to be congratulated for its performance, to date, in procuring Urgent Operational Requirements for UK Forces deployed on operations. We consider that there are some important lessons which can be learned from the procurement of Urgent Operational Requirements and applied to mainstream equipment procurement, and we expect the MoD to ensure that this is done.

78. We think it vital that the actual user of equipment is involved in defining the requirement for both equipment procured through the normal procurement process and equipment procured through the Urgent Operational Requirements process. MoD should have arrangements in place to ensure that the actual user of equipment is consulted and involved in defining the requirement for new equipment.

88 Defence Procurement Agency, *Annual Report and Accounts 2005–06*, HC 1164, Foreword by the Chief Executive, p 3

89 National Audit Office, *The Rapid Procurement of Capability to support operations*, Session 2003–04, HC 1161

90 Q 149

91 Qq 147–148

92 Q 148

Current operational needs

79. In an interview about Afghanistan to the British Forces Broadcasting Service on 7 October 2006, the Prime Minister said that “If the commanders on the ground want more equipment, armoured vehicles for example, more helicopters, that will be provided. Whatever package they want, we will do”.⁹³ We were pleased to hear these comments from the Prime Minister and asked CDP about the availability of funds to meet such a commitment. He told us that:

I work inevitably to the process that it will be for the military to determine the priorities of what equipment they believe they actually need in theatre, the order in which they want it and the extent to which that money would be made available either outside the normal budget in support of operations from the Treasury through the national reserve or the extent to which we would have to look at the rest of the programme.⁹⁴

80. CDP considered that funding was something which Ministers would have to determine:⁹⁵

I am absolutely clear that the Secretary of State is looking at the options which are available and are being costed and presented to him, and I am absolutely clear that he will implement those as fast as he is able to. How he gets that funded is something which he necessarily must agree with the Treasury. There is no basis on which the Ministry of Defence would go out without the Treasury having endorsed the expenditure of money; that is the way the process works.⁹⁶

81. At our evidence session with the PUS on 24 October 2006, we asked Mr Jeffrey what the Prime Minister’s commitment meant in practice. He said that “it means that if military requirements are properly laid down by commanders on the ground.... through the normal processes of acquisition but as quickly as we can do it those requirements will be met”.⁹⁷ Mr Jeffrey assured us that the MoD had never been turned down by the Treasury in funding such requirements and “we have operated on a pretty fast track”.⁹⁸ However, he said that “everything is a money issue” and that “in the end, everything has to be funded”.⁹⁹

82. In addition to the cost of procuring equipment for operations, there is the on-going cost of equipment once in-service. Mr Jeffrey told us that the Treasury met the procurement costs but the “longer run support cost implications would be picked up in the regular expenditure round”.¹⁰⁰ While the Treasury provides additional money to meet the cost of operations, it appears that the cost of supporting equipment acquired for operations falls on the defence budget.

93 Daily Telegraph, *Blair admits Afghanistan mission is ‘very tough’*, 7 October 2006

94 Q 167

95 Q 168

96 Q 173

97 HC (2006–07) 57, Q 86

98 *Ibid.*, Q 87

99 *Ibid.*, Qq 100–101

100 *Ibid.*, Q 91

83. During our visits to UK Armed Forces in Afghanistan and Iraq before the Summer recess, we were told that additional equipment was required urgently, such as more helicopters. We welcome the Prime Minister's commitment that whatever package of equipment commanders on the ground want will be provided. There will always be a need for requests from the front line to be evaluated by the chain of command, and ultimately approved by Ministers, but this must be done quickly. We note the high satisfaction with the Urgent Operational Requirements process, and look to the Ministry of Defence and the Defence Procurement Agency to rise to the challenge presented by the Prime Minister's commitment, ensuring that requests from the field are processed as quickly as possible. We also look to the Treasury to speed up the approval of the funding for such equipment procurement and to recognise that the MoD will require additional funding to support the equipment once in-service. Service commanders must not be inhibited from asking for equipment required in the field by fears that this will impact on their future budgets.

5 Progress on four smaller-size projects

Examination of four smaller-size projects

84. The MoD provided us with a list of equipment projects with a current forecast cost of between £50 million and £100 million. We selected four projects to examine in detail, covering different capabilities. The MoD provided us with project summary sheets for each of these projects which provided a description of the project, and information on performance against approved cost, approved in-service date, and approved Key User Requirements.¹⁰¹ The total approved cost at Main Gate, the main investment decision, for the four projects was £282 million. A description of the four projects is provided at Table 3 and details of the progress of the four projects as at the end of October 2006 is provided at Table 4.

Table 3: Description of the four projects

Project	Description
General Service Respirator (GSR)	A replacement for the in-service respirator. The new respirator is to provide "more appropriate levels of protection, equipment compatibility and reduced user burden". Some 310,000 respirators are being procured. The contractor is Scott Health and Safety Ltd.
Anti Surface Warfare (ASUW) Littoral Defensive Anti Surface Warfare	Weapons for the Type 23 Frigate, Type 42 Destroyer and Royal Fleet Auxiliary ships to counter the threat posed by fast attack craft. Some 42 units are being procured. The contractors are MSI Defence Systems Limited and Dockyard Management Limited.
Maritime Composite Training System Phase I	Shore based Warfare Operator Training capability for legacy platforms and the Type 45 Destroyer. The Prime Contractor is BAE Systems Insyte.
Thermal Sighting System (TSS) for the Self Propelled High Velocity Weapon system (SP HVM)	A Thermal Sighting System for the Self Propelled High Velocity Missile Weapon system. SP HVM provides close air defence. The contractor is Thales Air Defence Ltd

Source: Ministry of Defence¹⁰²

101 Ev 33–48

102 *Ibid.*

Table 4: Progress of the four projects as at end of October 2006

Project (Main Gate approval)	Current forecast cost variation against approved cost (approved cost)	Current forecast in-service date variation against approved in-service date (ISD) (current forecast ISD)	Percentage of Key User Requirements expected to be achieved
General Service Respirator (GSR) (October 2004)	£12.5 million underrun (£65 million)	10 months delay (October 2007)	100%
Anti Surface Warfare (ASUW) Littoral Defensive Anti Surface Warfare (September 2005)	£6 million underrun (£66 million)	4 months early (July 2008)	100%
Maritime Composite Training System Phase I (August 2005)	£2 million underrun (£79 million)	On time (July 2009)	100%
Thermal Sighting System (TSS) for the Self Propelled High Velocity Weapon system (SP HVM) (February 2001)	£2 million underrun (£72 million)	5 months delay (December 2006)	100%

Source: Ministry of Defence¹⁰³

85. Overall, as at the end of October 2006, all four projects were forecast to come in under the approved cost, two of the projects were forecast to be either early or on time against the approved in service date, and all four projects were forecast to meet their Key Use Requirements.

General Service Respirator

86. The General Service Respirator (GSR) will replace the in-service, personal issue, S10 respirator, and provide more appropriate levels of protection, equipment compatibility and reduce user burden. Some 310,000 units are to be procured. The approved cost for the project was £65 million and the forecast cost at 31 March 2006 was £52 million, some £13 million (20%) under the approved cost. The in-service date was expected to be October 2006, two months earlier than the approved in-service date of December 2006. The in-service date is defined as the provision of sufficient GSR to support an operational deployment of 26,215 personnel.¹⁰⁴ As at the end of October 2006, the forecast cost was

103 Ev 33–48, 52

104 Ev 33–35

£52.5 million an increase of £0.5 million over the forecast cost at 31 March 2006, but still £12.5 million under the approved cost. The forecast in-service date at the end of October 2006 was October 2007, ten months later than the approved in-service date.¹⁰⁵

87. The GSR will be used by all Service personnel across the Armed Forces.¹⁰⁶ There are some 200,000 Service personnel, so we wondered why 310,000 respirators were being procured. According to Lieutenant General Andrew Figgures, Deputy Chief of Staff, (Equipment Capability), MoD, the additional 110,000 respirators are for:

the Reserves, plus one needs a range to fit the shape of all faces. You could not buy one for one, you would have to fit them, and indeed, one of the reasons why this is particularly good is that you get a very close fit and there is lots of variation in it, so it is a very effective protection which can be suited to the individual.¹⁰⁷

88. 500 pre-production GSRs have been manufactured for User Trials, including a hot weather trial in Australia to confirm the GSR design against specific climatic categories.¹⁰⁸ We asked about the progress with the User Trials and were told that while there had been good user feedback, a fault had been discovered in the last of the User Trials. In the Australian trials, sweat had built up at the bottom of the respirator.¹⁰⁹ This will require money to be spent on some design changes and modifications, and a re-trialling of the respirator, and some delays in the programme with a revised forecast in-service date of Spring 2007.¹¹⁰ The MoD has subsequently informed us that the forecast in-service date is now October 2007.¹¹¹

89. It is disappointing that modifications are required to the General Service Respirator which will result in a ten month delay in getting the respirator into service. We look to the MoD to ensure that the necessary investment is made, and the required re-trialling undertaken, to ensure that the General Service Respirator is fit for purpose when it enters service.

90. We were told that there was no indication that police and ambulance services will be procuring the GSR, but there was no reason why it could not be used by these services in due course.¹¹² **Given that UK Armed Forces personnel, and police and ambulance personnel, are likely to be working together in the future, we look to the Home Office and the Department of Health to consider the benefits of procuring the same General Service Respirator as is being procured for UK Armed Forces.**

105 Ev 52

106 Q 48

107 Qq 52–53

108 Ev 33

109 Q 54

110 Qq 55–56

111 Ev 52

112 Qq 48–50

ASUW Littoral Defensive Anti Surface Warfare

91. The ASUW Littoral Defensive Anti Surface Warfare is intended to counter the threat posed by the emerging and proliferating Fast Attack Craft / Fast Inshore Attack Craft. An automated small calibre gun (ASCG) is being procured to meet the requirement for the Type 23 Frigate and an upgrade of the Phalanx 1A Close In Weapon System to the 1B standard is being procured to meet the requirements of the Type 42 Destroyer and priority Royal Fleet Auxiliary ships.¹¹³ The approved cost for the project was £66 million and the forecast cost at 31 March 2006 was £63 million, some £3 million (5%) under the approved cost. The in-service date was expected to be July 2008, four months earlier than the approved in-service date of November 2008. The in-service date is defined as “when one of each selected solution is available to be deployed on RN platforms for operations”.¹¹⁴ As at the end of October 2006, the forecast cost was £60 million, some £6 million (9%) under the approved cost.¹¹⁵

92. Mr Jonathan Lyle, Operations Director, Air and Weapon Systems, DPA, told us that this project is:

essentially countering the threat that emerged posed by fast attack craft and fast inshore attack craft, which could be rigid inflatable boats or even jet-skis armed with weaponry, and that is a particular threat to our ships when they are operating close to land in littoral waters or when they are at check points.¹¹⁶

Both systems were to provide better accuracy and better target identification.¹¹⁷

93. The Type 42 Destroyer is to be replaced by the Type 45 Destroyer.¹¹⁸ We asked why the Phalanx system on the Type 42 Destroyer needed upgrading if it was going to be replaced. Mr Lyle outlined the MoD’s future plans:

The Type 42 currently has Phalanx 1A systems. A certain number of Type 42s, five in fact, will be upgraded to the Phalanx 1B system and will carry that until they are paid out of Royal Navy service. When that happens, the Phalanx 1B mounts that we have will be refitted to other ships in the Royal Navy’s fleet and a decision will be taken at that time as to which are the priority to receive it. A number of RFAs are receiving modifications to enable them to receive this system. We will take a decision at the time. We will recycle the mounts, as we currently do, on to those ships that are best judged to need the capability at the time. So the assets will be reused.¹¹⁹

94. Mr Lyle said that upgrade to the Phalanx 1A system was an off-the-shelf procurement as the modification kit was already in service with the United States.¹²⁰

113 Ev 37

114 Ev 37–38

115 Ev 52

116 Q 78

117 Ev 278

118 National Audit Office, *Major Projects Report 2005*, Project Summary Sheets, Session 2005–06, HC 595-II, pp 107–112

119 Q 84

120 Q 86

95. The ASUW Littoral Defensive Anti Surface Warfare project will protect Royal Navy ships from emerging threats posed by fast attack craft. We are pleased to see that the project is progressing well and that the MoD is procuring one of the systems off-the-shelf which has already been proven and is in-service with the United States.

Maritime Composite Training System Phase I

96. The Maritime Composite Training System (MCTS) system is an incremental programme to enable a coherent approach to future warfare operator training. Phase 1 will deliver the short training capability and provide a central hub to facilitate training through a common synthetic environment. The approved cost for the project was £79 million and the forecast cost at 31 March 2006 was £77 million, some £2 million (3%) under the approved cost. The in-service date was expected to be July 2009, which is the approved in-service date. As at the end of October 2006, the forecast cost and in-service date remained the same. The in-service date is defined as “when all aspects of the throughput have been achieved for each role trained at the Individual Career, Warfare Team (Sub Team, Command Direction Team and Platform Warfare Team) and Continuation level”. At 31 March 2006, the project was 3.5 months into a 43 month contract for Demonstration and Manufacture.¹²¹

97. Dr Andrew Tyler, Director, Land and Maritime, DPA, outlined the project to us as follows, “They basically build the entire operations suite that you would find on board a ship at a land-based training centre”.¹²²

98. The MoD is taking advantage of commercial off-the-shelf technologies for the hardware for the system. The system will provide flexibility: a classroom can be configured with radars to provide radar training, or can be configured to simulate a Type 23 Frigate or a Type 42 Destroyer. The MCTS should also result in a reduction in the number of instruction and training staff and the amount of real estate used.¹²³

99. Dr Tyler told us that the project was seven month behind schedule: “originally it was January 2009 for our most probable [in-service date] and it has now slipped to July 2009”.¹²⁴ One reason for the slippage was that there were more protracted contract negotiations following Main Gate approval.¹²⁵ However, Dr Tyler considered that this project could be held up as a good example of the technique called Earned Value Management which forces those overseeing the project to be extremely rigorous about understanding very early on in a project about how it is likely to develop. Dr Tyler told us that understanding issues on the project very early on had allowed the MoD to do two things:

first of all, it is allowing us to obviously look within the project itself as to how we can get some of that time back, and I think there is a real prospect of doing that.... The

121 Ev 41–42

122 Q 87

123 *Ibid.*

124 Q 92

125 Q 91

second thing it allows us to look at is what contingency plans we might need to have in place in order to ensure that the customer is not going to be without their capability.¹²⁶

100. We asked whether the MoD had built into the MCTS project the training for the Future Carriers. Dr Tyler told us “not at this stage”, but that the system could be reconfigured to replicate the floor space of the operations room of the Future Carriers, or any other ship. There would be no need to build a separate training building.¹²⁷

101. The Maritime Composite Training System has the potential to provide flexible and efficient training for Royal Navy personnel. We look to the MoD to claw back some of the slippage that this project has experienced and to ensure that the lessons learned from the use of Earned Value Management techniques on this project are promulgated to other project teams in the Defence Procurement Agency.

Thermal Sighting System for the SP HVM

102. The Self Propelled High Velocity Missile system (SP HVM) provides close air defence for manoeuvre forces. SP HVM does not currently have the capability to operate at night, through cloud or in poor visibility. The Thermal Sighting System (TSS) is being procured to address this significant capability gap. The approved cost for the project was £72 million and the forecast cost at 31 March 2006 was £70 million, £2 million (3%) under the approved cost. The forecast in-service date at 31 March 2006 was December 2006, five months later than the approved in-service date of July 2006. As at the end of October 2006, the forecast cost and in-service date remained the same. The in-service date is defined as “one troop (SP HVM), trained, supported and equipped with TSS”. In 2005, the requirement was reduced from 135 to 84. However, because of the advanced stage in manufacture, 135 were still being procured. The MoD was investigating options to make efficient use of the excess sights, including using the equipment in an alternative role or as spares.¹²⁸

103. We asked why a Thermal Sighting System had not been fitted to the SP HVM when it was originally procured. Dr Iain Watson, Operations Director for Information Superiority, DPA, explained that the technology was not mature enough and the risk, both technical and financial, was “excessive for that original project”.¹²⁹ The in-service date slippage on the programme had been nine months, but some of this had been recovered. However, the current in-service date slippage of five months had resulted in a delay in operational capability.¹³⁰

104. We asked why the TSS requirement had been reduced from 135 to 84. General Figgures said that since the requirement had been set the threat had changed with a diminished air threat from the former Soviet Union.¹³¹ For the 51 Thermal Sighting

126 Q 94

127 Q 97

128 Ev 45–46

129 Q 98

130 Qq 100–101

131 Q 102

Systems which were surplus to requirements, General Figgures set out the options being considered:

there are three things we can do.... we are looking at opportunities to deploy this very capable sight in other roles. We could use the 51 items to enhance the spares and repair pool so that we could reduce our ongoing support cost.... we could decide to dispose of them from the inventory to avoid the storage and handling charges and perhaps get some recovery from another source. But we have not made up our minds yet which we will adopt.¹³²

105. In addition to the 51 sights which are surplus to requirement, there are also 51 vehicles with the existing SP HVM fitted to them, which are now surplus to requirement.¹³³ We asked whether these vehicles and their SP HVM systems could be used in another role, for example against vehicles or other targets. General Figgures confirmed that this was something which the MoD was exploring, but that it was at an exploratory stage rather than a conclusion stage.¹³⁴

106. The Thermal Sighting System being procured by the MoD will allow the Self Propelled High Velocity Missile system to be operated at night, through cloud or in poor visibility and address a significant capability gap. Changes in the threat mean that 51 of the 134 Thermal Sighting Systems being procured are no longer required. We expect the MoD to identify how these surplus systems might be best used to ensure value for money for the money spent. We also look to the MoD to find an alternative use for the surplus 51 vehicles fitted with the Self Propelled High Velocity Missile system.

Lessons for larger equipment projects

107. The four projects we selected to examine have generally performed well, particularly against their cost and performance targets. The MoD told us that smaller-size projects are not managed differently to larger projects and that the principles of Smart Acquisition are applied in the same way. However, the smaller-size projects tend to be shorter in duration “so they do tend to be fresher and, therefore, more immediately affected by changes in... [DPA] policies”.¹³⁵

108. We were interested in identifying why the smaller-size projects we selected were experiencing different outcomes compared to larger projects. For example the smaller-size projects we selected had experienced cost underruns, yet larger projects often experienced cost overruns. Dr Watson considered that “the shorter projects do tend to be slightly more successful, but we do not have that kind of separation”.¹³⁶ Mr Lyle added that “the larger and more complex projects are larger and more complex”.¹³⁷ This is self-evident, but it is

132 Q 103

133 Q 104

134 Qq 105–106

135 Qq 3–5

136 Qq 6–7

137 Q 9

unclear why the level of complexity could not be built into the estimates for cost and time. The MoD told us:

There are a variety of reasons why smaller projects could be deemed more successful than some of the larger projects, particularly from an in year cost variation position. Smaller projects, that is, the Category C projects between £20m–£100m may involve less risk, be less technically demanding, be of shorter duration, have less integration issues, are unlikely to involve collaboration and have fewer stakeholders....By contrast the level of technical difficulty is often greater in the larger projects because there is a much greater element of development to meet more demanding performance criteria. The Department has recognised that the degree of complexity in a project is an important factor in assessing how it should be managed. We are working closely with the Australian DMO [Defence Materiel Organisation] defining project complexity and pulling together a skills competence framework that will improve the Department's ability to manage large, complex projects.¹³⁸

109. The MoD told us that “Learning From Experience” is required for all projects, regardless of their size and the lessons from all size projects are shared. The DPA is also working with the NAO to implement the NAO's Gold Standard for effective project control in order to standardise good practice in controlling all projects. The NAO Gold Standard defines the drivers for successful project delivery which are applicable to projects of all sizes. In the Defence Industrial Strategy (DIS), the MoD recognised the benefit of adopting more flexible and agile approaches to procurement. The MoD's written evidence states that “a particular facet of small projects is the ability for the project stakeholders, including the front-line users to work as a small, effective team in delivering the project. DIS recognised the importance of better team behaviours and relationship management as part of the core business of all our acquisition”. The MoD is seeking to ensure that these and other initiatives shape the project management and control processes in the new Defence Equipment & Support organisation, which is to be formed following the merger of the DPA and the DLO (see paragraphs 21–38).¹³⁹

110. There are lessons to be learned from the successful management of smaller-size equipment projects which can usefully be applied to larger equipment projects, and we look to the MoD to ensure that such lessons are promulgated. We are pleased to hear that the MoD is working with the Australian Defence Materiel Organisation and the National Audit Office to identify better ways of defining project complexity and better ways of controlling projects. It is vital that what is learned is fully embedded in the new Defence Equipment & Support organisation, which will be formed following the merger of the Defence Procurement Agency and the Defence Logistics Organisation.

138 Ev 53

139 Ev 52

Conclusions and recommendations

1. We congratulate the DPA on achieving its Key Targets and the MoD's Public Service Agreement Target for Acquisition in 2005–06. (Paragraph 8)
2. We are pleased to see that the MoD is getting a better grip on programme time schedules. Off-the-shelf procurement, where available, can reduce the risk of programme time slippage. We look to the MoD to ensure that project teams are made aware of the lessons from the off-the-shelf procurement of the Javelin medium range anti-tank guided weapon, as this appears to be a good example of the benefits which can be delivered from this procurement route. (Paragraph 13)
3. While cost growth on defence equipment projects in 2005–06 was below the target, we have concerns that the main reason for this was reduction in the quantity of equipment ordered. Trade-offs between cost, time and performance are part of the Smart Acquisition process, but we expect our Armed Forces to receive equipment in the numbers required and with the capability to do the task required of it. Meeting Key Targets should not be given priority over meeting the requirements of our Armed Forces. (Paragraph 17)
4. We are concerned to hear that, in the current financial year, potential cost increases on the Astute submarine and Type 45 Destroyer programmes are putting pressure on the DPA's Key Target covering cost growth, and that the Key Target covering asset deliveries is at risk. We look to the MoD to monitor performance closely against these two targets, and to seek to limit potential further cost growth on the Astute and Type 45 programmes. We will also be looking closely at the Major Projects Report 2006 to ensure that the cost increases on these two programmes are not symptomatic of wider problems within the MoD's procurement process. (Paragraph 18)
5. Work to merge the Defence Procurement Agency and the Defence Logistics Organisation is underway and, on current plans, the new organisation will begin operating on 2 April 2007. The MoD is managing the merger as a project with four phases and target dates for the completion of each of these phases. Given the importance and scale of the merger, we recommend that the MoD provide us with quarterly progress reports. (Paragraph 24)
6. A key objective of the new Defence Equipment & Support organisation is to improve the management of acquisition on a through-life basis. We are pleased to learn that there will be new targets to measure the performance in this area and a target covering how quickly the new organisation responds to the needs of our Armed Forces. Given some of the substantial cost increases and time slippage experienced by some equipment programmes in the past, we expect the MoD to continue to monitor its performance at procuring equipment to time, cost and quality, and for the performance data to be published on an annual basis as it is now. Otherwise, there is a risk that poor procurement performance could be buried in long-term project management data. (Paragraph 26)

7. The success of the Defence Equipment & Support organisation will depend on whether the new organisation has the staff with the required skills to improve Through Life Capability Management and provide more agility in responding to the needs of the Armed Forces. Much work is being undertaken to identify the current skills gaps and to address these through training or external recruitment, and we welcome this. It is essential that the MoD commit the investment required to address the skills gaps identified. (Paragraph 31)
8. We recognise that collocating the Defence Logistics Organisation with the Defence Procurement Agency is a sensible step, given that the aim of the merger of these two organisations is to improve Through Life Capability Management. The merger will result in a substantial number of job losses and the collocation will have a major impact, particularly on those who work for the Defence Logistics Organisation and their families. We expect the MoD to continue to consult with the Trades Unions during this period of change and to provide appropriate support to those affected. (Paragraph 34)
9. We would expect the merger of the Defence Procurement Agency and the Defence Logistics Organisation to deliver substantial efficiency gains. We look to the MoD to identify what efficiency gains are likely to be delivered, and to monitor whether these gains are achieved. (Paragraph 35)
10. The new Defence Equipment & Support organisation will be huge, in terms of both manpower and expenditure. Its roles of procuring equipment and managing equipment through-life are key to ensuring the effectiveness of our Armed Forces. We are concerned that, as the organisation will not have agency status, its activities may lose transparency. We recommend that the new organisation publish an annual report so as to allow proper public accountability, and parliamentary scrutiny in particular. (Paragraph 38)
11. We were impressed during our visit to Barrow in September 2006 with the commitment of BAE Systems' management and workforce to deliver the first Astute class submarine before the revised MoD date of 2009. (Paragraph 46)
12. We are surprised to learn that the prices for boats 2 and 3 have still to be agreed and, as a consequence, the financial liability to the MoD is unknown. We look to the MoD to ensure that the negotiations on the prices for these boats are resolved as soon as possible. Lessons must again be learned from this programme, as letting contracts without pinning down prices, and negotiating prices when equipment is at an advanced stage of manufacture, cannot be considered 'Smart Acquisition'. (Paragraph 47)
13. The delay in agreeing prices on Astute boats 2 and 3 is delaying the placing of a contract for boat 4. This, in turn, has an impact on the submarine skills base in the UK. We are examining this issue as part of our inquiry into the Future of the Strategic Nuclear Deterrent: the manufacturing and skills base and plan to report at the end of the year. (Paragraph 48)
14. The price for the two future aircraft carriers had yet to be agreed. The MoD has sensibly commissioned an independent financial review to advise on what the

carriers 'should' cost, and it is to be hoped that this will lead to agreement on a challenging contractual price which industry will seek to beat. We look to the MoD to ensure that negotiations on price are moved forward as quickly as possible so that the main investment decision on the future carriers can be taken. (Paragraph 54)

15. Discussions on the Future Carrier programme will be crucial to the future of the UK shipbuilding industry. The programme is a key element of the Maritime Industrial Strategy. We will examine the Maritime Industrial Strategy as part of our inquiry looking at the progress of the Defence Industrial Strategy. (Paragraph 56)
16. We have no doubt that the Minister for Defence Procurement, the Chief of Defence Procurement and MoD officials have made considerable efforts to ensure that the United States are fully aware of the information required by the UK on the Joint Strike Fighter to allow the aircraft to be operated independently. However, it is still uncertain whether the United States is prepared to provide the required information. If the UK does not obtain the assurances it needs from the United States, then it should not sign the Memorandum of Understanding covering production, sustainment and follow-on development. Such an impasse on a procurement programme of such strategic importance to the UK would be a serious blow to UK-US defence equipment co-operation, which has hitherto been of such positive benefit to both our nations. If the required assurances are not obtained by the end of the year, we recommend that the MoD switch the majority of its effort and funding on the programme into developing a fallback 'Plan B', so that an alternative aircraft is available in case the UK has to withdraw from the Joint Strike Fighter programme. We must not get into a situation where there are no aircraft to operate from the two new aircraft carriers when they enter service. (Paragraph 64)
17. We are concerned to hear that possible changes to the early production of the Joint Strike Fighter aircraft programme could lead to an increase in the price for each aircraft. We look to the MoD to monitor this situation very closely and keep us informed of developments. (Paragraph 65)
18. There has been a long list of defence equipment projects that have experienced severe problems in terms of cost overruns and time slippage, including Eurofighter Typhoon, Astute submarines and Nimrod MRA4 aircraft. The procurement of eight Chinook Mk 3 helicopters is a case which illustrates the impact that poorly managed procurement can have on operations. Our Armed Forces in Afghanistan and Iraq desperately need heavy lift helicopters, yet eight such helicopters are sitting in hangars in the UK and no-one can tell us when they will be operational. We look to the MoD and Boeing to resolve this problem as quickly as possible. The reputations of both parties have already suffered from this sorry episode. (Paragraph 73)
19. The Defence Procurement Agency is to be congratulated for its performance, to date, in procuring Urgent Operational Requirements for UK Forces deployed on operations. We consider that there are some important lessons which can be learned from the procurement of Urgent Operational Requirements and applied to mainstream equipment procurement, and we expect the MoD to ensure that this is done. (Paragraph 77)

20. We think it vital that the actual user of equipment is involved in defining the requirement for both equipment procured through the normal procurement process and equipment procured through the Urgent Operational Requirements process. MoD should have arrangements in place to ensure that the actual user of equipment is consulted and involved in defining the requirement for new equipment. (Paragraph 78)
21. During our visits to UK Armed Forces in Afghanistan and Iraq before the Summer recess, we were told that additional equipment was required urgently, such as more helicopters. We welcome the Prime Minister's commitment that whatever package of equipment commanders on the ground want will be provided. There will always be a need for requests from the front line to be evaluated by the chain of command, and ultimately approved by Ministers, but this must be done quickly. We note the high satisfaction with the Urgent Operational Requirements process, and look to the Ministry of Defence and the Defence Procurement Agency to rise to the challenge presented by the Prime Minister's commitment, ensuring that requests from the field are processed as quickly as possible. We also look to the Treasury to speed up the approval of the funding for such equipment procurement and to recognise that the MoD will require additional funding to support the equipment once in-service. Service commanders must not be inhibited from asking for equipment required in the field by fears that this will impact on their future budgets. (Paragraph 83)
22. It is disappointing that modifications are required to the General Service Respirator which will result in a ten month delay in getting the respirator into service. We look to the MoD to ensure that the necessary investment is made, and the required re-trialling undertaken, to ensure that the General Service Respirator is fit for purpose when it enters service. (Paragraph 89)
23. Given that UK Armed Forces personnel, and police and ambulance personnel, are likely to be working together in the future, we look to the Home Office and the Department of Health to consider the benefits of procuring the same General Service Respirator as is being procured for UK Armed Forces. (Paragraph 90)
24. The ASUW Littoral Defensive Anti Surface Warfare project will protect Royal Navy ships from emerging threats posed by fast attack craft. We are pleased to see that the project is progressing well and that the MoD is procuring one of the systems off-the-shelf which has already been proven and is in-service with the United States. (Paragraph 95)
25. The Maritime Composite Training System has the potential to provide flexible and efficient training for Royal Navy personnel. We look to the MoD to claw back some of the slippage that this project has experienced and to ensure that the lessons learned from the use of Earned Value Management techniques on this project are promulgated to other project teams in the Defence Procurement Agency. (Paragraph 101)
26. The Thermal Sighting System being procured by the MoD will allow the Self Propelled High Velocity Missile system to be operated at night, through cloud or in poor visibility and address a significant capability gap. Changes in the threat mean

that 51 of the 134 Thermal Sighting Systems being procured are no longer required. We expect the MoD to identify how these surplus systems might be best used to ensure value for money for the money spent. We also look to the MoD to find an alternative use for the surplus 51 vehicles fitted with the Self Propelled High Velocity Missile system. (Paragraph 106)

27. There are lessons to be learned from the successful management of smaller-size equipment projects which can usefully be applied to larger equipment projects, and we look to the MoD to ensure that such lessons are promulgated. We are pleased to hear that the MoD is working with the Australian Defence Materiel Organisation and the National Audit Office to identify better ways of defining project complexity and better ways of controlling projects. It is vital that what is learned is fully embedded in the new Defence Equipment & Support organisation, which will be formed following the merger of the Defence Procurement Agency and the Defence Logistics Organisation. (Paragraph 110)

Annex: List of Abbreviations

ASCG	Automated Small Calibre Gun
ASUW	Anti Surface Warfare
CDL	Chief of Defence Logistics
CDP	Chief of Defence Procurement
DE&S	Defence Equipment & Support organisation
DIS	Defence Industrial Strategy
DLO	Defence Logistics Organisation
DMO	Defence Materiel Organisation
DoD	Department of Defense
DPA	Defence Procurement Agency
GSR	General Service Respirator
JSF	Joint Strike Fighter
MCTS	Maritime Composite Training System
MoD	Ministry of Defence
NAO	National Audit Office
PSA	Public Service Agreement
PUS	Permanent Under Secretary
RFA	Royal Fleet Auxiliary
RN	Royal Navy
SP HVM	Self Propelled High Velocity Missile
STOVL	Short Take Off and Vertical Landing
TLCM	Through Life Capability Management
TSS	Thermal Sighting System
UK	United Kingdom
US	United States of America
UOR	Urgent Operational Requirement

Formal minutes

Tuesday 28 November 2006

[Afternoon Sitting]

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
Willie Rennie

Defence Procurement 2006

The Committee considered this matter.

Draft Report (Defence Procurement 2006), proposed by the Chairman, brought up and read.

Ordered, That the Chairman's draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 110 agreed to.

Annexes (Summary and List of Abbreviations) agreed to.

Resolved, That the Report be the First Report of the Committee to the House.

Several papers were ordered to be appended to the Minutes of Evidence.

Ordered, That the Appendices to the Minutes of Evidence taken before the Committee be reported to the House.

A paper was ordered to be reported to the House.

Ordered, That the provisions of Standing Order No. 134 (select committee (reports)) be applied to the Report.

[Adjourned till Tuesday 5 December at 10.00 am]

List of witnesses

Tuesday 27 June 2006

Dr Iain Watson, Operations Director for Information Superiority, **Dr Andrew Tyler**, Director, Land and Maritime, **Mr Jonathan Lyle**, Operations Director, Air and Weapon Systems, and **Lieutenant General Andrew Figgures**, Deputy Chief of Staff (Equipment Capability), Ministry of Defence Ev 1

Tuesday 10 October 2006

Sir Peter Spencer KCB, Chief of Defence Procurement, Defence Procurement Agency, Ministry of Defence Ev 15

List of written evidence

1	Memorandum from the Ministry of Defence: Definitions of Categories for Defence Equipment Projects	Ev 33
2	Memorandum from the Ministry of Defence: General Service Respirator	Ev 33
3	Memorandum from the Ministry of Defence: ASUW Littoral Defensive Anti Surface Warfare	Ev 37
4	Memorandum from the Ministry of Defence: Maritime Composite Training System Phase 1	Ev 41
5	Memorandum from the Ministry of Defence: Thermal Sighting System for SP HVM	Ev 45
6	Memorandum from Avon Protection	Ev 48
7	Memorandum from the Ministry of Defence: Performance Against Key Targets 2005–06	Ev 49
8	Supplementary memorandum from the Ministry of Defence	Ev 54

List of unprinted written evidence

Additional papers have been received from the following and have been reported to the House but to save printing costs they have not been printed and copies have been placed in the House of Commons library where they may be inspected by members. Other copies are in the Parliamentary Archives, Houses of Parliament and are available to the public for inspection. Requests for inspection should be addressed to the Parliamentary Archives, Houses of Parliament, London SW1A 0PW. (Tel 020 7219 3074) hours of inspection are from 9:30am to 5:00pm on Mondays to Fridays.

Jag Patel

Defence Committee Reports in this Parliament

Session 2005–06

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

Oral evidence

Taken before the Defence Select Committee

on Tuesday 27 June 2006

Members present:

Mr James Arbuthnot, in the Chair

Mr David S Borrow
Mr David Crausby
Linda Gilroy
Mr Brian Jenkins

Mr Kevan Jones
Robert Key
Willie Rennie
John Smith

Witnesses: **Dr Iain Watson**, Operations Director for Information Superiority, **Dr Andrew Tyler**, Director, Land and Maritime, **Mr Jonathan Lyle**, Operations Director, Air and Weapon Systems, and **Lieutenant General Andrew Figgures**, Deputy Chief of Staff (Equipment Capability), Ministry of Defence, gave evidence.

Q1 Chairman: Would you like to introduce yourselves? General, would you like to begin, saying your role and who you are?

Lieutenant General Figgures: Yes, Chairman. My name is Lieutenant General Andrew Figgures. I am the Deputy Chief of Defence Staff (Equipment Capability) and this is my second week in the appointment.

Q2 Chairman: All questions will be directed to you!

Lieutenant General Figgures: Thank you very much indeed for that consideration. I am responsible for setting the requirement and allocating the appropriate resource and the balance of resource to those requirements such that we can then hand over a project to the Defence Procurement Agency for them to turn that requirement and that money into the equipment capability that we require.

Dr Watson: Iain Watson. I am the Operations Director for Information Superiority in the DPA and, therefore, have oversight of two clusters of IPTs that are principally directed towards delivering capability in communications intelligence and, indeed, broad electronic systems.

Dr Tyler: Andrew Tyler. I am the Director, Land and Maritime. I look after two clusters. One cluster contains all of the Maritime projects with the exception of the submarine-related projects, and the other cluster contains all of the land-related projects, with the exception of those which have complex weapons involved with them.

Mr Lyle: Good morning. My name is Jonathan Lyle. I am the Operations Director for Air and Weapon Systems, so my role is very similar to my colleagues Ian and Andrew. I look after the fixed wing, the rotary wing and the weapon sectors and have oversight of projects within those sectors.

Q3 Chairman: We intend to finish this evidence session this morning by 12 o'clock. This will require help from you, as well as discipline from us. Let us start by saying we are looking at four medium-sized projects rather than the larger ones, which are

normally scrutinised. Are such projects managed differently from larger projects and, if so, in what way and why?

Dr Watson: Perhaps I can lead on that. No, they are not managed differently. The instructions, the techniques, the staffing is similar. The only external difference that one would notice is that typically these projects form part of a project portfolio, a number of similar types of projects within a single IPT, but the approach is identical for all sizes of project.

Q4 Chairman: Are the principles of Smart Acquisition applied in the same way?

Dr Watson: Yes.

Q5 Chairman: The issue of whether the Smart Acquisition principles have been fully applied over the last five or six years has come under scrutiny by the Chief of Defence Procurement. Has there been any difference in large projects and small projects as to whether those principles actually have been applied, or has there been a similar failure in some of the application of those principles with medium-sized projects?

Dr Watson: I think you would find the same characteristics applying to projects at all sizes. The fact is that a number of these projects are shorter in duration, so they do tend to be fresher and, therefore, more immediately affected by any changes in our policies.

Chairman: Do any of the rest of you wish to add anything to what has just been said? No? Okay.

Q6 Mr Jenkins: I know we are getting the verbal and you are saying words, but I would like to make some more sense of this. If it is successful and you can deliver a small project, I would go on to say how many of our legacy projects are small and how many are large? So, although you are applying the same techniques, we are getting different outcomes. What is the reason we are getting different outcomes? Why

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do we get overruns mainly on larger projects and we get underruns on smaller projects? Can you tell us why that is happening, please?

Dr Watson: I cannot give you a precise analysis of that, because there is not one available to me.

Q7 Mr Jenkins: When we ask questions, we expect the people sitting in front of us to be experts and to tell us the reason. You are saying you cannot tell us the reason?

Dr Watson: If I were to take this sample, the TSS, the one that comes particularly from my cluster, is a pre Smart Acquisition project, so it has been running since 1997 in its initial assessment phase. The shorter projects do tend to be slightly more successful, but we do not have that kind of separation. What we do have is a summation of all our achievements in the key targets, and the key targets are not weighted by size of projects other than the financial figures, they represent an average of all of the slippage and performance characteristics.

Q8 Mr Jenkins: You told us firstly that you could not tell us. Would any of your colleagues like to offer their view on this from their particular silos, or should we be talking to somebody above your level, above your pay grade, to tell us why it works in small, why it does not work in large in general?

Dr Tyler: Perhaps I can add a little bit here. The smaller projects, by their nature, tend to be more focused on fairly focused pieces of equipment; the larger projects are often characterised by being very large integrative systems. If you take something like a warship, for example, you have got a multitude of different systems that have been brought together in a very complex manner on a project like that. What that gives you is a very complex project environment that you are operating in with an awful lot of external dependencies, all of which are subject to change. If you take a warship project, one part of that project, there may be some issue with a supplier or with a particular piece of technology that has not worked out the way it was expected to, and that knocks on through the programme.

Q9 Mr Jenkins: Can I stop you there. You are amateurs at this level. We are professionals. We pull our rank all the time; it is our job. We confuse people. What you are telling me is that because it is a larger project it has more components in it, therefore it is more difficult. What you have said to me is that smart Acquisition requires the same discipline and the same procedure whether it is small or large. Therefore it must get the same outcomes. What you are not telling me is the degree of planning, the amount of technical input into the planning stage, before it gets to Main Gate, even though that is where it has fallen down in the past, but, basically, I am getting the message that you do not know why. Yes or no. Who do we talk to to find out why?

Mr Lyle: I think, Mr Jenkins, what my colleague is saying is that the larger and more complex projects are larger and more complex.

Mr Jenkins: Of course they are; it is self-evident. I have just said, we are professionals.

Q10 Chairman: What is it that is injected into such a project by the size and the complexity that cannot be predicted in advance?

Lieutenant General Figgures: I was a Technical Director of the Defence Procurement Agency in my previous appointment. If I can give an example, if one were to seek to acquire pistols, nine millimetre pistols, that is essentially a very simple problem to solve in so far as the supply chain is understood, the requirement is well understood, the pistols have been developed over time, the ammunition has been developed over time. All the technical risks that you might experience in terms of acquisition have, to all intents and purpose, been worked through. That does not mean to say that you might not come up against some problem with the acquisition of pistols, there might have been a change in the supply chain, a change of material that might lead to cracking of the top slide, or something like that, but it does illustrate the point which I think has been made by all three, that the more complicated the project, there are more working parts, more things to go wrong, the supply chain is more complicated, the requirement is more complicated to assess and bring into service. It is a bit like anything that we deal with in civilian life. A small road project is very different from a motorway project, so complexity brings with it an increase in things that will go wrong.

Mr Jenkins: I understand that. I understand all this—in a previous life I was an engineer, so I know exactly what it is—but what I am trying to get at, on the small project, I understand there is not so much complexity, but on the large project there is more complexity, therefore I build in what I need to overcome that complexity. I do not turn round at the end of the day and say, “We underestimated that. There will be an overrun consideration, because we did not understand what we were doing. We can only handle small projects.” That is what is coming over to me.

Chairman: We could go around in circles.

Q11 Willie Rennie: I want to focus on the staff aspect. The Permanent Under Secretary of State in January told the Committee that he would be paying a lot of attention to whether the DPA had the staff, training and skills to implement the Smart Acquisition principles. Where is the appeal for staff? Is it the smaller projects? Is it the bigger projects? Which projects get the best staff and why is that the case?

Mr Lyle: I think it is a bit of both. Clearly, we look to put good staff onto all projects. What you tend to find is that the smaller projects offer a really good development opportunity for the aspiring younger people, let us say, equivalent to squadron leader level, where in a large project team they would be a small cog in quite a large wheel. In a smaller project they get to be someone who is the project manager and, particularly as Andrew has described, because the duration is shorter, they tend to see the project through from cradle to grave. Good people will have

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experience in both large and small projects. You would look in guiding them in their careers to saying, after having worked in a large collaborative project, to go and then work in a smaller project team, but we try and make sure that in all the projects we have a sampling of our best people. We put a lot of care and attention into how we recruit the team leaders for each of our project teams, and it is then for those team leaders, with our support and guidance, to build around the team of relevant professionals (engineers, requirements managers, commercial people, financial people) to build a cohesive team. It depends. For some the attraction is being in a large project, for some it is being much more hands-on in a smaller project.

Q12 Willie Rennie: So it is a mixed pool?

Mr Lyle: Yes. There are certainly no premier league staff that go into big projects and a second division who go into smaller projects.

Dr Tyler: It is worth just adding, as Iain has said, that a lot of the IPTs that are dealing with the smaller projects have a basket of smaller projects within it. So, taken together, you might have anything, from a handful up to may be even as much as a couple of dozen projects, within a single IPT, with an IPT leader running it, and then more junior people running the individual projects within that IPT.

Q13 Willie Rennie: The Permanent Under Secretary also told us that they are doing a review into procurement to identify the current procurement approach and how it can be approved. It was said it was going to be published in May. I wondered what the update is and when it is expected and if there are going to be great changes.

Mr Lyle: The review, which is called “Enabling Acquisition Change”, has been conducted and is complete. The recommendations are now with ministers, and we understand they hope to make an announcement on it very shortly.

Q14 Chairman: Will those recommendations be published?

Mr Lyle: I would imagine so, but I do not have a line on that, I am afraid. I am sure the substantive details of the changes to be made will clearly be published.

Q15 Chairman: But not the report itself?

Mr Lyle: I do not know, I am afraid.

Q16 John Smith: (1) Is it the case that staff have greater ownership and are, therefore, more accountable for smaller scale projects than larger projects because of the time period and the amount of resources involved, and (2) what training is provided for your staff, especially your technical staff, in project management within the department?

Dr Watson: If I could take those in order, I would say, no, there is not a greater ownership, individual team members will have a set of performance goals for the year. All of our staff on project teams tend to identify very strongly with the outcomes of their project and typically are very enthusiastic about

pursuing the goals. There would be a very clear identification of an individual who is responsible for managing the project, so the project manager does tend to have a very clear tick against his objectives for the year and the objectives of the project. As far as training is concerned, we recruit from a variety of sources. Obviously, there is a graduate recruitment scheme which we have put in place which provides a couple of years of dedicated professional development with a range of jobs and then some continuing professional development. There are a vast variety of technical teams’ demands, and we associate those with a defence procurement management training organisation, which offers a large variety of different types of training appropriate to the jobs in commercial, technical, financial and other disciplines. We probably need to improve. We have concluded, we need to improve the amount of through-life training that we give to individuals, and we have developed under the DPA Forward banner an approach which sees a number of technical experts—we are calling them development partners—who will take on the responsibility for developing their particular area of expertise. That is to enhance what we have already been doing, and we would see that developing into the future.

Q17 Chairman: Can I come back to the question I have just asked about whether the Enabling Acquisition Change report will be published. The way the Ministry of Defence does business is of great importance, both to the country and to the industrial base. What could be the grounds for not publishing the report, which I understand is being done by Mr McKane, is it?

Mr Lyle: It is Tom McKane’s report. Genuinely, Chairman, I am not seeking to give an evasive response, I just genuinely do not know the answer. All I would say is pretty much everything we have done recently has—. What I am saying is it is my Minister’s decision whether he chooses to publish.

Q18 Chairman: But you yourself can see no reason why such a report should not be published. Is that right?

Mr Lyle: Given my understanding of the way in which the department operates and the way in which we engage with Parliament, particularly under the Freedom of Information Act, it would be surprising were we not to do so, but ultimately it is for my Minister to decide whether he would choose to publish a piece of advice given to him within the department. All I could point to is the *Defence Industrial Strategy*, and all the work that was published with that. We were very helpful with that and, given this is part of this; it would be curious not to do so.

Q19 Chairman: We will certainly wish to take a close interest in that report.

Mr Lyle: I will certainly pass back to my Minister the Committee’s interest in seeing the McKane Report.

Chairman: Thank you.

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Q20 Mr Jenkins: Can I go back to project managers, because I think that is one of the key elements. When you have got a short project, a project manager can see the life of it out. When it is a longer project, because the project manager hands over to somebody else, there is no ownership, there is no responsibility, there is no accountability. Do you think it is important that any project has a project manager to see it out and to see its life out, and do you think there is a time beyond which a project manager should be removed, two or three years, or what is the guiding principle now used by your different sections for project managers? In the past I have been appalled about the number of project managers who are turned over on a particular project. Do you think it is important?

Dr Watson: The period of appointment of a project manager is an important topic, it is one that we watch very carefully, and typically we are looking for a sensible degree of continuity. At the same time, we need to recognise that people do need to move on. They do get stale in doing the same job, and, therefore, you want to balance how long they have been doing the job with the needs of the project. We would only look to make major changes if it was necessary for the individual or, indeed, it was necessary for the stage of the project.

Q21 Mr Jenkins: So it is not the shift in the individual where the blame falls directly?

Dr Watson: I am sorry, could you repeat the question?

Q22 Mr Jenkins: Sometimes you move a project manager off the project because you know it is not going to run to plan, and you move another project manager on and then, when they come before them, they say, "It is not his fault really because he was not there for the complete life of the project." There is none of that done in the department?

Dr Watson: Let me answer that more directly than I was going to. Clearly, if you have a failing project manager on a failing project what you do is you move him. We would do that, and we have got examples of having done that. If you have got a project that needs a fresh pair of eyes, then you would move the project manager. If you have a project manager who has won his spurs and is ripe for doing something tougher, then you would move him on. There are reasons why you would manage it, but we would not look to move people on because it is just the turning of the wheel. We would want reasons for doing that.

Mr Lyle: There is another factor as well which comes into play, which certainly bears on many of my projects. I like to keep my team leaders and the key specialist there as long as possible, but we hit also the issue of potential fraud, and we have what we call a five-year rule in that, if anyone is in post with a particular contractor for five years, we have to undertake a formal review because they could have become too close to the contractor. I have got people who have been in project teams in similar posts for seven or eight years, and every year I have to revalidate to say "what is the balance"? Is it best to

keep them there for their experience, for the next challenge, and we have to investigate whether there is scope for them to have got too close to the contractor, and that is a balance we have to draw, but I can certainly think of several individuals in my area where there are some really key individuals, I really want to keep there for quite a long time, because there is some real key knowledge with them and some key relationships with the company to be sustained.

Chairman: I would like to move us on a bit.

Q23 Linda Gilroy: Some smaller-size equipment projects are likely to be manufactured by small and medium enterprises rather than the big defence companies. How do you ensure that SMEs are alert to such opportunities and that they did bid for contracts?

Dr Watson: Perhaps I could start by saying that we are aware of the supply chain. Defence contracts are advertised. Over £100,000 of non war-like material are advertised in the *EU Journal*, material which is war-like—so it is a weapons system or something of the sort—above a value of half a million is advertised in the *Defence Contracts Bulletin*, which appears fortnightly, and that is available as a paper, or as a CD, or via Internet access; so there is that stage. There is a series of help that is provided. There is a contracts commercial help desk, there is a commercial cycle of briefings and we do things like "industry days" on a regular basis, specifically trying to ensure that what is available by way of business is seen by potential bidders and they are encouraged and helped to be able to do business for the MoD.

Dr Tyler: One of the things that you would have very early on in projects of any size is an invitation to potential members of the supply chain to come together for an "information day", where they will be told about the project and they will be given some view of the sort of opportunities that there would be for members of the supply chain. Those are extremely well attended.

Q24 Linda Gilroy: The supply chain is a supply chain as part of bigger contracts, but on some of the smaller projects that you are dealing with, would it be the case that a small or medium enterprise would be interested in bidding for the whole project and the method that Dr Watson described as the one that people would have to be alert to to participate in that?

Dr Tyler: As I say, I have just come from an SME before coming into the Ministry of Defence, and we used a variety of methods of finding out where the work was within the Ministry of Defence, just as I would expect to do in any other sector. Some of it is the more formal "industry days" where you can go along and be proactively given information. The *Defence Contracts Bulletin* was an excellent source. That was always scrutinised to find out what opportunities were coming in, and obviously with the very large projects there is a barrier to SME involvement just to do with financial strength and muscle to be able to take on the risks, but generally they are all open to SMEs.

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Q25 Linda Gilroy: When we were taking evidence on the *Defence Industrial Strategy* we had some evidence from trade associations, which small and medium enterprises take part in, that some of them were giving up because they were finding the route to market so difficult. Do you have any evidence of that perhaps from your previous role?

Dr Tyler: I think, to be honest, you would find that was very dependent on the area into which the defence market that they were trying to sell.

Q26 Linda Gilroy: Which areas are most difficult for people?

Dr Tyler: I suppose, in the round, we are not investing so much money in a particular area of defence technology at the moment.

Mr Lyle: If I can give one example, the one about which you have asked us to come and talk about today, the Anti Surface Warfare Littoral Defence System, one of the contractors in there is a small and medium-sized enterprise. MSI Defence System, with about 160 employees, I think, based in Norwich, a relatively small turnover, but they competed directly with Ultra, who are a medium-sized business, and BA Systems, who are well known to all of us, and won the competition. They clearly found a route there to access the market directly and are now signed for a contract of about £20 million directly to supply these systems; so they can succeed. I think in that case they have a fairly established relationship with us over many years.

Q27 Linda Gilroy: Universities have a key role in promoting knowledge partnerships. Do you have a relationship with universities which allows them to understand your procurement processes so that they can work with those knowledge partnerships?

Dr Watson: Yes, indeed, we do. There are a number of endeavours, such as the Defence Technology Centres, which have spread the opportunity to gain from the defence's investment in science and technology. We have also used universities extensively as advisers on individual projects and on management projects, and so I think there is quite a broad arrangement. I am not aware of a particular register which would enable us to give you a quick survey of that.

Q28 Linda Gilroy: It is not so much a register as firms which may have something that is relevant to defence, but they are working in another area. They may be new to trying to compete in that area and it is how you reach out that you get the benefit of that as well as them being able to come. Another and final question in relation to small and medium enterprises, where prime contractors are responsible for delivering smaller size equipment projects (I think you touched on the supply chain issue just now), does the DPA have specific ways of ensuring that they can compete for sub-contracts? You are beginning to describe ways in which you do that, but could you flesh that out a bit?

Dr Tyler: The answer to that is most definitely, yes, particularly as a lot of the SME sector is providing specialist areas of site engineering and technology

which the large contractors are as dependent upon as we are. It is not something that they would necessarily maintain within their own organisations. We have to walk a fine balance here between, on the one hand, ensuring that we are engaging the full supply chain and we are bringing in the specialist companies, but, on the other hand, not overly suggesting to a particular prime contractor or a major contractor that they are forced to use particular parts of the supply chain: because if we do that we are then finding ourselves within the contractual chain, which can mean that we end up with contract liabilities later on which we do not want. What we try and do is to encourage a teaming very early on in the genesis of the project, and that is generally what happens. If it is a large project, you will get three or four of the large organisations teamed with the smallest companies.

Q29 Willie Rennie: How would you rate your performance in attracting SMEs or getting work to SMEs? I know it is not your job to give work to SMEs, but how would you rate their performance in that area?

Dr Tyler: I have not got statistics instantly to hand, but, intuitively, from having worked personally in different sectors, I would say that there are some additional barriers to companies operating in the defence sector to do with some of the rigours of the science, engineering and technology that we are implementing, but, in broad terms, I have found the defence industry to be as receptive to SME engagement as other industries I have worked in, like the oil and gas industry. If you have got something that is to the customer's benefit, they will generally take notice of it and be interested in it.

Q30 Willie Rennie: Have you highlighted the necessary improvements or the areas that you would like to make improvements in to attract more SMEs?

Dr Watson: I think one of the areas that is important is the early stage in programmes and the openness that we are increasingly giving on the research and technology front, where much more of the research budget is to be completed in the future rather than directed into the former government laboratories.

Q31 Mr Jones: I think, Mr Tyler, you said it is a point of fine balance, but is it not your job as part of the *Defence Industrial Strategy*, to encourage and ensure that SMEs are involved in the supply chain? I have to say, my experience, talking to a lot of SMEs who are not defence-related contracts but people who possibly have got technologies who would be part of a larger company, like Linda Gilroy said, find it very difficult to get anywhere near Abbeywood?

Dr Tyler: For a new entrant into the defence market, I will definitely not deny there is not a hurdle to entry, but I do not think it is a barrier to entry. Frankly, if you are new entrant into the off-shore oil and gas market, there are hurdles to be overcome.

Q32 Mr Jones: That is different, because that is a private sector operation. This is a government operation. Should we not be looking for

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opportunities for SMEs to say to some of the larger primes, “Look, we expect you to look, especially in regional players”—

Dr Tyler: I do not think the hurdles are put in place by the organisation. They are more to do with understanding the market environment you are going into. Defence projects, as we are all aware, have a lot of special features to them which have to be understood by the supply chain in order to be effective suppliers, in the same way as I would expect to understand the way the oil industry works if I was going to be a good supplier into the oil industry.

Q33 Mr Jones: I disagree with you. I have to say that this is a multi-million pound business that the tax-payers are paying for. I would expect you, in terms of you as an organisation, to encourage SMEs into that. Are you aware of an organisation called Northern Defence Industries?

Mr Tyler: I am sorry?

Q34 Mr Jones: Northern Defence Systems?

Lieutenant General Figgures: Yes.

Q35 Mr Jones: They are a body in the North East, in Yorkshire and Lancashire, who try and put small SMEs into the supply chain for larger contracts. Listening to one of my firms, that I did last week, who do battle technology for electrical vehicles, they said trying to talk to you is like trying to talk to the Pope?

Dr Tyler: They are a supplier into the defence business?

Q36 Mr Jones: They are trying to be but they are finding it very difficult to get in.

Mr Lyle: We do engage with them. We have had seminars with the Northern Defence Industries organisation in the last few years on Abbeywood, about which one of my colleagues spoke not very long ago. We are trying to outreach as best we can through the Contracts Bulletin, through the seminars, but inevitably people will sometimes struggle and with the specific proposition they have got, not find a home for it, either because it is not the solution we need or there is not a requirement for that particular solution. We do quite a lot, as we describe, in terms of trying to outreach, but I recognise there will always be hard-luck stories or difficulties from SMEs who cannot—

Q37 Mr Jones: What priority is that for you? Clearly, Lord Drayson has put great stay on the Defence Industrial Policy in terms of ensuring not just traditional defence industry contractors get into the supply chain but actually some non-suppliers. I have got examples from the north-east where small SMEs down to two or three-man outfits have supplied things now into defence contracts which have never done before. How much vigour is there behind this? I would like to see a lot more in terms of ensuring that SMEs are being encouraged to get in, not just on “industry days” but going out there and looking at what is actually in the market place.

Mr Lyle: Certainly in terms of the way I think about SMEs, for me it is about, as Andrew has described, making sure that those niche technologies or capabilities that we depend on in SMEs are sustained. It is very much a capability or *Defence Industrial Strategy*, a different thing from the sectors that I look after. There are certain elements of the capability and certain companies in this country for the weapons industry, but there are some quite small companies doing some really key things. Those are the SMEs that I worry about in terms of delivering capability. I do not have a remit to go out and foster the SME base of this country. That is a broader policy remit.

Chairman: We will come back to this.

Q38 Mr Jones: I know we will, but I think it is an important point. He is trying to say that they have not got the remit to do this. This is a major investment of tax-payers’ money every year put into the British economy. Surely, if the Defence Industrial Policy is going to mean anything, it should be about trying to get that taxpayers’ money into those SMEs and get them involved?

Mr Lyle: Absolutely.

Q39 Mr Jones: I get the impression that this is second thoughts to you?

Mr Lyle: No. My role in the agency is to deliver my projects and worry about assistance in mine. To say it is not my personal role, in terms of what I worry about, in terms of the SMEs I worry about, in other words the ones I need to depend on, there are other people in the department, the agency, who have responsibility for trying to encourage the base.

Chairman: We will probably have to come back to this when we eventually return to the *Defence Industrial Strategy*, and we might well build on your answers today.

Q40 John Smith: The four projects that we chose to look at are all estimating considerable cost underruns from £2 million–£13 million. Were we just lucky or unlucky, or is this typical?

Dr Watson: I think you made a sample from the list we gave you. I do not think they are unrepresentative. I am rather flattered to hear them described as being considerable underruns. It is considerable sums of money but they are not considerably proportionate underruns, as I would call it. There is a general feeling that the sample that you selected is projects which are done reasonably well, and that is a combination of good management and the right project. I think, if you had selected a different sample, we might have had a slightly different conversation. The average, as I have said, for the key targets is the average, and that shows overall the slight slip, and one we would like to improve on.

Q41 John Smith: You are not concerned that there is any overestimating in your assumptions, either overestimating the original cost of these projects or, indeed, overestimating their ultimate cost, their anticipated cost, which is something that concerns

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this Committee. In our most recent report, where we did a study of the annual accounts, an example in there were claims of savings of £400 million in land and air logistics but, in fact, the MoD could only validate just over half of that, I think £209 million. Is there an inbuilt propensity to make sure that you do deliver on target to overestimate? Is that the culture?

Dr Watson: We are obviously careful to set the targets so that they are achievable for challenging. There is an internal scrutiny process which does just that, it does not allow us to put too much money behind a particular project proposition, and, moreover, conducts some external scrutiny of the "should cost" figure for a project to ensure we are asking for the right sum of money.

Dr Tyler: Even though we call these projects small and medium-sized projects, we are still talking about fairly large sums of money in these projects, and, if we were to overestimate the cost at the outset, then that would aggregate it up over the whole of the agency and give us significant pressure on an already pressured equipment programme in terms of the money that there was available; so we would not be doing ourselves any service whatsoever to have projects that have been carefully overestimated at the beginning in order to then over-perform otherwise.

Mr Lyle: It is the opposite of what we are normally accused of. We are normally accused of underestimating. We certainly want to try and ensure that we build credible estimates, and I think, as Andrew has alluded to, the customer at the other end of the motorway is always keen to ensure that they are taut costings, because if we have overestimated it, it has displaced something else out of the programme. There are plenty of pressures on us to make sure that we are not overestimating either in cost or time, and that is the figure that is approved at the Main Gate of approval. All we are reporting here is what was approved at the Main Gate and what our current estimate is.

Chairman: Urgent operational requirements, Kevan Jones.

Q42 Mr Jones: Lord Drayson, when he was before us in February, told us that there had been some vital lessons learned from the urgent operational requirement and that some of those lessons could be adapted to some of the larger projects. Have any similar lessons been adapted for the small and medium-sized projects?

Dr Watson: I actually have a number of the projects teams which are most active in UORs, and we do try and share the experience as much as we can. The kind of things which we could learn from them are, if you like, the corners that we might be able to cut in some parts of the acceptance process, the acceptance of capability at a mature enough but perhaps less rigorously proven level, more continuous involvement of the project teams in a developing programme, and that has helped us enormously in UORs, but there are some counter-problems. The counter-problems are things like having a robust enough support arrangement. An

urgent operational requirement is needed to deal with the current operational condition, and, as long as we are able to manage that support through that period, we might cut a corner or two, and that is not something we could probably accept across an entire programme.

Q43 Mr Jones: So the answer is, "No"?

Dr Watson: The answer is there are some things, and it is that early and continuous engagement with industry which is, I think, very helpful in the UORs and we could probably apply more to our broader range of projects.

Q44 Mr Jones: It does not surprise me, because the urgent operational requirements would actually kill off the Abbeywood beast, would it not, and clearly it is in your interests to keep feeding Abbeywood in terms of keeping things going to keep all your civil servants involved there. So, why are we not going over to more buying off the shelf rather than the long procurement process which we have got? Your nervousness in answer to the question between the four of you is clearly that this is something that is going to get to the heart of the real problem. In fact, do we need the size of Abbeywood as we have got it?

Dr Tyler: First of all, the Urgent Operational Requirements is not necessarily off the shelf. Quite a lot of those Urgent Operational Requirements require a very accelerated, granted, but a development programme in order to develop them. It is not a just a matter of popping down to B&Q and buying that bit of equipment off the shelf. The other thing is that they tend to be fairly specific, localised pieces of equipment that are being fielded. Most of the agency's business, as you are aware, is on these much larger platform and integrated system projects which there is no way on earth you could apply UOR principles to. Trying to procure a war ship under a UOR type arrangement would be an absolute disaster.

Q45 Mr Jones: No, but you could buy certain equipment which has been proven and tested by other Armed Forces who buy it off the shelf?

Mr Lyle: Yes, and we do that very successfully. If you look at the C17 procurement, if you look at the Javelin procurement, delivered last year four months early, those are two examples where we have bought equipment off the shelf from the United States and it has been delivered very successfully, but that still requires a team of people to do it.

Q46 Mr Jones: They are two projects and how many projects are you currently dealing with?

Dr Tyler: There is a much longer list of projects we are dealing with where we are buying collaboratively or where we are buying solutions that have been developed elsewhere and we are effectively piggy-backing on somebody else's development programme, and so on. There are countless examples.

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Chairman: Dr Tyler, we are interested in this, and we will come back to this as a subject during the course of the various projects that we will now start to go through. Robert Key.

Q47 Robert Key: Gentlemen, could we turn to the General Service Respirator. I have read the post Main Gate project summary sheet but I wonder if somebody could tell us briefly, what is the purpose of the General Service Respirator project and who will be using it?

Dr Tyler: I am going to take the general line of questioning of the General Service Respirator. While I answer that question, I hope this is appropriate, Chairman, but I thought it might assist you in understanding the project for me to bring a sample, first of all, of the current in-service respirator, that is the S10 respirator, which is the one currently in service with all of the Armed Forces. This is a tri-service piece of equipment—so this is issued to soldiers, airmen and sailors—and here I have got a version of the new respirator, the GSR. As I pass this round, one thing to be aware of is this is not off the production line, we have not started formal production, and so this is effectively a prototype, but it is a prototype that has been used extensively in the field trials over the past few months. Essentially, the purpose of the respirator is to provide primary protection from chemical, biological and radiological hazards in the battlefield. As such, it is balancing the need for protection against the need to be able to use this equipment and operate as a soldier, an airman or a sailor. I have forgotten the second part of your question.

Q48 Robert Key: Who will be using it?

Dr Tyler: All of the service personnel, right across the Armed Forces.

Q49 Robert Key: So it will not be going to police or ambulance, for example?

Dr Tyler: I do not believe so at this point. It is a very high specification respirator for use in a military context. There is no reason in principle why it could not in due course.

Q50 Robert Key: The Police and Ambulance Services train at Winterbourne Gunner alongside Army personnel. Why can they not procure these? They have had terrible problems, particularly the Ambulance Service, right across the nation, and Winterbourne Gunner trains every police force in the United Kingdom, so why on earth can we not have an a standard GSR?

Dr Tyler: As I said, in principle, I cannot see a reason why that would not be the case. However, this has been procured by the Defence Procurement Agency for military forces and not for civilian forces.

Robert Key: Joined up government!

Q51 Mr Jenkins: How many of these are we purchasing?

Dr Tyler: The initial buy is for about 310,000 of these.

Q52 Chairman: How large is the Army?

Dr Tyler: 108,000.

Q53 Mr Jenkins: And the Air Force and the Navy?

Lieutenant General Figgures: About 36 and 48 and then there is, the total Army, the Reserves, plus one needs a range to fit the shape of all faces. You could not buy one for one, you would have to fit them, and, indeed, one of the reasons why this is particularly good is that you get a very close fit and there is lots of variation in it, so it is a very effective protection which can be suited to the individual.

Q54 Robert Key: The GSR is another example of a substantial cost underrun, a 20% cost underrun here, and it is forecast to be £13 million under the approved cost. What are the main reasons for that underrun?

Dr Tyler: When we price a project initially, the most difficult thing in pricing a project is to price the risk in the project, basically to price the uncertainty. Here we have got an example of a next generation respirator where there was a level of technological risk in the programme as we worked through the development of the system. One of the things I wanted to appraise you of, and this is as good a time as any, just to illustrate this fact, is that although the trials that have been on-going for the last few months have generally been extremely successful with a good user feedback, we have had a fault with the product discovered in the last of the user trials, which rather illustrates the technological risks that we are exposed to when we are developing these pieces of equipment. This was where the mask has been used in an extremely hot and humid environment and we got some build up of sweat at the bottom of the respirator.

Q55 Robert Key: Was this the Australian trials?

Dr Tyler: That is right, yes, the Australian trials. What that is requiring is a little bit of our money to be spent in some of the design changes and modifications that are going to be required, and, in particular, for the re-trialling programme, which is obviously necessary to make certain this equipment is fit for purpose.

Q56 Robert Key: The initial in-service date, the latest acceptable and initial date, was May 2006. Clearly that has now gone. When do you anticipate there will be now, an in-service date? For October?

Dr Tyler: We were hoping to have an in-service date for October prior to this problem which emerged with the recent trial. What we have done now is we are busy assessing exactly what the implications are of that in programme terms, but it is possible that it could be as much as a six-month further delay, so that would have an entry into service in spring 2007.

Q57 Robert Key: Looking at the samples that we have in front of us, I notice that the new one appears to have two sections?

Dr Tyler: Two of the cartridges, yes.

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Q58 Robert Key: In Op Telic 1, we found that there were a lot of non-functioning kits distributed to the military. Have you overcome that problem, and how are you going to maintain and upgrade constantly each of these 300,000 pieces of equipment?

Dr Tyler: The equipment, as you might imagine, has been designed for very high reliability because it is a critical piece of safety equipment. As such, not only has that been intrinsically built into the design, one of the features of this design, for example, is an extremely low component counter—it goes back to our earlier discussions with Mr Jenkins about the complexity—and so we have tried to keep the piece of equipment as simple as we possibly can. This is issued as personal equipment to the individual service personnel, and they are given explicit instructions about how to keep their piece of equipment maintained, and every year there is a test done of the equipment to ensure that it is still delivering the same level of protection for those service personnel.

Q59 Robert Key: Originally we were told that the definition of the in-service date was for 45,000 personnel. That has slipped to 26,215 personnel. What is the reason for that?

Dr Tyler: The definition of “initial operating capability”, on some projects, is subject to some level of definition, because clearly you could say there is initial operating capability as soon as a few come off the production line, but that is not a meaningful capability. The choice of 26,000 is that it gives us a meaningful capability to be able to field. We have then got a five-year production line, which will then deliver the rest of the 310,000 to be delivered.

Q60 Robert Key: Was the development work on the new respirator done in conjunction with, for example, Fort Dietrich in the United States?

Dr Tyler: No, but it is very heavily used. There was a long period of research at DSTL.

Q61 Robert Key: Lawrence Livermore Laboratories, were they involved in the development of this project?

Dr Tyler: Not to my knowledge.

Q62 Robert Key: Was it all therefore at DSTL Porton Down?

Dr Tyler: A lot of the underpinning research and development was done at DSTL and then pulled through, and the mechanism by which that actually happened was that that information was provided to the aspirant contractors for the general service respirator, who were then allowed to use that in their prototypes that they had fielded during the bidding.

Q63 Robert Key: If the work was done at the DSTL Porton Down, why was the contract won by an American company when we have a United Kingdom company that has actually been supplying 2.5 million respirators to the US?

Dr Tyler: The company that is providing this is a UK company of 35 years. It was formed 35 years ago, and employs 250 staff, I would imagine the majority

of whom are British born and bred. It is true that it is now, having been acquired a few years ago, part of Tyco International, which rather reflects the general internationalisation of this business. The fact of the matter is that there was an open competition run between Avon and Scott, and Scott won on the value for money that they were offering to the taxpayer, and it is, after all, a British company.

Q64 Robert Key: Will there be interoperability between US and UK forces with this particular bit of equipment?

Dr Tyler: It depends what you mean by interoperability.

Q65 Robert Key: Will they both be able to use it and both be able to maintain it?

Dr Tyler: That will fit to anybody who has had it personally fitted to them, but you would expect the US personnel to have to be fitted with their own personal equipment. Bear in mind this is personal equipment; this is not just stock equipment that is brought out for a specific purpose. This is individually issued to service personnel.

Q66 Robert Key: Was interoperability considered when the tenders were assessed?

Dr Tyler: Yes, interoperability is a factor here, and one of the things that we have been doing with, for example, the design of the cartridges—you have not pulled it to pieces. General, would you just pass those over to me and I can show you—you will notice the way that the filter comes off on this one is a bayonet device. That is very significant from the point of view that one of the major benefits of this is its usability benefits. When you take that off, it locks that valve to allow you to change one of these at a time rather than having to take a deep breath, as you used to. If you can pass the other one over, this one has a thread-type connector on it, and you might say, supposing you are in the battlefield and you had got one of these and this is all that is available, in that situation this piece in the middle here pulls out and leaves you with a screw thread to allow you to attach one of these NATO standard fitting cartridges on to it.

Q67 Robert Key: Is that NATO standard fitting one also used by the Americans?

Dr Tyler: I do not believe that is used by the Americans.

Q68 Robert Key: So it is not a NATO standard fitting.

Dr Tyler: Maybe it is a European standard fitting.

Lieutenant General Figures: If I may, the first point you made, about joint research, there is a NATO committee, Land Group 7, that brings together all the research from the United States and other NATO nations, and there is a very good information exchange there, and standards for levels of protection and so on are defined there. Interoperability is also addressed. Up to now the United States, as I understand it, have operated to the NATO standard, but I understand with their

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Avon product that they are not pursuing interoperability. The reasons for it I do not know at the moment, but clearly, when I speak to my opposite number in the United States, that is just the sort of issue that I shall pursue.

Q69 Robert Key: Are there any other European Union military who have interoperable kit with whom we could exchange?

Lieutenant General Figures: Yes, the canisters. The canisters you can exchange throughout NATO at the moment.

Q70 Robert Key: Thank you for clearing that up. I thought that was what we had been told was now not interoperable.

Dr Tyler: Can I just be quite clear? We are in a transitional state, where we have moved over to this bayonet-type fitting, with all the advantages it brings, but what we have ensured is that we got backward compatibility, so that *in extremis*, if you do need to use the screw thread type canister, you can fit it to this respirator.

Q71 Robert Key: You still have not actually explained to me how you are going to maintain these in the field. They are going to be out there wherever we are in theatre and they have to be upgraded, they have to be serviceable all the time. You are not going to be issuing kit which does not work; how are you going to achieve that?

Dr Tyler: All of the personnel issued with these are issued with a preventative maintenance guide, fairly simple guidance which basically ensures that the thing is kept in good order, and then annually they are tested within a chamber. The mask is instrumented and it is tested within a chamber to ensure that the level of protection inside the mask is as it should be. That would check to make sure all these seals are in good order, the key thing being that actually, the level of protection that is being given inside the mask face here is what it is supposed to be.

Q72 Robert Key: What proportion of the costs of the contract is the cartridge, roughly? A third? A quarter? Three-quarters?

Dr Tyler: I am sorry. I do not have that information.

Q73 Robert Key: In other words, how much every year is going to have to be spent on replacing cartridges?

Dr Tyler: The cartridges are not replaced each year. They have a long life.

Q74 Robert Key: How long?

Dr Tyler: I do not know exactly what the number is, whether that is as long as the life of the whole unit. They are treated effectively as disposable equipment in the sense that once the thing has been used, certainly over time, it is then got rid of.

Q75 Robert Key: I hope that there is rather more detail in the instructions to the forces than you have been able to give us this morning.

Dr Tyler: There certainly would be. I am sorry. I just do not have the specifics. I do not want to mislead you. I do not want to give you specific numbers when I do not know them. I am very happy to give you a note on that.¹

Q76 Linda Gilroy: I just want to know more about what determines the procurement route. On the summary sheet, UK competition, both this one and the next one we are looking at. The third one is international and the other one is non-competitive. What determines this one being UK?

Dr Tyler: I do not know that we would have had a problem with an international competitive list but the two companies that we have talked about, Scott Health and Safety and Avon, are basically the world leaders in this particular type of technology, so they were the very best, and this is the world's most advanced general service respirator, so we wanted the companies who were in a position to deliver it.

Q77 Mr Jenkins: One very quick question. In fact, I will take a note on this, Chairman. I still cannot come to grips with the 310,000. I want to know how it is made up, etc. I did not know it was personal issue. The fit, like boots: which is the most common fit, in other words 9 or whatever? How many are we going to put in store? I estimate we will probably have £9 million worth in store. What is the delivery date? If I ordered them next week, would they be here the following week? Therefore, do I have to carry a store?

Dr Tyler: We will provide you with a note covering all of that, yes.²

Q78 Chairman: Thank you very much. Thank you, Dr Tyler, for bringing in an example. I dare say you will not have done the same for the next one, which is the anti surface warfare littoral defensive project. Can you tell us what the purpose of that project is and who will be using it, please?

Mr Lyle: Yes, I could not get it through the security devices, but I have brought some photographs of the systems. What this project is about is essentially countering the threat that emerged posed by fast attack craft and fast inshore attack craft, which could be rigid inflatable boats or even jet-skis armed with weaponry, and it is a particular threat to our ships when they are operating close to land in littoral waters or when they are at choke points. That is something that is increasingly prevalent for the Royal Navy in operating in littoral waters. We are meeting that capability gap through two systems, both incremental, so for the Type 42s and Royal Fleet Auxiliaries we are upgrading the existing Phalanx 1A system which is fitted to the Type 42s to a 1B standard to provide it with better capability to meet this threat. For the Type 23 frigates we have a different solution, which is the automated small calibre gun, which is the one I referred to earlier being supplied by the SME based in Norwich. Again, that is an upgrade to the existing 30mm cannon that is fitted to the Type 23. In both cases we

¹ See Ev

² See Ev

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are upgrading the gun systems on the ships to replace gun barrels with better accuracy and to put on new sensors and fire control systems which basically give us a better capability in terms of target identification and giving better capability at night time and in poor visibility. That is the capability we are trying to address. We are addressing it through these two incremental systems, and it will be used by the Royal Navy to defend their ships.

Q79 Chairman: The Phalanx system is the one that throws a wall of lead into the air to deter aeroplanes or missiles. Is that right?

Mr Lyle: Yes, Chairman. It is the picture of the white turret hat thing. That is the existing 1A, and the one that looks similar to it is the 1B. So that is the upgraded system. It does fire a hail of metal into the air at a very high rate of fire. It was originally developed and originally fitted to our ships to defend us against the sea-skimming missile threat post the Falklands War, Exocet-type missiles.

Q80 Chairman: How is this project going to deal with fast inshore attack craft?

Mr Lyle: We are putting new barrels on, giving more precise, accurate fire, but more importantly, as you can see in the pictures, we are putting additional sensors on to the mount so we have a forward-looking infra-red imager. We have what we call side lobe suppression in the radar, which means—the engineers in the room will hopefully understand it—that we are looking to direct the beam more clearly so that it gives it a look-down capability to discriminate and pick up targets against sea clutter. The sea produces a scattering effect for normal radars. This gives it an ability to look down more. It is looking up to aircraft threats or sea-skimming threats. It gives it an ability to look down at things coming effectively below the horizon. The system would look down on things on the water. It gives it that additional capability as well as retaining its capability to defend against sea-skimmers and against aircraft.

Q81 Chairman: At the end of March the projected cost was £63 million, which was £3 million under the approved cost. Does it remain the same? Is that the current forecast?

Mr Lyle: That is the current forecast, yes.

Q82 Chairman: At the end of March the forecast in-service date was July 2008. Does that remain the same?

Mr Lyle: Yes, that is the same.

Q83 Chairman: Does that in-service date projected relate to both the small calibre gun and the upgrade of Phalanx 1A?

Mr Lyle: The in-service date is a combination of the two systems. The in-service date is actually driven by the later of the two systems. So we plan to have an initial operating capability with the automated small calibre gun on the Type 23 in the summer of 2007; in

July in fact. So that will already be in service in 2008. The ISD is defined as when we have both systems in service, so it is driven by the Phalanx system.

Q84 Chairman: When the Type 45 destroyer replaces the Type 42, is there still a need to fit the Type 42 with an upgrade to the Phalanx system?

Mr Lyle: The Type 42 currently has Phalanx 1A systems. A certain number of Type 42s, five in fact, will be upgraded to the Phalanx 1B system and will carry that until they are paid out of the Royal Navy service. When that happens, the Phalanx 1B mounts that we have will be refitted to other ships in the Royal Navy's fleet and a decision will be taken at that time as to which are the priority to receive it. A number of RFAs are receiving modifications to enable them to receive this system. We will take a decision at the time. We will recycle the mounts, as we currently do, on to those ships that are best judged to need the capability at the time. So the assets will be reused.

Q85 Chairman: What system do other navies use to deal with these threats?

Mr Lyle: The Phalanx system is very much the market leader. I believe there are about 23 navies who operate the Phalanx 1A and about seven, including ourselves, who operate the 1B. The other contender which we do operate on our ships is the Dutch goalkeeper system, which we operate on some of our larger ships, but the market leader is very much the Phalanx.

Q86 Chairman: Getting back to the question that Kevan Jones was asking about buying things off the shelf, is there an element here of re-inventing the wheel with this project, or would it be possible to buy something that was already developed?

Mr Lyle: We are buying this off the shelf. We bought it off the shelf when we originally bought it as a Phalanx system, and we have then followed effectively the Americans. So the mod kit that we are now putting on, the mod 1B, which is part of this fit, is already in service with the United States. So it is off the shelf.

Chairman: Moving on to the Maritime Composite Training System Phase 1, Linda Gilroy.

Q87 Linda Gilroy: First of all, could you outline to us what the Maritime Composite System Phase 1 project will deliver, who it is for and what the other phases of the project will deliver?

Dr Tyler: Again, can I assist you by passing round a couple of pictures? The first one shows what we have presently in our maritime training simulator and the second one is a concept picture showing what we are aiming towards. The best way to describe this is if you imagine—some of you might have visited—a warship, that down in the guts of the warship is basically the nerve centre, the place where the ship is fought from, so it contains the radar systems, the missile control systems and so on, and what we have done in the past, and the existing system which is shown there, that is basically—I have heard it described as a concrete ship. They basically build the

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entire operations suite that you would find on board a ship at a land-based training centre. One of the key things about that is that each ship has a completely bespoke, unique set-up. So you will have one for the Type 23, one for the Type 22, one for the Type 42 and so on. They are completely inflexible. When the guys and girls go in it to practise and train, you need everybody present that you would have within the operations room, even if you were just using one or two bits of equipment. It has to be used as an integrated suite. What we are doing with the Maritime Composite Training System is we are taking great advantage of commercial off-the-shelf technologies in terms of the hardware, and indeed, this is the direction we are going in on the warships themselves, and you can see from that more conceptual picture there that what we have there is effectively standard hardware units inside of which will be maybe a slightly higher specification but the sort of computer you would expect to have, and all of the training, the systems, are provided as software to that. That has hugely opened up our flexibility for use of the system. We can now take one of those units and configure a classroom with, let us say, a dozen radars in it. So if somebody is getting radar training, we can have 12 of these set up, and you can have 12 people individually being taught how to use a radar. On the other hand, we can set them up and arrange the room and the equipment to simulate a Type 23 or a Type 42 and, even more significantly, what we can do is that when we are doing co-operative training, where we are trying to use more than one ship working together, we can basically set up any permutation and combination we like. At the moment all we can do is have one Type 23 and one Type 42 and one Type 22 working together. So we have enormously opened up our envelope of flexibility for use of the system. We have also, because of the flexibility it has given us, been able to reduce the number of instructional and training staff that we require to do this, the amount of real estate that we are using, so we are getting some very positive efficiency benefits coming out of this as well. The other thing that we have been able to do with this—and this is a subtlety but I think it is very important—is that in the past the training period that individuals would go through contained a relatively small generic training part and then a large specific training part. When I say specific, I mean specific to a particular ship. If that individual was going to move on to another ship, they would then need to go through a protracted specific training period. What we have done now is we have used this project as an opportunity to turn that on its head now and to have a much more protracted general training period followed by a much shorter specific training period. So you can imagine now that our ability to use our sailors more flexibly has been increased, because if they are going to move from one ship to another, they can come back for a relatively short period. I hope that answers the question.

Q88 Linda Gilroy: That is very clear. Thank you very much. What about the other phases of the project?

Dr Tyler: Both phase 2 and, being a little bit more visionary, phase 3, are—at the moment phase 2 has a notional amount of money put aside for it but it is not a confirmed project. At the moment all of this training goes on onshore, but obviously, what we would like to do is to optimise the amount of time that our sailors spend at sea, so what phase 2 would do is it that the equipment is actually fitted in the operations room on the ship but instead of being fed by live sensors, by live radar and the missile system, it would be fed by simulated and emulated data so they would sit alongside—this is not while the ship is under way—and take a data feed from the shore, and they would be able to sit in their own operations room and fight simulated conditions. Phase 3, going beyond that, is to do the same thing but at sea. That has quite a lot of quite complex issues associated with it so at the moment that is more of a vision for the future rather than something we have an extant plan for.

Q89 Linda Gilroy: As at the end of March 2006, some three and a half months into a four to three-month demonstration and manufacture phase, the project was forecast to be £2 million under the approved cost. Is the current forecast the same?

Dr Tyler: That is the current forecast, yes.

Q90 Linda Gilroy: The in-service date for initial operating capability for the system is July 2009. Is that right? March? July?

Dr Tyler: Our current forecast for the ISD is shown in table 3(b) at July 2009, which is seven months beyond our 50% date, as we call it, our most probable date of January 2009. So our timescale has slipped on this programme.

Q91 Linda Gilroy: What sort of things have caused that slippage?

Dr Tyler: Some of it we are going to have to put our hand up for here, in the sense that there was a more protracted negotiation. Immediately after we had gone through the main gate process, got the main gate approval, we were a bit optimistic about the time it was going to take to complete the contract negotiation. We have had to add in a three-month additional period into the acceptance process. The reasons for this are somewhat complicated but related to the changing of the way we are doing the training. I talked earlier about the generic training and the specific training. One of the implications of that means that instead of being able to accept the different ships' simulators one after the other, we basically have to have them all ready at the same point in order to be able to accept them, and that has effectively added three months into our acceptance process before we would actually be able to declare the initial operating capability.

Q92 Linda Gilroy: Can I just be clear? The initial operating is July 2009 but that has slipped?

Dr Tyler: Originally it was January 2009 for our most probable and it has now slipped to July 2009.

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Q93 Linda Gilroy: Full operating was October 2010. That has slipped back.

Dr Tyler: Yes, by which time we would have . . . We are working on that at the moment. We are at very early stages in the project here so we are just working through the specific implications of whether that slip would then track through the whole of the programme.

Q94 Linda Gilroy: What is the impact of that slippage going to be in terms of people who are expecting to be able to use it and are planning for it?

Dr Tyler: Two things. I would like to make a point here, because I think it comes to one of the more general things that we were talking about earlier. One of the things I think this project can be held up, as a good example of, is the application of a technique which we are now mandating in all projects called Earned Value Management, which, put simply, is basically gauging the stage you are in the project by the actual real value that has been executed in the project to that point in time. What that does is it forces you to be extremely rigorous about understanding very, very early on in the project how your programme is likely to develop. In times gone by, I am sure you have heard in the past of projects where we found out that things were slipping rather late in the event before we were able to really explore options about what we were going to do about it. What we have done is we have realised that there were some programme issues in this project at a very, very early stage, so that is allowing us to do two things: first of all, it is allowing us to obviously look within the project itself as to how we can get some of that time back, and I think there is a real prospect of doing that with our contractor, who is being very co-operative. The second thing it allows us to look at is what contingency plans we might need to have in place in order ensure that the customer is not going to be without their capability, and in fact, there are a couple of strands to that. First of all, we were originally due to be vacating the Southwick Park premises—it used to be HMS Dryad—but now that is staying in MoD's hands so that the enclave, as we call it, where the current simulators are based is going to continue to be available to us if necessary. The second thing is that we have some slippage in the Type 45 destroyer programme, which is the other critical date to have the simulator ready for the training for Type 45. So essentially, that has bought us a little bit of time on the programme. We can call that serendipity but that gives you some idea of the contingency plans that we are able to build in order to make sure that, whatever happens, we are not getting a situation where we do not have our sailors trained and ready for action.

Q95 Linda Gilroy: I am curious as to how the programme can slip but can become less expensive at the same time. I would have thought it would be the other way round.

Dr Tyler: It depends. This is a lump sum, fixed price contract that we have with the contractor. If the contractor determines that it is going to take him three months longer, that is his risk that he is taking.

Q96 Linda Gilroy: So his reward basically comes with meeting the deadline, and if he does not do that, he is losing something.

Dr Tyler: Of course, and one of the things he is going to have to do is to sustain his project team for a longer period than he had budgeted for, and so there will be a financial penalty to him for that.

Q97 Chairman: Have you built into this training system, training for the future aircraft carriers?

Dr Tyler: Not at this stage. However, one of the beauties of the maritime composite training simulator is now all the new classes, instead of us having to build a concrete CVF on some land site somewhere, what we will basically be able to do is, as somebody put it to me the other day, bring the CD, load it in and then reconfigure the floor space with those standing units that you saw in the picture to replicate the floor space at the CVF operations room, and the same for any other ship.

Chairman: Moving on to the thermal sighting system, David Borrow.

Q98 Mr Borrow: I was at TADL in Belfast yesterday so I have had a demonstration of this kit. I was a bit perplexed to understand why this sort of kit was not fitted in the first place with the SP HVM.

Dr Watson: It was an aspiration when the original project was carried forward. At that time the technology was not mature enough and the risk, both technical and financial, was excessive for that original project, so it was therefore postponed to a later date, and when we felt the technology was ready, we chose to take it forward.

Q99 Mr Borrow: At the end of March this year, the project is forecast to be £2 million underspent. Is that still the case?

Dr Watson: That is correct.

Q100 Mr Borrow: At the same time there was also a forecast five-month slippage. Is that still the situation?

Dr Watson: That is still the situation. The slippage was of a larger scale, nine months, I believe, at about 2004. We have recovered some of that in the current programme.

Q101 Mr Borrow: Will the slippage have any effect on operational capability?

Dr Watson: The operational capability will be delayed and therefore that does feed through. I think we will see the completion of the programme rather earlier than we would have otherwise seen. I do not have that date with me.³

Q102 Mr Borrow: The original order was for 135 pieces of this kit to be fitted on 135 vehicles. At a later date that was reduced to 84 but, because of the

³ *Note by Witness:* The intention was to indicate that since the re-approval we have managed to recover some time and we believe there is a good chance to recover another month or so.

27 June 2006 Dr Iain Watson, Dr Andrew Tyler, Mr Jonathan Lyle and Lieutenant General Andrew Figgures

nature of the contract, it was not possible to reduce the cost. What was the motivation for reducing the order in the first place?

Dr Watson: Perhaps General Figgures would like to start.

Lieutenant General Figgures: As time moved on from the original setting of the requirement and the proposed project to meet it, the threat had changed, the former air threat posed by the now defunct Soviet Union had diminished further, we had achieved improved air situational awareness, we had seen the introduction of the Typhoon, and perhaps, very importantly, we have been able to achieve the transmission of the recognised air picture into land headquarters through Tactical Data Links. So in the round, and indeed the threat we were facing, it was considered that we needed to rebalance our capability, reduce the counter-air and invest elsewhere. This led to a reduction in the order of battle and hence the requirement for the Air Defence systems.

Q103 Mr Borrow: We are going to have, as I understand it, 51 surplus systems that will not be fitted on to 51 existing vehicles. What are we going to do with those pieces of kit?

Dr Watson: Generically, there are three things we can do. We have not made up our mind which of these we will adopt, and we are working on that at the moment. Clearly, it would be good, and we are looking at opportunities to deploy this very capable sight in other roles. We could use the 51 items to enhance the spares and repair pool so that we could reduce our ongoing support cost. Finally, of course, we could decide to dispose of them from the inventory to avoid the storage and handling charges and perhaps get some recovery from another source. But we have not made up our minds yet which we will adopt.

Q104 Mr Borrow: We also have the 51 vehicles with the existing system on them, which, from what you have said, is surplus to requirements.

Dr Watson: Correct.

Q105 Mr Borrow: Have you found a new role for those? One of the suggestions that I picked up yesterday was that whilst the systems are very good at demobilising flying bits of kit, they could also be quite effective and quite accurate at fairly short

range with vehicles or other targets, and potentially could be used in different roles. Is that something the MoD are exploring?

Lieutenant General Figgures: Yes.

Chairman: Excellent answer.

Q106 Mr Borrow: Is it at an exploratory stage rather than a conclusion stage?

Lieutenant General Figgures: Yes.

Q107 Robert Key: Do all four of you work at the same location?

Lieutenant General Figgures: No.

Q108 Robert Key: Will Project Hyperion have any impact on any of you when the decision is taken?

Lieutenant General Figgures: Yes.

Q109 Robert Key: What will it be?

Lieutenant General Figgures: The impact will be that the personnel recruiting and training command and the frontline command, as you know, will come together. Those are both contributors and indeed customers to the equipment capability area and so I can foresee a better ability to integrate across the lines of development, ie the training, the recruiting, the structure, the support in the field.

Q110 Robert Key: The decision has slipped by many months so far. When are you anticipating an announcement on the result?

Lieutenant General Figgures: I could not answer that question.

Q111 Chairman: We have half a minute left. General Figgures, your answer on the thermal sights, about the reduction in the threat from the Soviet Bloc and the improvement of our capability on air defences, implies that we will see a similar surplus of Typhoons. Would you agree?

Lieutenant General Figgures: I would not like to give a short answer there because, again, rather looking at the capability of the aircraft, it may not just have an air to air capability. As with other aircraft, we may over the life of the aircraft develop that capability, for example, to air to surface.

Chairman: Thank you very much. Sorry to throw that at you right at the end. That is the end of this evidence session. I am most grateful to all of you for coming to give evidence and for doing so in what I think was a helpful and open way on something that we do not often look into. The meeting is closed. Many thanks.

Tuesday 10 October 2006

Members present:

Mr James Arbuthnot, in the Chair

Mr David S Borrow
Mr David Crausby
Mr Mike Hancock
Mr Adam Holloway
Mr Kevan Jones

Robert Key
Mr Mark Lancaster
Willie Rennie
John Smith

Witness: Sir Peter Spencer KCB, Chief of Defence Procurement, Defence Procurement Agency, Ministry of Defence, gave evidence.

Q112 Chairman: Sir Peter, good morning and welcome. Thank you very much for coming to give evidence about procurement to the Committee.

Sir Peter Spencer: Thank you for inviting me.

Q113 Chairman: Not at all. There are four main areas that we want to cover, but I think on two of them we will be asking questions in writing to you, and those are the performance targets and the DPA's performance against your targets, and also the smaller projects that we took evidence on earlier in the year. We think that those could probably best be covered in writing rather than by cross-examination of you.¹ So the ones that we want to concentrate on mostly today are the merger between the DLO and the DPA and various major projects, including the Astute submarine, the carriers and others. So if I may begin, Sir Peter, with a question about the merger of the DLO and the DPA. We were told that the way the organisation was going to be run and the performance and management system would be set up by September. Has that happened?

Sir Peter Spencer: The organisation has been set up and announced, and in broad outline we have described the purpose, the aims and the objectives, and we have named the key players that we can who will be in board level positions. There are a number of other work strands which are at varying degrees of completion which are going to focus in on the detail of how the performance metrics will be set, both for the organisation and for the Ministry of Defence as a whole. Central to this is the principle at the heart of the Defence Industrial Strategy which is that we should measure performance in terms of delivering through-life capability.

Q114 Chairman: Okay. Have you worked out precisely how that is to be achieved within the new organisation?

Sir Peter Spencer: Without wishing to be pedantic, if I could just stand back from this and say that there are four phases to the project. Phase one was to define what the organisation would look like and set out in broad principles how it will operate.

Q115 Chairman: That was to finish by September?

Sir Peter Spencer: The end of September and that was completed on time.

Q116 Chairman: That was completed on time.

Sir Peter Spencer: Phase two has now begun with giving a set of instructions to each of the two star board members to define in outline what it is we want them to do, to tell them what their job is, define in outline what it is we wish them to deliver, and for them to do the more detailed work as to how in each of their areas they might need to make some degree of change to deliver the targets which they have been set and to live within the resources which have been provisionally earmarked for them, which we will achieve at the end of December.

Q117 Chairman: Sorry, when will you achieve phase two?

Sir Peter Spencer: Phase two is planned to be achieved at the end of December, which then initiates phase three, which is the next level of detailed work of engaging with the workforce in a much more detailed way to explain what it means for them. However, we will have deep chilled the design by that stage so we will know we have got something which is adequate for the purpose as a new organisation which vests on 2 April (because the 1st is a Sunday). That is important because there will be a lot of communication with all of the people involved, and by communication of course I mean not just telling them how it is going to be but listening to the particular points that they have got. There will still then be in the very fine detail the same sort of opportunities as are happening now to consult because although the leaders with the two stars are already consulting with the people that work with them. All of this draws upon what we did when we did the DPA Forward project inside my own agency. It recognises that the people who are really very familiar with the patterns, in the main, will go a very long way towards implementing change, so long as it is change which has been explained to them properly, and you have given them boundaries within which you want them to operate. But you do not try to dictate explicit, cookery book instructions to them because it does not work.

Q118 Chairman: Okay, that is phase three. Phase three will be completed by when?

Sir Peter Spencer: It will be completed by 1 April so from 2 April phase four is the first year of operation of the new organisation and during that year there

¹ See Ev 49

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will then be the first of the post-project evaluations to take a look to see to what extent the organisation is going to be delivering what is needed and then to be prepared to make any further adjustments at the end of that first year. During that first year the intention is to measure the performance publicly by the existing PSA targets for delivery of projects and by the same targets that are in place for the current Defence Logistics Organisation, but to shadow trade in a new set of targets which will be optimised to measure the organisation's ability to deliver year-on-year improvements in through-life capability management and some other performance metrics as well, including agility in terms of responding more rapidly than we do at the moment to the needs of the Armed Forces.

Q119 Mr Jones: Yourself and the Civil Service do not actually believe in this merger, do you?

Sir Peter Spencer: Yes I do, and that is a passionate belief.

Q120 Mr Jones: Oh, that is the first time you have been passionate about anything before this Committee but—

Sir Peter Spencer: That is not true.

Q121 Mr Jones: Can I put to you something that was put to me over the summer and it is coming from a number of quarters—it is coming from both the MoD and it is certainly coming from within industry—which is the fact that industry and the MoD and others are signed up to both this merger and also the Defence Industrial Strategy and that is being driven through by a Minister, who I have got to say I do rate in terms of pushing change against the bias of which is your organisation, but their fear is that as soon as he has gone, yourself and the civil servants will actually stop that change or somehow try to thwart that change. I am not suggesting for one minute, by the way, that Lord Drayson is going anywhere but that is a real fear that they have got? How can you actually reassure them that you and all your civil servants are truly signed up to this change and also the change not just in this organisation but in the Defence Industrial Strategy as well?

Sir Peter Spencer: I resent the insinuation about civil servants, to be candid.

Q122 Mr Jones: It is out there. What I am saying is not me, it is coming from people I have spoken to over the summer and it is a widespread thing inside industry.

Sir Peter Spencer: Wherever it is coming from I still resent it and I would rebut it. For the record, I came into this job determined to confront the problem and to do something about it; and I have. The extent to which you can demonstrate that on the bottom line targets is to a certain extent constrained by the legacy of some very big projects which we still suffer from in terms of uncapped financial exposure. We are doing damage limitation on that as best we can. We have totally transformed the culture in defence procurement into one which is obsessed with delivering results and where success and failure

matter. I have also worked increasingly closely first with Malcolm Pledger and then with Kevin O'Donoghue on Defence Logistics Organisation convergence with the DPA in an initiative known as Joint Working, because it was very evident to both of us that we were presiding over organisations which were increasingly drifting apart, to the detriment of the people whom we are here to serve which is the front-line forces. So none of what is happening has been anything other than a natural extension of where we were going but it has been greatly invigorated and accelerated by the leadership of Lord Drayson.

Q123 Mr Jones: So if Lord Drayson had not happened all this would have happened anyway? Is that what you are saying?

Sir Peter Spencer: It would not have happened at the same pace because I think what he has done is to break the mould in terms of our relationship with industry, and in earlier hearings we had discussions—

Q124 Mr Jones: I am sorry, I just think that is complete rubbish, Sir Peter, and I think without the dynamism of that Minister you lot you would not have shifted on this.

Sir Peter Spencer: I am sorry, I will not sit here and be publicly insulted by any member of this Committee when I can demonstrate what I have achieved because it is on record. It is on record in Hansard for a start; it is on record in the NAO audits; and it is on record in comments that have been made by not only by this Committee but also by the Public Accounts Committee, so the fact that you say it would not have happened without Lord Drayson I can disprove.

Q125 Mr Jones: I am sure he will be pleased to hear that.

Sir Peter Spencer: It has been accelerated and invigorated greatly—

Q126 Mr Jones: He has recognised it himself actually.

Sir Peter Spencer:—by the very bold line he took in dealing with the interaction with industry, which to a degree was spelt out in the Defence Industrial Policy but which we recognise until it was worked into more explicit strategies for each sector of the defence industry tended to be more a statement of good intent rather than something which changed the way in which we procured.

Q127 Mr Jones: In terms of your agency and the numbers of people employed since you have taken over, are there more or fewer people since you took over?

Sir Peter Spencer: I need to look up the numbers but fewer by a reasonable percentage.

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Q128 Mr Jones: Can you provide us with that?

Sir Peter Spencer: Of course.²

Q129 Chairman: In July David Gould was in front of us and was asked whether he thought the new organisation was going to be an agency or not. He said that the jury was still out on that. Has a decision been taken on that?

Sir Peter Spencer: A decision has been taken and it will not be an agency.

Q130 Chairman: It will not be an agency and what will be the benefits that will flow from that?

Sir Peter Spencer: I think the benefit which comes from it is that an agency, however hard it tries, tends to develop over time a rather inward-looking culture. You will recall that the purpose of agencies when they were initially developed was as a staging post for something which was heading towards trading fund status. The Government has no intention of Defence Equipment and Support becoming a trading fund, and has recognised that in order to achieve the better overall results that we will need, we need a much more joined-up arrangement, not only across the Ministry of Defence but with industry as well, so we get a real concept of unity of purpose. In that respect, a Top Level Budget arrangement, which is what the new organisation will be, is now capable of being given the same precision in terms of objectives that any agency would get, the same budgetary disciplines, and to a large extent the same delegated powers to deal with its personnel management issues.

Q131 Chairman: Does that not undermine the entire rationale for agencies?

Sir Peter Spencer: I do not think it does. I think what it recognises is that over time you get a certain amount of benefit by agency status and you then have to decide on your evaluation whether or not you are going to take the next step into trading fund status, whether or not you are going to remain as an agency, or whether or not, frankly, agency status is beginning to be counter-productive. In the concept of bringing together the Defence Procurement Agency with the Defence Logistics Organisation, on balance it was believed that the advantage lay with non-agency status. I have no difficulty with that. I do not think it would have made that much difference one way or the other.

Q132 Mr Hancock: What was the downside that made people make that decision?

Sir Peter Spencer: Of the agency? It was the point I made earlier, Mike, which is that people do tend to think in terms of an agency almost being able to exist by itself; and of course it does not. It is part of a very complicated chain between the front-line and the factory, so anything which reinforces a sense of separate identity when you need to be much more flexible in the way in which you are operating has to be of benefit in this area.

Q133 Chairman: Let us move on to the report which you have mentioned—the Enabling Acquisition Change report—which said that despite the best endeavours of everyone involved and significant improvements in recent years, agreeing with what you said Sir Peter we are simply not doing as well as we could do. What did that mean?

Sir Peter Spencer: It meant that we had achieved improvements in the DPA's performance against its key targets, we had achieved improvements in how well the Defence Logistics Organisation Procurement Reform was delivering results, and we had gone some way through Joint Working to bridge the gap, in the sense that all teams became automatically dual accountable on formation so they were already responsible from birth to the Chief the Defence Logistics for delivering the affordable through-life capability management arrangements that were needed. There were a number of project teams in the Defence Logistics Organisation that actually delivered for me because they are doing capital investment projects, which are best run inside the family of projects which are already dealing with them because they are so closely connected.

Q134 Chairman: These, Sir Peter, are examples of how you are doing as well as you could have been.

Sir Peter Spencer: What I am saying is that we were able to go so far with a rather ad hoc arrangement between us called Joint Working but effectively it was beginning to put a bandage on the problem as opposed to cure the problem.

Q135 Chairman: And the problem was?

Sir Peter Spencer: The problem is that we do not have a single organisation which has got the focus on through-life capability delivery *ab initio*. We also do not have a financial planning system which recognises the need to balance adequately the difference between capital expenditure and operating cost, and we do not have the arrangements with industry which are implementing the McKinsey principle of having a more open relationship and having a more flexible relationship which looks at more appropriate contracting strategies depending on the degree of challenge of a project. So the conclusion which was drawn was that so far so good, but we needed to go a whole lot further and that the Defence Industrial Strategy had said it would take a look internally at what was getting in the way of implementing the Defence Industrial Strategy proposals which were internal to the Ministry of Defence, shine a light on that and do something about it, and that is precisely what the Ministry of Defence has done. It has laid itself bare in terms of what it has recognised as things that get in the way. Industry has been involved in that. It reflects their views as well, and it has set out a timetable for doing something about it.

Q136 Mr Jones: Is that not a massive cultural change for yourself, and I am sorry if you feel insulted by my comments on the Civil Service, but cultural change in the sense that if you push a lot of these things out to industry—and I agree with that

² See Ev 54

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in terms of saying through life should be looked at in terms of what their role is in that—but does that not necessarily therefore mean that your organisation is going to get smaller and that control over it and some day-to-day decisions are going to be left to industry? How do you get that through psychologically to civil servants whose vested interest is to keep themselves employed in an organisation such as yours?

Sir Peter Spencer: I think you put your finger on one of the key issues and in fact it is one of the 10 work streams which accompanies the delivery of the EAC. We are going to address it in a number of ways. I have done quite a lot to bring new blood into the DPA. In open competition we have got two non-executive directors out of the three on the Board, one operations director, the finance director and the current interim commercial director. There will be further competitions to fill some new posts in the Defence Equipment and Support Organisation, so there is ample scope for bringing people in, not only to do the work but also to explain and bring people with them to do things in a totally different way than they have been used to. In that context you will remember that Amyas Morse was appointed as the defence commercial director in a separate post from one which had been a dual function post when it was DG Commercial and the commercial director of the DPA, with that very aim in mind. We have made it clear through publication of the Defence Acquisition Values that we will be assessing people quite explicitly on the way in which they represent those values in their day-to-day work and their day-to-day decisions. One of the big cultural changes, which I would say we were leading on in the Defence Procurement Agency, is holding people accountable for their results. This is not yet fully embedded across the whole of the public sector, but we are starting both in the DPA and now in the Defence Equipment and Support Organisation to put real focus on the outcomes because the new organisation is not an end in itself; it is a way of delivering the end result, which is demonstrable, publicly auditable improvements in the way in which we deliver capability to the Armed Forces.

Chairman: Moving on to the training for this change, John Smith.

Q137 John Smith: In fact, in one sense training is absolutely key to the success of this cultural transformation, this organisational transformation, and the Committee has expressed concern in the past with the introduction of long-term partnering, PFIs, and much greater involvement for longer periods with the private sector. Are your civil servants adequately trained to carry out this role in this changed environment? You yourself have expressed concern about the training levels and the need for training in project management and commercial activity. Has that training programme started? When will it start and have you committed the investment to pay for that training?

Sir Peter Spencer: At present we have not done enough training. We are beginning to open up and recover the deficit. It is a fundamental strand of the

work which we are doing which is to up-skill and re-skill people as and when appropriate. Each of the major professional groupings has got a senior person who is charged with identifying what the needs of that particular professional specialisation are, what its current levels of capability are, and therefore identifying what the deficit is and to put in place training programmes in order to increase the ability of the workforce—and this applies not only to civil servants, it applies just as much to the military members of staff who work in both organisations. The major strands are finance and commercial project management, engineering and logistics. The intention is to ensure that we use the Defence Academy to be the lead in delivering this training. It will not do all of it itself. It will in many cases act as the portal to direct people into the best training they can find that is value for money within the UK, and we are also seeking to ensure that the way in which people are then identified at the various levels is related to accreditation with organisations that have international recognition, so that we are giving people real skills which they will value and we are investing in them. So, for example, the Association of Project Managers has three levels of expertise and we are now looking towards ensuring that all those who are involved in project management, and certainly those in project leadership will over time, amongst other things, have to demonstrate the right level of professional accreditation in order to be entrusted with the work which they do.

Q138 John Smith: Thank you. Has the commitment to do that been identified and how much over what period of time?

Sir Peter Spencer: I do not have a complete answer to that at the moment because I do not have a complete answer to the gap analysis. If your sense is that there is a risk that we will not earmark enough, I would agree with you and therefore that is the risk which we are going to need to manage. Have we done anything to demonstrate we are taking seriously? Yes, we have. Both I initially and then the CDL of the day earmarked additional funds to sustain the direct entry graduate recruitment of engineers. We have a direct entry graduate scheme now for accountants.

Q139 Chairman: Do you think you could write to us with an answer.

Sir Peter Spencer: What we have done so far and what we plan to do?

Q140 Chairman: Yes.

Sir Peter Spencer: Of course.³

Mr Hancock: I am glad Kevan has come back into the room because I would just like to reassure members of the Committee who had not seen Sir Peter before that I have witnessed him on at least two occasions when he has been extremely passionate about what he believes in, both in his capacity as Second Sea Lord and also in his new role. That is not

³ See Ev 54

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to flatter him but I think the record does need to be put right to a certain extent about that. Kevan is obviously disappointed by that remark but nevertheless—

Mr Jones: I am trying to think what you are after, Mike!

Q141 Mr Hancock: To protect Portsmouth's interests! The commercial is over and I am sure Sir Peter will take both comments in the spirit in which they were intended. In *Preview* in July it was suggested that there were a lot of changes in your organisation, the DPA and the DLO and they have been through quite a lot since the creation of it in the 1990s. The staff have had to deal with major initiatives, Stocktake, Smart Acquisition, the DPA Forward programme, etc, and now in the July edition of *Preview* the suggestion is that you are going to lose something like 450 jobs, nearly 10% of your staff, over the next two years or so. That is a big cut in an organisation which has not really found its feet properly but is on the way to getting there. How are the staff going to cope with what they are expected to do, with the training you want them to have and the loss of 10% of the workforce at a critical time both for your organisation and for the men and women on the front-line?

Sir Peter Spencer: Part of the reduction was brought about by the forward look at the number of new projects which we will be managing, and I think that has been made clear in the Defence Industrial Strategy. However, we have just been through a period of buying quite a lot of new big and complicated platforms and we have still got a few more to buy, and we will come on to that later. But in the main the focus now is going to be much more on technology insertion on existing platforms and much of that work is done inside the DLO anyway by project teams, albeit that they are accountable to me currently for the outcomes. Secondly, we had to accept our part of the Gershon efficiency savings, and I think it is no bad thing to ensure that projects are properly sized. I think the onus, as you would expect, lies on the leadership to ensure that we are using those individuals to best effect, and all I would say is that there are inconsistencies between the way in which projects of similar sizes have been populated in the past which are more to do with the way it has always been as opposed to having a really thorough look at how a project needs to be set up. One of the problems which we have grappled with is when you have got a limited number of people with real expertise, the way in which we have empowered project leaders previously has effectively allowed them to own people who we might use to better effect by being a bit more flexible.

Q142 Mr Hancock: How selective are you going to be and are we going to find ourselves in a position where we let people go and then we re-hire them in a different guise as consultants?

Sir Peter Spencer: I hope not. I cannot stop people leaving. What I would say is that my strong preference is for the work to be done inside the project by properly experienced people, and so it will

take time as we get the up-skilling arrangements in place. Meanwhile the most important thing as we form up the new project groupings with the DLO, who in generality tend to have projects with larger numbers of people in them, I think there is going to be much more scope for the individual two star board members who are going to be entrusted with managing groups of projects to take a much more thorough look and decide how they might redistribute within the cluster of projects they have got.

Q143 Mr Hancock: Do you have the facility to be able to slow down the process of loss of staff, to be able to cope, or have you got this target which has to be met?

Sir Peter Spencer: The Gershon targets have been set for the agency. In terms of loss, the loss from the agency over and above planned retirements is extraordinarily low.

Mr Hancock: That is fine.

Q144 Mr Jones: You mentioned the issue around IPT leaders which is very important in terms of making sure that projects go forward. What are you doing to ensure that you actually get the right people doing that job rather than what has been seen in the past possibly as a nice pre-retirement job for somebody before they leave the Armed Forces, for example? Have you any mechanisms in this organisation to ensure that you are going to get the very best people to do this?

Sir Peter Spencer: We have had that mechanism in place for several years now. I have removed a number of team leaders from their posts who have not been capable of doing the work, and so the sort of message I get from people when they leave now is, "It used to be quite fun being a team leader until you rolled up, now there is a rather sharper edge to it." That is where we need to be.

Q145 Mr Jones: What is your role, Sir Peter, in terms of ensuring that you get the right people in the first place?

Sir Peter Spencer: The way the process works is that most team leader posts are competed and that competition is sometimes an open competition, sometimes it is within the Ministry of Defence and the Armed Forces. I take a look at the proposed shortlist so that anybody who is then subsequently interviewed I have confirmed before their interview that I would be content for them to be appointed. In other words, I take a long, hard look at their ability and their expertise to ensure that it is a reasonable thing to ask them to be doing. This has bought me into some discussion, as you might imagine, with other parts of the Ministry.

Q146 Mr Jones: Can you be overruled by, for example, the MoD who want to palm somebody off on you before they go off on retirement?

Sir Peter Spencer: It has happened the other way round. Where the conflict has been, and it is a friendly conflict, has been my insistence that if I am going to be held accountable for results (and I wish

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to be) the most important decisions I make are the people who are going to deliver it, which is why I went open competition for an operations director and for a commercial director and for two non-executive directors because there is no room for sentiment here. This is business, and we need to get people who are of the right ability and background in order to do it. The challenge we tend to find when we go to open competition is that there is a national shortage in quite a lot of the skills areas we are looking for and some of the very best have got good jobs somewhere else, thank you very much, and then we have to compete either on salary, or on the quality of the work and the interest, or a combination of both.

Chairman: There is a series of questions about key targets that we propose to write to you about because they are rather technical and detailed and are not really the subject of good oral evidence, so we would like to move on to Urgent Operational Requirements and Kevan Jones.

Q147 Mr Jones: Sir Peter, the NAO Report said the DPA performed well in terms of Urgent Operational Requirements and the Committee have seen some of those first-hand both in Afghanistan and Iraq. Are there any lessons that can be learned from those UORs in terms of major procurement issues?

Sir Peter Spencer: There are some very powerful lessons. I think the three most powerful principles are go for something which is off-the-shelf or as close to off-the-shelf as you can get; secondly, make sure right from the outset that the front-line end user is involved in defining the requirement.

Q148 Mr Jones: Can I just stop you on that. When you say the front-line user, do you mean the squaddie who is actually using the equipment at the front end or the commanding officer, because I have found there is a big difference between what a commanding officer is saying and what the man or women we are asking to use the equipment on the front line is saying?

Sir Peter Spencer: That is a good point. I think probably not often enough do we get the actual user. When it is Special Forces we do. A key lesson from that is when somebody rolls up as front-line user, it is a good idea to make sure that it is a real front-line user. Without boring the Committee now, I have a very similar experience from years ago of getting involved with officers trying to say that something was needed which the sailors who were using it really did not need and there being quite a confusion. The third point is to ensure that we go incremental. I think a lot of procurement problems ultimately, when you are measuring performance, go back to people get carried away with their own enthusiasm and extending the financial liability beyond the envelope of their understanding of the uncertainties. So build a bit, test a bit, build a bit, test a bit, as long as you do it rapidly and you have not got long periods of time where you are waiting for decisions to be made and you have a rolling concurrent programme is a way of doing that. Then once you have got the project on contract you need to keep the

end users properly engaged. I think that we are probably better at getting the right end user engaged at that time because, in the main, if you are looking at something which is fit for purpose and reliable, you need troops to test it, and we have done that, for example, with the Functionally Integrated Soldier technology system, where we had a number of soldiers who came and wore the equipment and used it in exercises and we could then measure not only the performance but find out where the weaknesses were. Often it is just not being made rugged enough and reliable enough for the sort of terrain in which it is to be used.

Q149 Mr Jones: This is becoming a highly political situation at the moment because people are homing in, for example, on the vehicles in Iraq and Afghanistan, so there is a spotlight being put on to it. How confident are you that you can as an agency react quickly to some of these issues because—and again it is not me saying this—there is a school of thought saying you civil servants are down there in Bristol labouring over all these long projects while our men and women are being exposed in Iraq and Afghanistan. This is going to be an increasing problem for us as we do more operations and is going to lead to the situation we have got in both Iraq and Afghanistan. How can you give assurance to those people that you are reacting rapidly to those issues?

Sir Peter Spencer: I think the performance on UOR speaks for itself and certainly when we have questioned people over the last three or four years, they thought the UOR that was delivered gave them what they needed. It was a 98% success rate. So in terms of when we go UOR, we know we can do it and I think you will always be judged on your performance as opposed to your propaganda. So far as trying to speed up the more conventional processes, speeding up the Vector vehicle is one example of that and the speed with which we have moved with Mastiff is another example. Where we are going to have to be very careful is the speed at which you have to make those decisions means you run a higher risk of not understanding what the full requirement is, and therefore you just need to be very careful as you start to deliver that somebody does not say, “By the way, it also needs to do A, B and C.” That is manageable so long as you keep in mind the point I made about incrementality. So long as you say okay, we are going to get you precisely what you ask for and it is going to have some stretch potential, and that is phase one. Then when as operations evolve you realise there is something else you want, you then say that is phase two and you approve it as a separate project. Then so far as public accountability is concerned you have got two successful projects. If you are not careful, the idle way of doing it is to say, “By the way, the requirement is now this and I would like to resubmit.” You then make two successes look like one single failure. It sounds trivial but we have been completely bedeviled by this sort of slackness in managing.

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Q150 Mr Jones: I do sympathise with you. Sometimes the MoD is not clear in what they actually want but if you are a man or woman in Afghanistan or Iraq, the important thing—

Sir Peter Spencer:—is to act quickly.

Mr Jones:—is to act quickly but also in terms of vehicles it should protect those individuals. Trying to explain that to their families as well is the key point.

Chairman: Can I bring in Mark Lancaster.

Q151 Mr Lancaster: I am intrigued by you saying the important thing is to act quickly because it is, but I fear that sometimes the need to feel that you have to act quickly is not necessarily working in our soldiers' interests. Can I give you one example, and I do not expect you to comment on this example, but there is a UOR just gone in for Afghanistan for a route clearance package, which is a combination of vehicles, American vehicles, Buffalo and Huskies, and they go and clear IEDs off the road. It has come in because the threat is changing in Afghanistan, but when you actually go and talk to the American soldiers using this equipment you discover that one piece of equipment (because this package was designed for Iraq for the nice Tarmac roads there) is completely unsuitable for Afghanistan and one of the pieces—and I am not going to go into too much detail for obvious reasons—is simply not being used in Afghanistan and so this notion of we have to react quickly is potentially resulting in us buying the wrong piece of equipment. I have some concerns that we can go too far. How do you address that? Clearly nobody had spoken to the first sergeant who is using this equipment in Kandahar.

Sir Peter Spencer: I think the clue that was given by Kevan in ensuring that you have got the right end user is pretty fundamental. I do share the concerns but there is a balance to be struck between proper propriety to say let us make sure we have understood this requirement, we are asking for the right thing, we understand the costs and this is not the thin end of a wedge which is going to cause us to spend huge amounts more money putting right the wrong appliance. But by the same token what we cannot do is then apply very slowly the full assurance and scrutiny process which bedevils the rate at which we have laboured in the past. To be positive about it, that was why it was so important that in setting the metrics of performance for the new organisation, agility and speed of response in delivering the right thing to the front-line is going to be encapsulated and more importantly—and I should have said it earlier—at my insistence, those targets are going to be written by the military. The work strand is led by the Vice Chief, Tim Granville-Chapman, who is in consultation with the three Services because one of the problems that you have if you set up a target set without properly involving the end users is that you could end up meeting your targets and they do not feel good about it at all, and what you have done is to satisfy an internal agency requirement which has not been aligned with the real needs. That is the trick

of all this is; to put the intellectual effort in and involve the right people so that when you meet the targets there is a wow factor out there.

Q152 Mr Jones: You have just said involving the right people. I think the example that Mark has just outlined—and it is perhaps not your fault but you are perhaps talking to senior people in the MoD, even military people, and are not talking to the squaddie or the person who needs to use the kit. I think that is one of the fundamental changes that needs to happen.

Sir Peter Spencer: I will look at the detail because occasionally there is nothing available in the market place that will do something and it may be that was the only thing they could get, which may not be as good in one theatre as in another clearly.⁴

Q153 Mr Hancock: Chairman, why would you buy a piece of kit with that on it if you are getting good advice that it is a pointless bit of kit to buy on a vehicle? I can understand the need but I think there are some judgments to be made. I am annoyed when I hear Prime Ministers say time and time again that commanders only have to ask and we will deliver and yet you hear then of soldiers dying because their vehicles are not properly armoured. Yet there are adequately armoured vehicles that are available, as you said, off-the-shelf, from other countries which could deliver the basic commodity which they need, which is a safe journey from their base to where they are expected to be in operations.

Sir Peter Spencer: With respect, I think we have to break that down a bit into its component parts. I did not say that there were vehicles that would guarantee the safety of British Armed Forces.

Q154 Mr Hancock: Give them better protection than they currently have in some of the vehicles they are driving around.

Sir Peter Spencer: And that is the whole purpose of the current procurement activity.

Q155 Mr Hancock: How long does that process take if you are buying it off-the-shelf and it is only a vehicle that is delivering personnel from one location to another and is not expected to do anything other than that role?

Sir Peter Spencer: It rather depends as to how many there happen to be with the supplier because although they might be able to provide one very rapidly, in order to get a realistic number, generally speaking these days, people operate lean supply chain manufacture do not have large numbers of complex and expensive bits of equipment stacked up in a warehouse. In the case of Mastiff we managed to place that contract within a very short space of time.

Q156 Mr Hancock: From start to finish give us an example then. You let the contract: how long did it take you to get to the stage of letting the contract and how long will it be for the vehicles to be fully operational?

⁴ See Ev 55

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Sir Peter Spencer: We let the contract in under a month from being asked to do it and that was in July and the first vehicles are planned for delivery on 17 November. So you can do it within a few months, depending upon the article and depending upon the availability from the manufacturer. Occasionally of course you can intervene and see if another nation is willing to allow something to be diverted.

Q157 John Smith: I just wondered, Chairman, following on from the earlier point about training, were there any plans to introduce new training programmes to try and improve this agility of response? Because we are not going to the NCOs on the front-line, I wonder whether there is a training requirement there? You said we were using the Defence Academy for training not just civil servants but the military for improving our delivery of defence procurement. How far are we going to take it? Are there going to be any plans for NCO training in the proposed new Academy because I know there is going to be a whole department on logistics and logistical support.

Sir Peter Spencer: They have already achieved training within the DLO training organisation, all of which will be owned by the Defence Academy from 1 April which will, I think, give much more coherent, cost-effective training across defence. We do need to train people to be more agile in their procurement processes, and that is people involved across the spectrum, from those who state the requirements through to those who are negotiating contracts.

Chairman: We will have more questions to ask about vehicles in later inquiries. Robert Key?

Q158 Robert Key: I want to say, Sir Peter, all power to your elbow for recognising that you can do things quickly, although I would point out that there was an Urgent Operational Requirement for a Mastiff-type vehicle in 2001 which somehow got lost in the system, but that is history. Could I turn to the question of Chinook Mk 3s. We were all delighted to hear the Prime Minister say what he did about the Forces having the requirements that they needed to do the job. I thought particularly then of the eight Chinook Mk 3 helicopters in my constituency that have been sitting in hangars since 2001. I do not want to go back over why that happened. The Public Accounts Committee and the NAO have already told us roughly what happened. What I would like to hear from you, please, is what is now happening to those eight Chinook Mk 3s which are urgently required in Afghanistan and Iraq? Estimates were made that Boeing and the MoD are working to fix this problem, but the cost appears to have doubled from £4 million per helicopter to £8 million. The date for in-service operations seems to have slipped from 2007 to 2010 or 2011. Could you please explain what is happening with those eight helicopters, which cannot be flown except in the most benign conditions because they cannot be certified?

Sir Peter Spencer: The position today is that a Boeing team has arrived in Bristol to go through what I hope will be convergence on the final negotiations for a contract which is both affordable

and satisfactory in terms of where the financial risk lies. This has been a much more difficult problem to unravel than had been anticipated. I have pressed the team very hard because I could not understand the timelines. When I looked into it, I discovered the extent to which we just had not completed the original design for the cockpit, so we have got to finish off the cockpit and we have also got to sort out the safety issues and we have also got to sort out the certification and airworthiness issues. We then have to sort out the priority for delivering the work because clearly there are options as to how fast you can push that through, and that will need to be judged against priorities elsewhere in the programme by the equipment capability community.

Q159 Robert Key: Have you got any date in mind as to when they might be operational?

Sir Peter Spencer: It is so delicate at the moment that I can only risk your irritation by saying early in the next decade remains the current publicly stated forecast. Ministers are taking a very close interest in this. When the answer does emerge I am sure the Minister would want to tell the House first. It would not really be for me to pre-empt that. I can assure you that I am on the case and he is on case. I talk about it regularly with the CEO in Boeing, Jim Albaugh. I saw him in London two weeks ago and I have another telephone call arranged with him for either Thursday or Friday of this week, so we are doing everything possible to drive it through and get on with it.

Q160 Robert Key: That is very good news. The Public Accounts Committee suggested that one option might be to break up the helicopters for spares, to cannibalise them. Is there any question of that or will all eight of them remain untouched?

Sir Peter Spencer: At one stage we thought that might be an option. That was before we had defined what the fix was going to be. We now have good technical definition. We now know what the solution is. The discussion is how much we are going to pay for it and we would expect Boeing to cap our liabilities with a firm fixed price. I am not interested in getting drawn into a project which if it cannot be delivered we end up paying more and more and more money, which is where we were last time. So there is a very important point of balance to be struck here, of course not to delay the needs of the Armed Forces for a day longer than is necessary, but what we cannot do is to sign up to another bad contract. We are not arguing from a position of particular strength with a company which has a very large order book. As I have made it clear to them, as far as I am concerned, it is their reputation which is at stake here.

Q161 Robert Key: Yes but there are other reputations too. I hope very much that you will manage to lay some ghosts to rest here because, of course, my constituents who work at Boscombe Down have been haunted for many years by what happened with the ZD576 Chinook on the Mull of

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Kintyre. It was of course the engineers at Boscombe Down who refused to certify that helicopter for flight which subsequently crashed. We will not go into that, but if we can now rebuild the reputation that you have mentioned that will be a very important side effect. The most important thing, however, is to get those Chinooks in service for the benefit of our troops.

Sir Peter Spencer: Of course.

Q162 Chairman: The consequence of these Chinooks being out of service is that the troops in Afghanistan and Iraq have a severe shortage of heavy lift. Is there in progress any thought of an interim solution to improve the heavy lift capacity that is available to both of these theatres?

Sir Peter Spencer: To the best of my knowledge, and I am not as well briefed on this as others in the Ministry of Defence, the focus at the moment is looking at medium lift in the immediate term, but that does not discount anything in terms of acquiring additional items of inventory. The main thrust of the work of course is to manage the operations of the aircraft that we have got and to look at priorities for deployment of those aircraft between the two theatres.

Q163 Mr Lancaster: Can we clarify what we mean by heavy lift, medium lift and rotary lift? Heavy lift I am thinking of Antonovs and C17s and things like that as opposed to medium lift, Hercules—

Sir Peter Spencer: I thought we were talking helicopters.

Mr Lancaster: It is relative.

Q164 Chairman: So what sort of helicopters?

Sir Peter Spencer: Heavy lift in my vocabulary is either a Chinook or a great big Sea Stallion or a big Sikorsky; medium lift is Merlin and Puma, those sort of things.

Q165 Mr Holloway: How are plans progressing or indeed are there any to start using private contractors to do the water runs and mail runs in Afghanistan in order to let the military helicopters do a more military role?

Sir Peter Spencer: We are looking at a range of options. One of the challenges of those sorts of arrangements is the liability issues in theatre. So until the requirement is clearer from the military customer precisely what he wants us to go and do, all I can do is to look at the proposals that come forward. Anything which is on a lease does give you quite severe challenges in terms of insurance and liabilities.

Q166 Mr Holloway: But MI-17s cost a lot less, I guess, than Chinooks. On Chinooks how long would it take to magic up another six Chinooks from Boeing or anybody else? What are the options? If the Government decided we want six more Chinooks tomorrow, how long would tomorrow be?

Sir Peter Spencer: A lot would depend on the extent to which when we engage with Boeing other customers, particularly the United States Army,

were prepared to allow an order to be diverted. They are in production at the moment for the Green Fleet of Chinook Foxtrots. You could certainly theoretically go for a very rapid purchase but a lot of it depends on the availability of money, the willingness or the ability of that production line to be diverted and we have not, to my knowledge, approached Boeing with that question. If I am invited to do that then I will do so.

Q167 Chairman: Do you take the Prime Minister's comments over the weekend as being the answer to the availability of funds?

Sir Peter Spencer: I work inevitably to the process that it will be for the military to determine the priorities of what equipment they believe they actually need in theatre, the order in which they want it and the extent to which that money would be made available either outside the normal budget in support of operations from the Treasury through the national reserve or the extent to which we would have to look at the rest of the programme.

Q168 Chairman: But surely if the Prime Minister meant anything he meant that if the need was there the money would be found?

Sir Peter Spencer: That is going to be something which Ministers will have to determine. It is not for me to act on the basis of what I read in the newspaper what the Prime Minister has said. There does need to be, even allowing for the need for agility of response, somebody who is calling the direction, and that will come from the Secretary of State.

Q169 Mr Hancock: Have you been approached to look at any method at all of improving the medium lift capability for our troops and have you been instructed to seek out a solution to that problem?

Sir Peter Spencer: Have I been or will I be?

Q170 Mr Hancock: Have you been?

Sir Peter Spencer: The work is going on at the moment through the future rotorcraft capability team leader who is looking at the whole range of options. It is a pretty rapidly moving field at the moment, so there are a range of things which are being looked at from diverting from other sources to accelerating the programmes that we have already got.

Q171 Mr Hancock: What sort of time-frames have you been instructed to work under for that?

Sir Peter Spencer: I have not personally been given a time-frame to work under but the answers are being fed back to Ministers in real time in terms of what those options are and Ministers are engaged in it.

Q172 Chairman: Sir Peter, I am a bit disappointed by what you are saying here because the Prime Minister said over the weekend that the troops can have anything they need, and the implication of your reply is that you are shoving it back into the negotiations between the Treasury and the Ministry of Defence, which have always been rather fraught.

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What does the Prime Minister's promise that the troops could have anything they need actually mean in practice?

Sir Peter Spencer: I am not hiding behind the relationship between the Ministry of Defence and the Treasury. I am just respecting the position I am in in terms of being accountable for the expenditure of public funds.

Q173 Chairman: But did your heart leap when your heard what the Prime Minister said?

Sir Peter Spencer: Yes of course, but somebody has to be the team leader and the team leader is the Secretary of State. That is not me opting out. If everybody rushes off in different directions and runs up their own particular wheeze, it does take quite a long time to sort it all out. I am absolutely clear that the Secretary of State is looking at the options which are available and are being costed and presented to him, and I am absolutely clear that he will implement those as fast as he is able to. How he gets that funded is something which he necessarily must agree with the Treasury. There is no basis on which the Ministry of Defence would go out without the Treasury having endorsed the expenditure of money; that is the way the process works.

Q174 Chairman: So we can be confident, can we, that the Secretary of State would put into effect and give reality to the Prime Minister's words over the weekend?

Sir Peter Spencer: I think you would have to ask the Secretary of State that himself.

Q175 Chairman: Can we move on to *HMS Astute*. Recently the Committee visited BAE Systems in Barrow and Devonport Management Limited because we were looking at the Strategic Nuclear Deterrent and we saw *HMS Astute*, we saw *HMS Ambush*, and *Astute* was very nearly finished. Are you satisfied that the problems with the programme are now dealt with?

Sir Peter Spencer: No, I am not.

Q176 Chairman: What are the problems outstanding?

Sir Peter Spencer: Well, to give credit where it is due, I think the leadership at Barrow has been outstanding under Murray Easton in terms—

Q177 Chairman: I think we would agree with that.

Sir Peter Spencer:—of the focus of his shipyard on the schedule and I think in terms of the progress in making the schedule is extremely encouraging. Our planning date is 2009 and he is determined to beat it and show us he can do it in 2008 and all of that I hugely applaud. The concerns I have got are that we have at the moment unlimited financial liability for boats two and three because we have not managed yet to agree the prices of boats two and three and we know that there have been problems in terms of rework in terms of the fragility of the supply chain, all of which continue to put up the financial pressures and I am extremely keen to bring this to a conclusion ideally before the end of this financial

year because it is high time we did so. Now, we are making progress on that front because we now have got a much more detailed set of prices which are being offered up for negotiation. We have done a lot of independent assessment of that with the Pricing and Forecasting Group and we are now into the stage of negotiations which is very difficult to predict in terms of duration because there is a lot of money at stake. We then have to think about the rest of the programme and the ability to continue to build these submarines where we know the supply chain has taken a lot of damage because of the disruption to the early part of the build. Therefore, there is a lot of effort being put into drawing together across industry the right grouping of companies to look at boat four and the subsequent boats in that class to make sure that we get right the underlying drumbeat of the industry, that we nurture and make healthy again the supply chain and that we do not lose out on the key skills which are needed to do this very demanding work because it is probably the most complicated thing that anybody ever makes, a nuclear submarine.

Q178 Mr Crausby: So does the lack of agreement on prices for boats two and three affect the second batch of submarines? It seems to me that it would be odd not to agree the prices on boats two and three, but agree a contract for further submarines.

Sir Peter Spencer: Our approach is, as you would expect, that we necessarily must agree prices for two and three before we consider placing a contract for boat four, although in the nature of things we have not been absolutely literal about that because if we had not done anything regarding boat four, we would have already forgone the opportunity to have a boat four, so we have invested carefully in those long-lead items which are necessary to sustain the industry.

Q179 Mr Crausby: So you see the next batch as just simply being boat four? The question is: how many would be in the next batch? Would you do this one at a time for boat four and boat five?

Sir Peter Spencer: The decision has not yet been made and it is being worked through in the context of the Defence Industrial Strategy as to precisely how and when we will contract for them.

Q180 Mr Crausby: So can you give us any indication as to when the contract for further submarines will be made?

Sir Peter Spencer: Predicting the timing of placing of contracts is not an activity which runs very well particularly with ministers, so they will decide at the moment of their choosing.

Q181 Mr Crausby: You see, what we get from people at Barrow is that the skills base is absolutely dependent on further orders, particularly as far as submarine design is concerned. People will just simply walk away from Barrow and not walk back. There are lots of opportunities, particularly for submarine designers who have quite a broad skill, to travel the world really. Their concern is that once we

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lose that base, then we will just not be able to complete *Astute* or indeed be capable of dealing with future submarine orders from the nuclear deterrent point of view.

Sir Peter Spencer: I absolutely agree with you and that is why at the beginning of this year, on 1 April 2006, we created the post of DG Nuclear, Rear Admiral Andy Mathews, who was the first dual accountable Director General in both the DPA and DLO and has the oversight of all of our submarine activity, both in-service, technology insertion and new construction, and his job is to oversee the future of the nuclear submarine industry and to ensure we have in place the plans to sustain that industry over time.

Q182 Chairman: But the point which was made to us in Barrow was that the only way you can retain the skills is by ordering submarines.

Sir Peter Spencer: And that point is well understood, but we have to look at the question of price and timing and the rate at which we can afford to outturn money in that area of the programme in order to sustain the submarine build industry against the other pressures on the programme and it is going to need some quite careful management.

Q183 Mr Hancock: I just cannot believe though that people cannot see that the outturn price on boats two and three will actually determine whether any other boat ever gets built because there will come a time when the point crosses the line beyond what is reasonable to pay for a fourth and fifth boat.

Sir Peter Spencer: Precisely.

Q184 Mr Hancock: That will really in the end be decided by the final price of boats two and three and I think everyone has to understand that there is an enormous risk here, that if this price just goes on and on escalating, then there cannot be another order, the nation just cannot afford it and, whether that does terminal damage or not to the infrastructure at Barrow or the workforce, I think that is the reality of the situation surely, is it not?

Sir Peter Spencer: It could be, but I do not think it is because I have sufficient visibility of where I think the prices of boats two and three will come out for them not *per se* to provide that degree of threat to—

Q185 Mr Hancock: But we could not build for the price of those, could we? The nation really would be paying through the nose for something, would it not? You could not build four and five for the same price as we will pay for two and three?

Sir Peter Spencer: I think if we go back first of all to the value for money argument, notwithstanding the escalation there has been in price because of the disruption to the programme when the design was not far ahead enough of the production process, the outturn price of these submarines is probably rather less than the prices which the United States Navy pay for their nuclear submarines by a considerable percentage, and that is in the public domain. I think the error we made was to be unrealistic in terms of how economically we could build these submarines,

based on an unrealistic expectation from computer-aided design and computer-aided manufacture which led to a very aggressive degree of concurrency and of course when you are committed to that extent and it comes unstuck, you do pay an extremely heavy price. Even allowing for that, when we do these comparisons with other nations, the prices we are getting, I think, even so represent good value, but that does not mean to say we will be prepared to settle there because clearly there were a lot of inefficiencies due to the rebuild work. The challenge here with subsequent submarines of course is that over time quite a lot of the technology becomes obsolete and you have to take out that obsolescence as you go through time. We also, just as a technicality, pay in outturn prices, so even if in real terms submarine number four costs exactly the same as submarine number one, the number that would appear would be different because it would have a number of years' inflation built into it.

Q186 Chairman: It looks in real terms, and possibly in money terms, as though boat number two would cost less than boat one and boat number three would cost less than boat number two, does it not?

Sir Peter Spencer: I do not think you can make those assumptions about boats. Three should cost less than two and the cost of boat number one, yes, because we will have amortised a lot of the design costs into it, so the general trend is clear, that you can get a learning effect for subsequent submarines. The difficulty comes when you are faced with a new contract to place and the extent to which you continue down the learner curve or you are affected by other influences, and the other influences here are the disruption of the supply chain and the fact that some of the manufacturers of quite important components are no longer around and we are having to find alternative sources and that is a challenge.

Q187 Chairman: Sir Peter, you are being very helpful. The *Astutes* that we saw in manufacture were being made with a very interesting method of sliding in cassettes almost, large cabins and large bits of infrastructure being made outside the submarines and then being slid in. When we went to Devonport, we found that submarines which were being maintained and repaired had to have holes cut in them and things taken out and we wondered whether the method of making these submarines is antipathetic to the method of maintaining them in Devonport and whether, therefore, sufficient consideration is being given in the manufacturing process to the through-life maintenance of them. Do you have a comment on that?

Sir Peter Spencer: I think it is a very good question because right at the heart of delivering through-life capability with a new organisation is that you spend more time and effort thinking up-front what additional investment should be made to ensure that in whole-life terms you produce something which is affordable, so we move from right equipment, right kit, right price, right time to right equipment, right price, right time, right cost of ownership. Now, the nuclear submarine is probably the most extreme

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example because you have a pressure hull and you are going to have to cut holes in it in order to get things in and out. Part of the design process is focused on the exit and entry routes. As you know, there are certain key components you have to replace through life. I would need to go back and take some professional advice on the extent to which the Astute class differs from the existing classes so far as replacing components is concerned. I am happy to do that, but I can only give you a rather general, unsatisfactory answer at this stage. It is certainly a principle which is in place at the beginning of any major procurement programme. The fundamental question is the extent to which it is actually applied *ab initio* because, as we all know, you commit a very large percentage of the through-life cost of ownership at the point at which you make some quite early decisions in any design process.

Chairman: I think it would be helpful if you could go back and look at that please.⁵ We move on to the Future Carrier.

Q188 Mr Crausby: First of all, can you update us on the progress of the Future Carrier programme and tell us if a date for the main investment decision has been set?

Sir Peter Spencer: We are progressing pretty well since this Committee last enquired and a lot more work has been done on the detailed design in the shipyards and on value engineering so that we have moved from parametric-type cost estimation to bottom-up estimates from the people who are actually going to do it. We have clarified the standards to which a ship is going to be built and the performance so as to remove some of the ambiguities, and the industrial arrangement with the alliance between the Ministry of Defence and the companies concerned has settled down and is working pretty well. The common baseline design was agreed with the French and they agreed to contribute up to £100 million as an entry fee and to pay one-third of the demonstration phase costs and to date they have paid some £70 million, most of which is the first two payments of their demonstration fee, £55 million, and the other is a contribution towards the demonstration phase costs and there will be more to come on that. The final £45 million will only be paid if they make the decision to go ahead and build the ship based on that common baseline design. We are now at the stage of due diligence and we are now at the stage of making sure that we really do understand the proposition which is on the table and that we actually understand and believe the numbers. You will remember from the Tom McKane paper, *Enabling Acquisition Change*, there was a part of it devoted to better due diligence and to emulating best practice in the private sector. With that in mind, we have had three independent reviews just recently; one a standard Office of Government Commerce gateway review which lasts five days to make sure that the whole of the organisation is joined up and it has got a common understanding of what is required and we have got a

proper understanding of the projects which interrelate with this and that we have the right governance arrangements in place and the right risk management arrangements in place. There has been a Red-team review of the design led by Sir John Parker and a team of very well-regarded independent experts to look at the design and the procurement planning to take a look and see where there are areas which would cause us some concern, and that report has not yet been delivered. Finally, there has been an independent financial review conducted by the team led by Deloitte with Rand and Jacobs. They will give us an independent financial estimate as to what they think the cost of this project should be because the great risk when you have to live within a budget is that people call the number they think you want to hear. You are so pleased that you sign the contract and then three years down the line hard reality kicks in. We have been there before and we are not going to do it again. It was the reason why I refused to go to contract in April 2004. Had we gone to contract in April 2004, in my view and this is a personal estimate, we would be looking at a cost escalation of around £1 billion on the basis of our lack of knowledge at the time, so all of this has simply been a relearned lesson in the merits of getting the assessment phase done properly, to be incremental in your thinking and not to commit yourself to very large capital investment until you have got the necessary degree of understanding and confidence. It always sounds so much like a blinding glimpse of the obvious when it is spoken like that, but of course you have to set it in the context of all the other pressures that are on the procurement process to get on with something.

Q189 Mr Crausby: I hear that what is really holding things up is that there is a very large gap between the industry's estimate and the MoD's budget. Is that the case? Can you tell us, how does the latest industry estimate compare with what you consider to be the MoD's budget and the right price?

Sir Peter Spencer: There is no budget *per se* inasmuch as we will set the budget when we make the capital investment decision. We clearly have a number in mind for planning purposes because we need to give that to those who are on the case to sort it out, but we always have the ability, if something is going to cost something, to match our budget to suit.

Q190 Mr Crausby: So how close are you? Are things running smoothly? Do you think you are quite close to reaching agreement on what the price would be?

Sir Peter Spencer: I am the great sceptic in all this, professional sceptic, because I have got reason to be sceptical. Those who are dealing with it are very encouraging; they believe that what we are seeing here, which is after all the beginning of a negotiation on price, is bound to need some judgment as to what ultimately the price is going to turn out to be. If you think of the contractual arrangements here which are going to be set upon a target cost with the gain-sharing arrangements for beating that cost, then if you stand to benefit by making a lot of earned profit by beating the cost, you are going to be trying to

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nudge the price high. We have got to find the right point of balance which says that this is a reasonably challenging cost to go for and if you do beat it, then you deserve to get additional profit, so this is where the real work begins. This is why we have gone for the sort of due diligence arrangements I have described because we need as many views as we can as to what the 'should cost' of this project is going to be, and I am not trying to hide anything from you, but I simply have not—

Q191 Mr Crausby: I hear that the difference is hundreds of millions. Is that true? Is there a difference of hundreds of millions between them?

Sir Peter Spencer: What you are hearing is views from people in industry perhaps who have got a vested interest in talking the price up, so that has to be taken into account when judging what is at the heart of this. When a project comes in, it is not just one number, as you know, but it is a very, very complicated piece of work which has to be very carefully analysed so that we understand what is included, what is excluded, what we think the costs of the exclusions will be, what we think the risks are and put a value on that risk. That very detailed process is actually happening as we speak and all I have to go on at the moment is an assurance from the team leader, which is still all to play for, that he believes that it is very, very feasible to get a contract negotiated for a price that we can afford and that industry can deliver and that we should have the right level of confidence that that target cost will be a real target cost and it will incentivise industry in the right sort of way.

Q192 Mr Crausby: What effect is this having on the Maritime Industrial Strategy? Is it not absolutely crucial to the Maritime Industrial Strategy? It seems to me that we are a very long way from reaching agreement and making progress.

Sir Peter Spencer: No, if I have given that impression, may I correct it because I do not think we are a very long way from reaching an agreement. We have actually come an enormously long way and what we are seeing now is the end of a process where there are real numbers on the table and people are going to start negotiating quite hard and that is a process which can, only to a limited extent, be conducted in public. A lot of it will come down to very detailed discussions as to what the numbers actually mean and it is not lost on Lord Drayson that the CVF project is fundamental to the Maritime Industrial Strategy and you will remember his description of wanting to get together the fantasy football team to deliver it.

Q193 Mr Crausby: We also hear that the management arrangements are not proving to be robust. Are you expecting the management arrangements to change and, if so, soon or is that a factor in this?

Sir Peter Spencer: I cannot answer a hypothetical question. Who has said that about which management arrangements?

Q194 Mr Crausby: Are you satisfied that the managing group of this project from an industrial point of view is working well?

Sir Peter Spencer: I think so. I think we have got two absolute stars in it. We have John Coles who came back out of retirement to do this and it does not benefit him much financially at all, but he does this because he has got a real passion about wanting to deliver this. We have also got Peter—

Q195 Chairman: Sir Peter, I do not think that the suggestion is that the individuals in charge of it are not appropriate, but the suggestion, I think, is that competing some bits of Carrier, allocating other bits of the Carrier, not necessarily the right bits to be allocated or the right bits to be competed, and then putting them all together in a place, which I am sure Willie Rennie will come in soon to express his view about, but in a place which some people would say should not be the place they should be put together. That is what some people have been questioning rather than the individuals in charge of it.

Sir Peter Spencer: Thank you for the clarification, but just to complete my sentence, Peter McIntosh who, I just wanted to publicly say, has come to us from industry, works as a civil servant, so this is expertise we have brought in from outside and he is doing a very, very impressive job in giving the Alliance Management Board the leadership which it needs which complements the leadership which John Cole is giving across the Ministry of Defence and elsewhere. In terms of the build arrangements, well, the Defence Industrial Strategy centres upon the need to ensure that there is a unity of purpose and a clarity of purpose so that industry can make its own judgments as to how and when it needs to invest as opposed to long periods when we say nothing to them and then suddenly a contract rolls up and meanwhile we have had a very sort of uneven demand on their resources. So the whole aim of the strategy here is to give that degree of understanding and the ministerial judgment was that we needed, in the case of Govan and Barrow and Vosper Thornycroft and Rosyth, to give that clarity and to say, "We have got these super-blocks which we will expect to be built in these places". There is always a tension there between whether or not you are going to get the right prices for that work if it is a non-competitive process, and the way in which the alliance works, the transparency we are getting and the side-by-side comparison we are getting gives us the opportunity to ensure that that non-competitive process still gives us prices which are competitive and we will then add to that through the competitive arrangements for the rest of the structure which is pretty simple. The skills that prevail in the oil industry are pretty competent at bringing bits of the structure together and sticking it together. In fact we already do this in the warship-building industry where the bow sections of Type 45s are manufactured in Portsmouth and floated up to Scotland, so this is not a trick which is unreasonable to ask. It is a way of ensuring that, as we get through into this very large peak of demand, we try to make the best use of the industrial capacity we have got,

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but look through that peak of demand to what happens on the other side to make sure that we size the industry properly and we identify the key skills which we need in order to retain operational sovereignty over the maritime assets in perpetuity.

Q196 Mr Hancock: I have two questions relating to the figures that you evaluated at the time during the due diligence process. Is it for both ships or for the first aircraft carrier?

Sir Peter Spencer: We would be looking at the total programme.

Q197 Mr Hancock: So for both, and the through-life maintenance of the ships is being priced into this equation as well, is it?

Sir Peter Spencer: There are options for looking at the initial period of support which we will look at.

Q198 Mr Hancock: So the time-frame is also critical then, is it not, because you cannot agree a price unless you have agreed a time-frame from start on the first ship to completion on the second ship, so that is fairly critical? Can you advise us on what that time-frame now is from the laying down of the first ship to the operational capacity being delivered of the second ship?

Sir Peter Spencer: Well, the separation between the ships that forms the basis for estimating is the three-year separation between In Service Dates which sets the relative positions and that is the basis on which the pricing is being done, but in any contract there will be a tender validity period during which the prices will hold until we take them up and we would aim to get those well outside the timescale within which a decision will be made.

Q199 Mr Hancock: But part of the process is also the way in these two very large ships, the largest ships of all the Navy will have ever had, are going to be serviced, not maintained, but just generally home-ported and serviced. Now, the Ministry of Defence are going through this complex exercise at the moment looking at the three bases and there are some critical issues there and if it was not Portsmouth, the ships are too big for Devonport, so are you being asked to look at that as part of the work you are doing of where these ships could be serviced if the Navy makes a decision, which hopefully it will not, which would go against Portsmouth?

Sir Peter Spencer: All of this work comes together with the Maritime Industrial Strategy on which David Gould is leading for Lord Drayson and draws in the surface ship build programme, the submarine build programme and also the ship support programmes because we need to ensure that we recognise that what the Royal Navy needs is delivery of through-life capability from not only a Ministry organisation which is joined up, but from an industry which works for the common purpose and understands and that we understand the best way of doing that. So there is a lot at work going on at the moment with industry in order to tease out what the options might be. One of the realities, as you will be

aware, is if we have over-capacity, we pay an awful lot of the budget on servicing overheads and we then have less opportunity to actually go for what is actually needed, so there are some quite tough decisions which are going to need to be taken.

Q200 Willie Rennie: I was interested to hear what you were saying about the maintenance of skills and I was glad to hear what you were saying about the appropriate work going to the appropriate places. Rosyth has got to a stage now at Babcocks where they have got quite a skilled, kind of hard-core workforce which is efficient and widely recognised as so, but with the triple S strategy, the decision about the Liverpool five was to cut the school which has resulted in a possible 90 job losses out of 1,200 at Rosyth, and excuse me for talking about Rosyth. The reason why I mention this is because it is quite significant for the maintenance of Babcocks in advance of the Carriers coming to maintain those skills. Could you maybe explain why that decision was made and how that fits in with the maintenance of skills in the longer term?

Sir Peter Spencer: It is not a decision which I was personally involved in, so if you wanted a detailed answer, we would need to write, but the general context in which these decisions were taken in-year was to ensure that we could manage within our means and there needed to be some veering and hauling on some parts of the budget.⁶ It was not, I can assure you, a decision which was lightly taken because of the very point that you make which is that there is not much point in publishing a Defence Industrial Strategy about nurturing the industrial base and then failing to implement the strategy which ultimately is placing contracts and providing the work for people. So there is a tough edge to all of this where it is quite clear we are not going to be able to sustain the totality of the industrial base that there is in place today and we need to find, working with industry, working with the trade unions and working with the Armed Forces, what the right balance is going to be to deliver the fundamental objectives of the Defence Industrial Strategy and to make sure that where financial reality in the end kicks in, we do not actually kill something off which we actually needed.

Q201 Willie Rennie: I can understand what you are saying. There were two factors that people find difficult to understand, that the redundancy payments would be covered by the MoD and be significant, but also that the future Carrier work was coming this close down the track that actually to fill that gap in the short term might benefit the MoD in the longer term. That is what people find difficult to understand.

Sir Peter Spencer: I can understand why it looks completely perverse. All I can say is that if we could have managed to do it any other way, we would have done, but we do have to live within our means.

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Q202 Robert Key: I just wanted to cheer Sir Peter up by reminding him that exactly 100 years ago a British shipyard delivered to the Royal Navy the largest military naval ship in the world ever built and it took three months to build.

Sir Peter Spencer: Was it on budget?

Q203 Robert Key: I do not think they minded about budgets in those days, Sir Peter!

Sir Peter Spencer: There is the difference!

Chairman: We will write to you about the issue of what the prognosis of the French involvement in the programme is, if we may, and we move on to the Joint Strike Fighter.

Q204 Mr Borrow: Earlier this year we went to the United States as a committee and discussed with people on the Hill and also the US Administration the technology transfer for the JSF. We came back rather more optimistic than we went and I think on 11 July the Secretary of State gave evidence and was optimistic at that stage that agreement would be reached before the end of the year on the sort of technology transfer that would be necessary to sign the contracts later on this year. I must say that in the three months since then a lot of the mood music has changed and it has become much more pessimistic. Is that mood music, which I think most members of the Committee picked up, wrong? If it is not wrong and things are not looking very good in terms of reaching a satisfactory solution, is the UK Government prepared to say to the US Administration, "We aren't prepared to go ahead with Joint Strike Fighter"? If that is the case, presumably we have got a plan B and what is plan B?

Sir Peter Spencer: There are a lot of questions there. Can I start by saying how much the Ministry of Defence valued the engagement of the Committee with their counterparts in the United States. I think the fact that they operating together as UK plc is hugely helpful here because it sends an unmistakable message.

Q205 Chairman: Well, we would like to be able to do that again on the basis of as much information as the Ministry of Defence can possibly give us on all sorts of issues.

Sir Peter Spencer: I am not sure where your mood music is coming from or whether or not it is just filling in because not much has been heard, but if it would be helpful, I can tell you what has been happening. We made it clear to the Americans that we were going to go through the operational sovereignty principle in considerable detail and test it with a number of examples to demonstrate the extent to which operational sovereignty was understood in the United States and was going to be available. That is important because the point at which the Memo of Understanding for Production and Sustainment of Future Development is due to be signed, which is by the end of this calendar year, is well in advance of when those undertakings by the United States will be delivered. So there has to be not only huge attention paid to the detail so that we do understand precisely what was meant, but we also

need to understand how the delivery of those undertakings is going to be managed and honoured. As you know, part of the challenge is that the United States is not an homogenous country in the sense that when we deal with it in Defence, a great deal of work gets done not only with the DoD, but also with the State Department. The way the American Constitution works means of course that the State Department has to observe a whole lot of different requirements, including procurement law, which does not necessarily melt away simply because it is inconvenient when we come through and say, "By the way, here's what we understand you are now prepared to do on the basis of the undertakings agreed at Head of State level between the President and the Prime Minister". Therefore, in order to ensure that we have the best chance of getting this right, I had a series of meetings following the detailed work by the teams with Ken Krieg, who is my nearest equivalent in the United States system, to agree a statement of principles which described some of the detail and set out the degree of proof that we will be looking for at the end of this year and the fact that it was a non-trivial discussion meant that we had correctly anticipated that this was not just going to be an easy thing to achieve. This is very clear to Lord Drayson who, in addition to the close attention to detail that I am paying, is himself making an independent check in considerable detail of some of these technical issues and there is a large matrix based on the original exchange of letters which defines in considerable detail which bits of technology we are talking about and what it is that we would need to have in order to deliver the UK requirements. A huge amount of progress has been made, but until we have got to the end of it, we simply will not know and we are about to enter a series of quite intense meetings with the Americans. I see Krieg next week and the week after and may well fly out to Washington in order to conclude the discussions at my level and I have no doubt that at some stage the Minister will wish to take a view and decide to what extent he will wish to intervene again, so that is where it is. I do not think anything could be described as a foregone conclusion here. There is at the level of the DoD that I deal with a very clear recognition and willingness to help with this problem and a great deal of work done to facilitate agreement across the rest of the American Administration, including and especially with the State Department, but when it comes down to it, some of these are actually quite tough issues. We also have to draw a clear distinction between a government-to-government agreement and industry-to-industry agreements. One thing which was a great help during the Farnborough week was the fact that Lockheed Martin and BAE Systems signed up for the next stage of partnering in this programme because the partnership up until that point had just been for the so-called 'SDD phase', the design phase. They have now got in place a clear arrangement which identifies that BAES will be the lead in delivering sustainability and support to the Royal Air Force and the Royal Navy in operating

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these fast jets and identifies the role that Lockheed Martin will play in supporting them to get access to the information that BAES will need to do that.

Q206 Mr Borrow: There were some comments in *Aviation Weekly* a few weeks ago that the American Congress were considering delaying the production phase for their aircraft and that that would possibly lead to an increase in cost of 25–35%. Would you like to comment on that?

Sir Peter Spencer: Well, subsequently we have had confirmation that there will be a change in the front end of the programme. If I have got this wrong from memory, I will correct it after the event, if I may, but the number of aircraft in the initial low rate of initial production has been reduced and there has been an approach which defers some of that production activity because of concerns about the risk of concurrency i.e. the overlap between design and production. The impact of reducing the numbers in a low rate of initial production quantity inevitably is going to be felt in terms of the cost of the aircraft. For the total programme that the UK is going to buy into, the majority of our aircraft will come when they are in full production anyway, so the actual price of those aircraft we can only sort of continue to estimate at this stage and it will ultimately depend upon how many the Americans decide to buy and the rate at which they decide to buy them. But we are vulnerable for the early orders if the low rate of initial production quantities change to the extent as to make significant changes. We simply do not have the information to call on that, but it is an area of concern which we are watching very closely.

Q207 Mr Borrow: And plan B?

Sir Peter Spencer: There is a plan B. Ministers, if the time comes, will explain what plan B is.

Q208 Chairman: Has the time not come now because is it not quite important for a plan B to be public, at least in the minds of the Americans?

Sir Peter Spencer: I would much rather continue the discussion in camera if you really want to go down this road, or give you a written answer.⁷

Chairman: That is fair enough, I think. I think I would not wish to press that at this stage unless the Committee disagrees with me. Would you agree?

Mr Crausby: I agree.

Q209 Chairman: I will not press that at this stage. Sir Peter, you said there has been agreement “at my level”, or at least at your level. Is not the problem that while there is agreement between prime ministers and between ministers and at your level, it is very difficult indeed driving that agreement down to the lower levels of the American administration and industry?

Sir Peter Spencer: Yes, it is. That is the nub of the problem. Partly because as you go further down the organisations, you are dealing with much more detail and, therefore, the tests have to be described much more precisely and properly understood. It is

clearly easier to agree in principle that on the basis on which we operate together with the Americans on military operations that they would want to regard us no differently than they regard any one of their own armed forces, but there are legal requirements on the State Department which State Department officials simply cannot ignore so we have to take each of these items through one by one and that takes a lot of careful and detailed work and explanation. It also puts the onus on us to be precise about explaining the need to know. It does not help if we try and short circuit it and give a more general question and say, “tell us what you know about this subject” It is not going to be possible for us to get a response on that basis. We have had to do a lot of detailed thinking ourselves and both parties have to work constructively together on this, and they are.

Q210 Chairman: Is one of those constraints that United States personnel are not allowed by United States law to reveal to a foreign company the way that secret information works?

Sir Peter Spencer: Part of it is the United States law in terms of technology transfer and there are processes through Technology Access Agreements, so-called TAAs, that form part of how that technology is made available. For example, BAES is a subcontractor of Lockheed Martin, Lockheed Martin then approaches as the prime contractor the DoD and the State Department and says in order for BAES to do this particular bit of design they will need access to this bit of information and then goes through the State Department process and a decision is taken. I have to say, up until now everything that has been asked for has been made available. The difficulty is it is such a demanding process that everything gets slowed down and we are trying to get into a different relationship ideally where the United Kingdom is dealt with no differently, and United Kingdom companies, so long as the right arrangements are in place, from American companies. What we are getting is a combination of the two at the moment. It is recognition of the standing the United Kingdom has as a nation because of what it does together with the United States in military terms reflected back into an easing of the technology access arrangements and the big principle is agreed. As you know, it is now getting that through the system which is why we put together the statement of principles because it was a means of the United States DoD communicating with the rest of its own organisation and the State Department saying what these principles were and what was now expected as we started to take forward each of the individual components of the technology which is needed.

Q211 Chairman: But a government-to-government arrangement such as the one you are talking about does not take into account that it will not be ministers who are fixing new British, say, weapons on to the Joint Strike Fighter in the future. You need to have British industry involvement for that process, do you not?

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Sir Peter Spencer: Yes, we do, and the intention is to ensure that British industry is involved. The question will be over time how the technical knowledge is made available so that British industry is involved to best effect. To put this into context, British industry is already hugely involved in the total programme and a large number of companies have won valuable business in competition here. What we are focused on from a government perspective is not just the volume of that business but to ensure at the highest level that we retain operational sovereignty on our ability to operate, maintain and upgrade these aircrafts through life.

Chairman: Okay. Any more questions on the Joint Strike Fighter? We will move on to spectrum charging.

Q212 Robert Key: Thank you, Chairman. Can I just say that I think you are having a tremendously good effect, Sir Peter, on that point about joint working and certainly it has been a major concern in the QinetiQ workforce in Boscombe Down that whatever may be agreed at ministerial level, when it comes to technicians trying to get into the gates of American yards and factories they have been challenged and stopped, but it is getting better. The National Audit Office produces its Major Project Review once a year, quite rightly focusing on big projects over £200 million, but there are some of the many smaller projects which concern me, and one of them is radio spectrum charging. As I understand it, until 1998 the Ministry of Defence did not pay for spectrum at all. They are the biggest users of spectrum at about 30% of the total and since 1998 under the Wireless Telegraphy Act they have had to pay a charge. Professor Cave's study in 2002 suggested that what is currently, I think, this year a charge the Ministry of Defence pays to the DTI of around £56 million will almost double over the next five years. There are two consequences that I am concerned about. The first is that as the communications budget has to bear this charge communications will be squeezed to the point where redundancies in whole systems will be made, perhaps even, it has been suggested, weapons systems will have to be scrapped early as economy measures in order to hold the line of the Ministry of Defence budget. I would hope Sir Peter could reassure the Committee that spectrum charging is not going to have an adverse impact on the communications budget in particular but also a knock-on effect on to other procurement budgets of a smaller nature. My second problem is that we know Australia and the United Kingdom of the Western Allies are the only governments where the defence ministries are charged for spectrum and among the United States and other members of the Combined Communications Electronics Board, that is Australia, Canada, New Zealand, the UK and the United States, there is grave concern that there could be an operational impact here, spectrum charging could lead to less combined training between forces which would naturally expect to operate together in time of tension or, indeed, war. I would like to be reassured that there will not be an impact on

international relations or training caused by a squeezing of the defence budget by this innovation of spectrum charging which is still quite a lot of money each year.

Sir Peter Spencer: I had never heard of spectrum charging until quite recently because, as you say, it tends to be something which is of relatively low value and people manage that and as long as it is being managed we are okay. I can assure you that it has my full attention at the moment because in the Defence Management Board Review of our budgetary position over the next few years increases in spectrum charging were identified and flagged up. I think in the way in which they were flagged up, I hope it will reassure you, there is no intention that I am aware of to force the communications budget to swallow its own smoke. It is being looked at as a defence-wide issue which will need to be managed. The pros and cons of spectrum charging are really an inter-governmental department issue and something for ministers ultimately to deal with. At the moment what we are doing is to ensure that we get our house in order. There is a Spectrum Acquisition Authority which was set up a few years ago in order to get more coherence in the way in which individual projects went about stating their uses for the spectrum. In some cases we have got profligate use of the spectrum because if you have got proper co-ordinated, planned use of the spectrum you can (a) avoid going for the same bit or (b) make sure that the way in which you go for different bits does not make what is left in the middle too little to be used for anybody else, so you make better use of what you have actually got. We do not pay for spectrum on overseas operations, of course, so this is something which happens only internally. I asked the question just now but I am not sure only because my new MA happens to have a background in this area so we are playing to one of his strengths, but even this expert cannot give me an answer with sufficient confidence to give the Committee that this will not mean charging overseas operations. I very much doubt it, but for the sake of thoroughness I will go away and confirm one way or the other.⁸ I think the 50 million extra per year for spectrum charging, or whatever it turns out to be, is one of many pressures on the budget so it would be irresponsible just to shrug it off and say, "we will mop that up", it is another burden that we will have to cope with one way or another. Much of this, of course, will go into the discussion which the Ministry of Defence has with the Treasury on the Comprehensive Spending Review.

Q213 Robert Key: Could I just ask where the Spectrum Acquisition Authority sits in the Ministry of Defence structure?

Sir Peter Spencer: It sits in London. It is chaired by Air Vice-Marshal Stu Butler, who is one of the members of the Joint Capability Board working for General Figgures. He began this work as an Air Commodore and because he is now the Capability

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Manager for Information Systems, and because we realise it needs to be run at that level, he has retained the continuity, which I think is quite a help.

Q214 Robert Key: The Government responded to the Cave report in March of this year and they produced a response and action plan which I happened to read on the internet yesterday having done a Google search on it. I noticed that in paragraph 5.3 it says that the Ministry of Defence will provide the spectrum requirement to the Treasury by the end of 2006 in order to inform the Comprehensive Spending Review, as you have just said. This is going to put a new pressure on the Ministry of Defence, just one, no doubt, of many, but I hope that you, Sir Peter, and your colleagues will be robust with the Treasury pointing out the practical and possible operational consequences of squeezing the budget in terms of spectrum charging.

Sir Peter Spencer: We will make sure that the arguments are properly laid out and well understood.

Q215 Mr Holloway: Chatting to some of the tanker crews at Brize Norton we came on to the subject of PFIs and some absolutely eye-watering mathematics on the cost of that equipment across the whole of the contract as opposed to a one-off purchase. What do you think, if any, are the dangers of PFIs in terms of the flexibility of your successors in decades to come to get the equipment they need at a particular point?

Sir Peter Spencer: I think if the concern is that we lock up too much of the budget too far into the future then we structure the contract with the

appropriate exit points. We also have to structure the contract in such a way as to cope with anything which is very fundamental, like a complete change in the way in which the United Kingdom is going to do defence hypothetically in 10 years' time. The technical challenge in that is to ensure that those very necessary contractual arrangements are not done in such a way as you take back on to the Ministry of Defence as the customer the demand risk of the project, because if you do then in terms of balance sheet treatment you effectively carry it on the balance sheet and you are then faced with a major practical issue as to the ability of the balance sheet to absorb so much of the capital hit all at once. I am pretty optimistic about how far we have come on negotiating this very difficult, very complex contract. I think the reason why the numbers are eye-watering is for the simple reason that we do not make it clear enough to all of our people what the real cost of equipment is. Some of these equipments will cost four and five times as much to run through life as they do to buy. It is the same calculation we fail to do when we have children. They are wonderful and lovely in their first two years but you have no idea what is going to hit you when they go to school, go to college, get married and have children. All of defence needs to be better educated, not only so we are realistic in terms of what the alternatives might be but also to ensure that we all of us think through life *ab initio*. It is terribly easy to say. It is quite hard to do.

Chairman: Sir Peter, I think that is it. Thank you very much indeed for a marathon session in which you have been extremely helpful, candid and passionate. Thank you.

Written evidence

Memorandum from the Ministry of Defence

DEFINITIONS OF CATEGORIES FOR DEFENCE EQUIPMENT PROJECTS

The level of the Approving Authority which will consider a Defence equipment project including Technology Demonstration Plans, is mainly determined by the project's total (UK) expected procurement cost (ie the cost of the Concept, Assessment, Demonstration and Manufacture phases), expressed at outturn prices (including all non-recoverable VAT) at 90% confidence.

The Total Cost Of Ownership, the risks associated with a project, any novel or contentious features or significant policy issues will also be taken into account, in deciding the level of the Approving Authority.

<i>Category</i>	<i>Procurement Cost</i>	<i>Approving Authority</i>
A	Above £400 million	Investment Approvals Board, MoD Ministers and HM Treasury
B	£100 million to £400 million	Two star Approving Authorities
C	£20 million to £100 million	One star Approving Authorities

There is a further Category (Cat D) for projects with a procurement cost of under £20 million.

Is there a MOD definition of Medium sized equipment projects?

The Ministry of Defence does not use the term “medium” to define a project.

It should be noted that the Committee Audit Adviser asked in his initial request for information on category B projects. Some of these are “Major Project Report (MPR)” projects as the MPR looks at the top 20 defence equipment projects in terms of value each year, rather than just projects within Category A. He subsequently asked for information on equipment projects valued between £50 million and £100 million. Neither Category B or projects within these values are classified using the phrase “medium” within the MoD.

June 2006

Second memorandum from the Ministry of Defence

POST MAIN GATE PROJECT SUMMARY SHEET

General Service Respirator (GSR)

Integrated Project Team Responsible: Chemical, Biological, Radiological and Nuclear (CBRN)

Single Point of Accountability for project capability: Director Equipment Capability (CBRN)

Senior Responsible Owner for broader capability: Capability Manager (Battlespace Manoeuvre)

SECTION I: ABOUT THE PROJECT

1a *Project description, progress and key future events*

GSR will replace the in-service, personal issue, S10 respirator, providing more appropriate levels of protection, equipment compatibility and reduced user burden. GSR is currently within the Demonstration Phase, contracted with Scott Health and Safety Ltd, having been selected by competition. The In-Service Date (ISD) is currently forecast for October 2006.

A quantity of 500 pre-production GSRs have been manufactured for the User Trials. User Trials are now nearing completion—covering Common User Tasks, Special to Arms aspects and extreme climatic conditions. A “hot weather” trial has been scheduled for mid-April 2006 in Australia to confirm the GSR design against specific climatic categories. This trial is being scrutinised by the MoD Ethics Committee to safeguard the interests of the volunteers involved with the trial. The Design Acceptance meeting is set for 3 May 2006 to allow production to commence.

1b *Associated projects*

<i>Critical to Achievement of ISD</i>		<i>Critical to Initial Gate Requirement</i>	
<i>Project Title</i>	<i>Forecast ISD</i>	<i>Project Title</i>	<i>Forecast ISD</i>
—	—	—	—

1c *Procurement strategy*

<i>Contractor(s)</i>	<i>Contract Scope</i>	<i>Contract Type</i>	<i>Procurement Route</i>
Scott Health & Safety Ltd	Demonstration and Manufacture	Firm price to October 2007, then fixed price subject to Variation of Price	UK competition

SECTION 2: PROJECT COSTS

2a *Performance against approved cost*

<i>£ millions (outturn prices)</i>	<i>Procurement Cost</i>
Current forecast cost	52
Approved cost at Main Gate	65
Variation	-13
In-year changes	

2b *Reasons for variation from approved cost*

<i>Date</i>	<i>Variation (£m)</i>	<i>Factor</i>	<i>Explanation</i>
5 October 2005	3	Technical factors	Advanced Respirator Test System (ARTS) solution reworked following unforeseen technical problems. Additional costs associated with special users respirator.
10 June 2005	-14	Procurement strategy	Hybrid twin design now on contract, ARTS solution identified and risk reduced.
Historic	-2	Risk differential	Difference between the risk allowed for in the most likely (50%) and the highest acceptable (90%) estimates at Main Gate.
Net Variation	-13		

2c *Expenditure to date*

Expenditure to (£m)	7
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2d *Years of peak procurement expenditure*

2007-08	2008-09
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2e *Unit production cost*

<i>Unit Production Cost (£m)</i>		<i>Quantities Required</i>	
<i>at Main Gate</i>	<i>Current</i>	<i>at Main Gate</i>	<i>Current</i>
0.0001	0.0001	309,228	309,228

SECTION 3: PROJECT TIMESCALE

3a *Definition of in-service date*

ISD Definition: Achievement of Initial Operating Capability (IOC) defined as the provision of sufficient GSR to support an operational deployment of 26,215 personnel, fully supported (ie logistic support requirements achieved), with mature Lines of Development.

3b *Performance against approved in-service date*

	<i>Date</i>
Current forecast ISD	October 2006
Approved ISD at Main Gate	December 2006
Variation (months)	- 2
In-year changes	0

3c *Reasons for variation from approved ISD*

<i>Date</i>	<i>Variation (months)</i>	<i>Factor</i>	<i>Explanation</i>
Historic	- 2	Risk differential	Difference between the risk allowed for in the most likely (50%) and the highest acceptable (90%) estimates at Main Gate.
Net variation	- 2		

3d *Cost resulting from ISD variation*

<i>Type of Cost/Saving</i>	<i>Cost £m</i>	<i>Saving £m</i>	<i>Explanation</i>
—	—	—	—

3e *Operational impact of ISD variation*

- No operational impact as current capability will continue until replaced.

SECTION 4: KEY USER REQUIREMENTS

4a *Performance against approved key user requirements*

<i>KUR Name</i>	<i>Key requirement</i>	<i>Forecast to be met</i>	<i>At risk</i>	<i>Not to be met</i>
KUR 1	The User shall be afforded respiratory and facial protection against airborne and deposited Chemical Biological and Radiological hazards.	Yes		
KUR 2	The User shall be afforded respiratory and facial protection that is integrated with the full range of current and planned operational clothing and personal issue equipment.	Yes		
KUR 3	The User shall be afforded respiratory and facial protection that can be donned correctly without external support within nine seconds.	Yes		
KUR 4	The User shall be afforded respiratory and facial protection that enables continuation and timely completion of the operational mission before, during and following CBRN contamination.	Yes		
KUR 5	The User shall be afforded respiratory and facial protection that can be decontaminated whilst continuing the operational mission.	Yes		
KUR 6	The User shall be afforded respiratory and facial protection that allows replacement of any consumable component within a CBRN environment without assistance.	Yes		
KUR 7	The User shall be afforded respiratory and facial protection that will maintain the specified Protection Factor (PF) over a period of 14 Battlefield Missions (BFMs). A BFM comprises up to 48 hours continuous use followed by not longer than a period of one hour during which respiratory and facial protection shall not be worn.	Yes		

<i>KUR Name</i>	<i>Key requirement</i>	<i>Forecast to be met</i>	<i>At risk</i>	<i>Not to be met</i>
Percentage currently forecast to be met			100%	
In-year change			0	

4b *Reasons for variation against approved key requirements*

<i>Date</i>	<i>Key Requirement</i>	<i>Factor</i>	<i>Explanation</i>
—	—	—	—

SECTION 5: HISTORY UP TO MAIN GATE APPROVAL

5a *Description of the Assessment Phase*

The GSR project was initiated within the Defence Procurement Agency (DPA) following a successful Technology Demonstration Programme (TDP) conducted by DSTL. The TDP demonstrated the integration of advanced technologies to a stage that proved the design concept for enhanced respiratory protection. The Initial Gate Business Case was approved on 24 July 2002. Competitive procurement then ensued through two contracts awarded to Scott Health and Safety Ltd (Skelmersdale) and Avon Technical Products Ltd (Melksham). These contractors were required to further develop these concept technologies, using their skills and expertise, and provide Proof of Principle Prototype respirators that provided the required performance. The technical performance of these prototypes were independently assessed and validated against the User Requirements Document (URD). The evaluation demonstrated that both Contractors had viable solutions that would be compliant against all Key User Requirements (KURs) and the majority of Priority 1, 2 and 3 Individual User Requirements (IURs). However, Scott Health and Safety Ltd were selected as the preferred Contractor on the basis of the Value for Money that their tender offered. The Main Gate Business Case was approved in October 2004.

5b *Cost of the Assessment Phase*

<i>£m (outturn prices)</i>	<i>Assessment phase cost</i>	<i>Proportion of total estimated procurement expenditure</i>
Actual cost	6	8%
Approved cost at Initial Gate	7	10%
Variation	-1	

5c *Duration of Assessment Phase*

Date of Main Gate approval	October 2004
Target date for Main Gate approval at Initial Gate	September 2004
Variation (months)	+1

5d *Cost boundaries at Initial Gate and Main Gate Approvals*

<i>£m (outturn prices)</i>	<i>Lowest</i>	<i>Budgeted For</i>	<i>Highest</i>
Cost of Demonstration and Manufacture Phase forecast at Main Gate	61	63	65
Cost of Demonstration and Manufacture Phase forecast at Initial Gate	n/a	53	61

5e *ISD boundaries at Initial Gate and Main Gate Approvals*

	<i>Earliest</i>	<i>Budgeted For</i>	<i>Latest Acceptable</i>
Forecast ISD at Main Gate	August 2006	October 2006	December 2006
Forecast ISD at Initial Gate	n/a	December 2005	May 2006

Third memorandum from the Ministry of Defence

POST MAIN GATE PROJECT SUMMARY SHEET

ASuW Littoral Defensive Anti Surface Warfare

Integrated Project Team Responsible: Maritime Gunnery and Missile Systems IPT (MGMS IPT)

Single Point of Accountability for project capability: DEC (AWE)—Above Water Effect

SECTION 1: ABOUT THE PROJECT

1a Project description, progress and key future events

The change of emphasis from “Blue Water” sea control operations to power projection demanded by Joint Vision (JV) and the Future Maritime—Operational Concept (FMOC) dictates that future operations will be conducted within complex littoral environments. In addition to the threat posed by traditional weapon systems, the emerging and proliferating Fast Attack Craft/Fast Inshore Attack Craft threat will be faced. The traditional methods of conducting Surface Warfare and current equipment are not well suited to countering this threat and as such a capability gap has been identified and endorsed.

The Defensive Anti Surface Warfare (ASuW) strategy seeks to address this gap by providing a “Close in” Defensive Capability to counter the Fast Attack Craft/Fast Inshore Attack Craft threat. Following further investigation in the Assessment Phase, an open competition was conducted to satisfy the requirement for the T23 Frigate (an automated small calibre gun (ASCG)) and a single source procurement was investigated to satisfy the requirement for the T42 Destroyer and priority Royal Fleet Auxiliary ships (an upgrade of the Phalanx 1A Close In Weapons System to the 1B standard).

Following Business Case submission through the Investment Approvals Board contracts were let with MSI Defence Systems Limited for the ASCG and with Dockyard Management Limited in Devonport, subcontracting to Raytheon Missile Systems in the USA, for the Phalanx 1B upgrade. The programme, which is CAT C, remains within its approvals for Performance, Cost and Time. Future key events consist of:

- ASCG Initial Operating Capability July 2007; and
- Phalanx 1B and ASCG In Service date July 2008.

1b Associated projects

<i>Critical to Achievement of ISD</i>		<i>Critical to Initial Gate Requirement</i>	
<i>Project Title</i>	<i>Forecast ISD</i>	<i>Project Title</i>	<i>Forecast ISD</i>
—	—	—	—

1c Procurement strategy

<i>Contractor(s)</i>	<i>Contract Scope</i>	<i>Contract Type</i>	<i>Procurement Route</i>
MSI Defence Systems Limited for automated Small Calibre Gun	Demonstration to In-Service	Firm price	UK competition
Devonport Dockyard Management Limited for Phalanx 1B	Demonstration to In-Service	Firm price	Non-competitive with international sub-contract elements (Raytheon)

SECTION 2: PROJECT COSTS

2a Performance against approved cost

<i>£ millions (outturn prices)</i>	<i>Procurement Cost</i>
Current Forecast Cost	63
Approved Cost at Main Gate	66
Variation	– 3
In-year changes	

2b *Reasons for variation from approved cost*

<i>Date</i>	<i>Variation (£m)</i>	<i>Factor</i>	<i>Explanation</i>
1 September 2005	- 3	Risk Differential	Difference between the risk allowed for in the most likely (50%) and the approved figures at Main Gate.
Net Variation	- 3		

2c *Expenditure to date*

Expenditure to (£m)	5
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2d *Years of peak procurement expenditure*

2e *Unit production cost*

<i>Unit Production Cost (£m)</i>		<i>Quantities Required</i>	
<i>at Main Gate</i>	<i>Current</i>	<i>at Main Gate</i>	<i>Current</i>
Phalanx IB £2.58m	£2.32m	16	16
ASCG £0.70m	£0.67m	26	26

SECTION 3: PROJECT TIMESCALE

3a *Definition of in-service date*

ISD Definition: The ISD is defined as when one of each selected solution is available to be deployed on RN platforms for operations.

3b *Performance against approved in-service date*

	<i>Date</i>
Current forecast ISD	July 2008
Approved ISD at Main Gate	November 2008
Variation (months)	- 4
In-year changes	- 4

3c *Reasons for variation from approved ISD*

<i>Date</i>	<i>Variation (months)</i>	<i>Factor</i>	<i>Explanation</i>
6 March 2006	2	Change in associated project	Limited fitting opportunities for the integration of the Phalanx 1B upgrade to the T42 destroyers.
1 September 2005	- 6	Risk Differential	Difference between the risk allowed for in the most likely (50%) and the approved figures at Main Gate.
Net Variation	- 4		

3d *Cost resulting from ISD variation*

<i>Type of Cost/Saving</i>	<i>Cost £m</i>	<i>Saving £m</i>	<i>Explanation</i>
n/a	nil	nil	No change to procurement

3e *Operational impact of ISD variation*

SECTION 4: KEY USER REQUIREMENTS

4a *Performance against approved key user requirements*

<i>KUR Name</i>	<i>Key Requirement</i>	<i>Forecast to be met</i>	<i>At Risk</i>	<i>Not to be met</i>
KUR 1	Mission Denial The User shall be able to achieve mission denial against individual or multiple elements of the Fast Attack Craft/Fast Inshore Attack Craft Target Set.	Yes		
KUR 2	Reload/Recharge The system shall be capable of two engagement sequences without the requirement for reload/recharge.	Yes		
KUR 3	Manual Engagement The User shall be able to operate the system under manually initiated engagements conditions.	Yes		
KUR 4	Training The User shall be able to use the system in a training mode.	Yes		
KUR 5	Platform constraints The proposed system shall be accommodated within the existing platform constraints.	Yes		
KUR 6	Availability The User shall be able to operate the system such that it performs the required function under the agreed conditions for the stated mission period with an Operational Availability of 90%.	Yes		
KUR 7	Operational Effectiveness The User shall be able to maintain operational effectiveness whilst minimising effect on the operational effectiveness of other systems.	Yes		
KUR 8	Compliance The user shall be able to comply with relevant safety requirements, international laws and conventions.	Yes		
KUR 9	Environmental The user shall maintain operational effectiveness in the following climatic categories and weather conditions. Maritime Categories: M1—Marine Hot M2—Marine Intermediate M3—Marine Cold Wind: mean true wind speed of 70 km/hour Sea state: up to sea state 6 Related Categories: A1—Extreme Hot Dry B3—Humid Hot Coastal Desert General weather: Rainfall: up to 4 mm/hour Electromagnetic: operational in all natural EM environments Operational under light and dark conditions and cloud cover, up to 8 octas (mist and fog conditions)	Yes		
Percentage currently forecast to be met			100%	
In-year change			0	

4b *Reasons for variation against approved key requirements*

<i>Date</i>	<i>Key Requirement</i>	<i>Factor</i>	<i>Explanation</i>
n/a			

SECTION 5: HISTORY UP TO MAIN GATE APPROVAL

5a *Description of the Assessment Phase*

A Concept of Operational Effectiveness and Investment Appraisal (COEIA) was utilised to determine the preferred mix of system types to be taken forward to the Demonstration and Manufacture Phases. The COEIA highlighted that given that more than one platform type, each with differing constraints, was being addressed by this project, a single equipment and procurement strategy was unlikely to satisfy the capability gap. Therefore the procurement strategy consisted of two elements:

- A single source open book procurement to satisfy the T42 destroyer/RFA requirement. Contract discussions took place with DML for the upgrade of the existing Phalanx Block 1A to 1B configuration to satisfy the requirements of the SRD. The T42's were assessed with respect to their suitability for this Military Off the Shelf (MOTS) solution, which is an enhancement to the Phalanx systems already in service with the Royal Navy.
- An open competition to satisfy the T23 frigate requirement. Following a Pre Qualification Questionnaire and initial down selection, a competitive Invitation to Tender was issued for the ASCG to satisfy the T23 requirement, with Industry invited to propose detailed solutions against a System Requirement Document (SRD). The open competition tender evaluation took the form of both a quantitative and qualitative assessment of the proposals, using lessons learnt from a previous technology demonstrator programme.

Support Strategies were scrutinised and assessed against the guiding principles of the Support Solutions Envelope (SSE), and Whole Life Costs for each of the possible solutions were compiled.

A Training Needs Analysis (TNA) was completed to inform the preferred technical solution. The Maritime Training Systems IPT was fully involved in the process ensuring a holistic and coherent approach to individual and team training taking full cognisance of training policy initiatives and in particular, the Maritime Composite Training System programme.

5b *Cost of the Assessment Phase*

<i>£m (outturn prices)</i>	<i>Assessment Phase cost</i>	<i>Proportion of total estimated procurement expenditure</i>
Actual cost	0.281	0.45%
Approved cost at Initial Gate	0.320	0.51%
Variation	-0.039	-0.06%

5c *Duration of Assessment Phase*

Date of Main Gate approval	September 2005
Target date for Main Gate approval at Initial Gate	April 2005
Variation (months)	+ 5

5d *Cost boundaries at Initial Gate and Main Gate Approvals*

<i>£m (outturn prices)</i>	<i>Budgeted</i>		
	<i>Lowest</i>	<i>For</i>	<i>Highest</i>
Cost of Demonstration and Manufacture Phase forecast at Main Gate	60	63	68
Cost of Demonstration and Manufacture Phase forecast at Initial Gate	64	68	80

5e *ISD boundaries at Initial Gate and Main Gate Approvals*

	<i>Earliest</i>	<i>Budgeted For</i>	<i>Latest Acceptable</i>
Forecast ISD at Main Gate	November 2007	May 2008	November 2008
Forecast ISD at Initial Gate	June 2006	December 2006	July 2007

Fourth memorandum from the Ministry of Defence

POST MAIN GATE PROJECT SUMMARY SHEET

Maritime Composite Training System Phase 1

Integrated Project Team Responsible: Maritime Training Systems (MTS)

Single Point of Accountability for project capability: Director Equipment Capability (AWE)—Above Water Effects

Senior Responsible Owner for broader capability:

SECTION 1: ABOUT THE PROJECT

1a *Project description, progress and key future events*

The Maritime Composite Training System (MCTS) is an incremental programme enabling a coherent approach to future warfare operator training. Phase 1 delivers the shore training capability and provides a central warfare hub to facilitate training through a common synthetic environment. The closure of the Maritime Warfare School (MWS) Southwick Park site (formerly within HMS DRYAD) and the planned transfer of all surface flotilla warfare training to the MWS at HMS COLLINGWOOD has provided an opportunity to combine coherency with innovation in the provision of training facilities for new and legacy platforms.

The procurement strategy was open competition for a Prime contract which was awarded to BAE Systems Insyte. Flagship Training Limited was a nominated sub-contractor due to their existing partnering arrangement with the Naval Training and Recruitment Agency (NRTA).

At 31 March 2006 the project is 3½ months into a 43 month contract for Demonstration and Manufacture (noting that the initial In-Service phase is also under the same contract). The key future milestones are the:

- Critical Design Review (CDR), current forecast for January 2007;
- Ready For Training Date (RFTD) current forecast for July 2008;
- Initial Operating Capability (IOC) current forecast for July 2009; and
- Full Operating Capability (FOC) current forecast for October 2010.

A key strength of MCTS is it brings together a number of projects¹ that have Maritime training requirements into a single coherent programme which has enabled requirement synergy to be exploited and capability to be met in a more cost effective manner.

Initial work required in support of Earned Value Management (EVM), a key element of project monitoring and control, identified issues regarding the extent of risk within the programme plan. The IPT is in close dialogue with the BAE Management Team to understand the potential impact to the overall programme and the most appropriate action should it be required.

1b *Associated projects*

<i>Critical to Achievement of ISD</i>		<i>Critical to Initial Gate Requirement</i>	
<i>Project Title</i>	<i>Forecast ISD</i>	<i>Project Title</i>	<i>Forecast ISD</i>
—	—	—	—

1c *Procurement strategy*

<i>Contractor(s)</i>	<i>Contract Scope</i>	<i>Contract Type</i>	<i>Procurement Route</i>
BAE Systems Insyte Broadoak	Demonstration to Manufacture	Firm price	International competition

¹ Sonar 2087 (the new Anti Submarine Sonar for Type 23 Frigates), WARSPITE (the move from MWS Southwick Park to HMS Collingwood), Type (the new Anti Air Warfare Destroyer), UAT Capability Upgrade (Electronic Surveillance Measure system), Sea Wolf Mid Life Upgrade and Link 16 (Radio Tactical Data Link system).

SECTION 2: PROJECT COSTS

2a Performance against approved cost

<i>£ millions (outturn prices)</i>	<i>Procurement Cost</i>
Current forecast cost	77
Approved cost at Main Gate	79
Variation	-2
In-year changes	0

2b Reasons for variation from approved cost

<i>Date</i>	<i>Variation (£m)</i>	<i>Factor</i>	<i>Explanation</i>
1 August 2005	-2	Risk Differential	Difference between the risk allowed for in the most likely (50%) and highest acceptable estimates at Main Gate.
Net Variation	-2		

2c Expenditure to date

Expenditure to (£m)	11
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2d Years of peak procurement expenditure

2006-07	2007-08
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2e Unit production cost

Note: not applicable to MCTS as it is a single system.

<i>Unit Production Cost (£m)</i>		<i>Quantities Required</i>	
<i>at Main Gate</i>	<i>Current</i>	<i>at Main Gate</i>	<i>Current</i>
—	—	—	—

SECTION 3: PROJECT TIMESCALE

3a Definition of in-service date

ISD Definition: Initial Operating Capability—IOC will be declared by FLEET when all aspects of the throughput have been achieved for each role trained at the Individual Career, Warfare Team (Sub Team, Command Direction Team and Platform Warfare Team) and Continuation level.

3b Performance against approved in-service date

	<i>Date</i>
Current forecast ISD	July 2009
Approved ISD at Main Gate	July 2009
Variation (months)	0
In-year changes	+7

3c Reasons for variation from approved ISD

<i>Date</i>	<i>Variation (months)</i>	<i>Factor</i>	<i>Explanation</i>
16 December 2005	7	Contracting Process	Protracted negotiations and extended acceptance process.
1 August 2005	-7	Risk Differential	Difference between the risk allowed for in the most likely (50%) and the approved figures at Main Gate.
Net Variation	0		

3d *Cost resulting from ISD variation*

<i>Type of Cost/Saving</i>	<i>Cost £m</i>	<i>Saving £m</i>	<i>Explanation</i>
—	—	—	—

3e *Operational impact of ISD variation*

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SECTION 4: KEY USER REQUIREMENTS

4a *Performance against approved key user requirements*

<i>KUR Name</i>	<i>Key Requirement</i>	<i>Forecast to be met</i>	<i>At Risk</i>	<i>Not to be met</i>
KUR 1	The User requires MCTS to enable the Operational Capability (OC) of the surface Fleet to be maintained through the training of individuals at different levels and standards of professional experience and expertise.	Yes		
KUR 2	The User requires MCTS to enable the training of surface flotilla warfare operators of all ranks/rates to a level of individual competency defined by the relevant OPS.	Yes		
KUR 3	The User requires MCTS to enable an individual to be trained, both independently and within their platform teams, to maintain and improve upon the level of competency defined by the relevant OPS onboard their platforms.	Yes		
KUR 4	The User requires the throughput of personnel trained to be that required to sustain the requirement of NRTA's Warfare training plans.	Yes		
KUR 5	The User requires the training of individuals within their platform warfare teams to be that required to maintain Readiness.	Yes		
KUR 6	The User requires MCTS to output trained personnel to the front line within current training pipeline lengths as defined by the warfare TPAG.	Yes		
KUR 7	The User requires that MCTS shall be available to meet the training throughput profiles.	Yes		
KUR 8	The User requires MCTS to provide a suitably representative training context for delivery of the warfare operator training requirements.	Yes		
KUR 9	The User requires MCTS to support the management and control of warfare operator training.	Yes		
KUR 10	The User requires MCTS to support the brief and debrief of warfare operator training.	Yes		
KUR 11	The User requires MCTS to integrate with Initial (Phase 1) Training.	Yes		
KUR 12	The User requires MCTS to be fully interoperable with other platform warfare team, Joint and Combined training capabilities.	Yes		
Percentage currently forecast to be met			100%	
In-year change			0	

4b *Reasons for variation against approved key requirements*

<i>Date</i>	<i>Key Requirement</i>	<i>Factor</i>	<i>Explanation</i>
—	—	—	—

SECTION 5: HISTORY UP TO MAIN GATE APPROVAL

5a *Description of the Assessment Phase*

Initial Gate Approval was given 25 February 2004. The assessment phase for MCTS focussed on the expansion of the User Requirement Documentation (URD) and production of the System Requirement Documentation (SRD). The approach taken sought to achieve early engagement with Industry by inviting prospective Prime Contractors, for the Demonstration, Manufacture and In Service phases, to take part in a "Rainbow team" to work alongside the MoD Integrated Project Team and the Royal Navy Customer 1 and 2 community. Industry participation was formally invited through the contracts bulletin and was subject to Industry participating at their own cost; in return they would gain early insight and understanding of the requirement, be involved in shaping the programme and be invited to tender for the D, M & initial In Service Phase. Six companies agreed; Alenia Marconi Systems (AMS) (now BAE Systems Insyte), CAE, Electronic Data System (EDS), Lockheed Martin, Serco, and Thales.

The output from the assessment phase was an agreed SRD and a robust and well understood suite of commercial and project requirements to support the Invitation To Tender (ITT). The ITT was issued to the six companies late in 2004 and AMS and Lockheed Martin responded with tenders. BAE Insyte [formerly AMS] was announced as the preferred bidder and the contract was signed on the 16 December 2005.

5b *Cost of the Assessment Phase*

<i>£m (outturn prices)</i>	<i>Assessment Phase cost</i>	<i>Proportion of total estimated procurement expenditure</i>
Actual cost	1	1%
Approved cost at Initial Gate	4	5%
Variation	- 3	

5c *Duration of Assessment Phase*

Date of Main Gate Approval	August 2005
Target date for Main Gate approval at Initial Gate	December 2005
Variation (months)	- 4

5d *Cost boundaries at Initial Gate and Main Gate Approvals*

<i>£m (outturn prices)</i>	<i>Budgeted</i>		
	<i>Lowest</i>	<i>For</i>	<i>Highest</i>
Cost of Demonstration and Manufacture Phase forecast at Main Gate	73	77	79
Cost of Demonstration and Manufacture Phase forecast at Initial Gate	65	73	92

5e *ISD boundaries at Initial Gate and Main Gate Approvals*

	<i>Earliest</i>	<i>Budgeted For</i>	<i>Latest Acceptable</i>
Forecast ISD at Main Gate	September 2008	December 2008	July 2009
Forecast ISD at Initial Gate	—	December 2007	—

March 2006

Fifth memorandum from the Ministry of Defence

POST MAIN GATE PROJECT SUMMARY SHEET

TSS for SP HVM

Integrated Project Team Responsible: Joint Sensor Engagement Networks (JSENS).

Single Point of Accountability for project capability: Director Equipment Capability—Theatre Airspace.

SECTION 1: ABOUT THE PROJECT

1a *Project description, progress and key future events*

The Self Propelled High Velocity Missile system (SP HVM) provides close air defence (Force protection) for manoeuvre forces. Currently, the weapon system does not have the capability to operate at night, through cloud or in poor weather. Threat analysis concluded that this is the period when our forces are most vulnerable to attack. The Thermal Sighting System (TSS) will address this significant capability gap as well as improve the detection and recognition of targets in poor visibility. The sight is located on top of the vehicle giving 360° coverage and is fully integrated with the weapons system.

In February 2001 the TSS produced by Thales Air Defence Ltd (TADL)/Pilkington Optronics (now Thales Optronics) was selected to provide the SP HVM with a 24 hour capability to protect Zone 1 (Manoeuvre Forces) at night and in poor weather.

The Main Gate Business Case was approved and a contract placed with TADL in February 2001. A successful User Trial was conducted in October 2005 which included successfully firing eight missiles. A Logistics Demonstration is planned to be conducted in May 2006. The first production vehicle is scheduled for delivery in July 2006.

In 2005, the requirement was reduced from 135 to 84. Due to the advanced stage in manufacture, 135 are still being procured. Options are being investigated to make efficient use of the excess sights, including using the equipment in an alternative role or as spares.

1b *Associated projects*

<i>Critical to Achievement of ISD</i>		<i>Critical to Initial Gate Requirement</i>	
<i>Project Title</i>	<i>Forecast ISD</i>	<i>Project Title</i>	<i>Forecast ISD</i>
—	—	—	—

1c *Procurement strategy*

<i>Contractor(s)</i>	<i>Contract Scope</i>	<i>Contract Type</i>	<i>Procurement Route</i>
Thales Air Defence Ltd	Demonstration to In-Service	Firm price for Demonstration and Manufacture, maximum price for first five years support	Non-competitive

SECTION 2: PROJECT COSTS

2a *Performance against approved cost*

<i>£ millions (outturn prices)</i>	<i>Procurement Cost</i>
Current forecast cost	70
Approved cost at Main Gate	72
Variation	-2
In-year changes	-2

2b *Reasons for variation from approved cost*

<i>Date</i>	<i>Variation (£m)</i>	<i>Factor</i>	<i>Explanation</i>
March 2006	-2	Changed Requirement	Forecast reduction in In-Service Support expenditure.
Net Variation	-2		

2c *Expenditure to date*

Expenditure to (£m)	42
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2d *Years of peak procurement expenditure*

2005-06	2006-07
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2e *Unit production cost*

<i>Unit Production Cost (£m)</i>		<i>Quantities Required</i>	
<i>at Main Gate</i>	<i>Current</i>	<i>at Main Gate</i>	<i>Current</i>
0.3	0.3	135	84

SECTION 3: PROJECT TIMESCALE

3a *Definition of in-service date*

ISD Definition: One troop (SP HVM), trained, supported and equipped with TSS.

3b *Performance against approved in-service date*

	<i>Date</i>
Current forecast ISD	December 2006
Approved ISD at Main Gate	July 2006
Variation (months)	5
In-year changes	0

3c *Reasons for variation from approved ISD*

<i>Date</i>	<i>Variation (months)</i>	<i>Factor</i>	<i>Explanation</i>
Historic	9	Technical	Re-approval of ISD August 2004. Contractor experienced problems with the Integrated Thermal Detector Unit and the Processing Electronics Unit. Both issues now resolved.
Historic	-4	Risk Differential	Difference between the risk allowed for in the most likely (50%) and the approved figures at Main Gate.
Net Variation	+5		

3d *Cost resulting from ISD variation*

<i>Type of Cost/Saving</i>	<i>Cost £m</i>	<i>Saving £m</i>	<i>Explanation</i>

3e *Operational impact of ISD variation*

TSS is forecast to enter service in December 2006. It will provide 24 hour, all weather close air defence to manoeuvre forces. The slip of five months to ISD represents a continued shortfall in the ability of HVM to provide all-weather, day/night force protection to the manoeuvre force. Besides allowing time to rectify the technical problems associated with the STAIRS C (Sensor Technology for Affordable IR systems)

Thermal Sighting System, the delay to ISD has enabled the Successor Identification Friend or Foe (SIFF) and TSS programmes to be given a common ISD thus enabling a single upgrade of SP HVM for both systems rather than removing vehicles from service twice with associated operational penalty.

SECTION 4: KEY USER REQUIREMENTS

4a Performance against approved key user requirements

<i>KUR Name</i>	<i>Key Requirement</i>	<i>Forecast to be met</i>	<i>At Risk</i>	<i>Not to be met</i>
KUR 1	Detection: TSS must have a 90% probability of placing the target image within the operators field of view in less than two seconds.	Yes		
KUR 2	Detection Identification Ranges: Once target detected, TSS must be capable of allowing a trained operator to have a 90% probability of identifying the target.	Yes		
KUR 3	Field of View: In the narrow FOV the total TSS aiming error, must not exceed 1 metre from the target centroid.	Yes		
KUR 4	Missile Launch Efflux: The system is to be robust to the effects of missile efflux, such that the operators tracking performance will not be degraded.	Yes		
KUR 5	Mission Reliability: The TSS is to have at least 98% probability of completing a battlefield mission without a mission failure.	Yes		
Percentage currently forecast to be met			100%	
In-year change			0	

4b Reasons for variation against approved key requirements

<i>Date</i>	<i>Key Requirement</i>	<i>Factor</i>	<i>Explanation</i>

SECTION 5: HISTORY UP TO MAIN GATE APPROVAL

5a Description of the Assessment Phase

In May 1997 approval was given to launch the Assessment Phase with Shorts Missile Systems Ltd (now TADL) as the HVM weapon system Design Authority running a competition for the development, integration and supply of a TSS for SP HVM. The Pilkington Optronics (now Thales Optronics) STAIRS sight was recommended by the Company as fully meeting the TSS operational requirement and offering best value for money. This sight was developed by Pilkington Optronics with BAE Systems and AVIMO under a Joint Applied Research/Private Venture programme thus exploiting shared MoD/Industry investment. This project was approved prior to the adoption of SMART acquisition and the CADMID cycle. There were no precise equivalents to Initial Gate targets.

5b Cost of the Assessment Phase

<i>£ million (outturn prices)</i>	<i>Assessment Phase cost</i>	<i>Proportion of total estimated procurement expenditure</i>
Actual cost	£0.9 million (IPT spend only)	
Approved cost at Initial Gate		
Variation		

5c Duration of Assessment Phase

Date of Main Gate Approval	February 2001
Target Date for Main Gate Approval at Initial Gate	
Variation (months)	

5d *Cost boundaries at Initial Gate and Main Gate Approvals*

<i>£m (outturn prices)</i>	<i>Budgeted</i>		
	<i>Lowest</i>	<i>For</i>	<i>Highest</i>
Cost of Demonstration, Manufacture and five years In-Service Support forecast at Main Gate		69	72
Cost of Demonstration and Manufacture Phase forecast at Initial Gate			

5e *ISD boundaries at Initial Gate and Main Gate Approvals*

	<i>Earliest</i>	<i>Budgeted For</i>	<i>Latest Acceptable</i>
Forecast ISD at Main Gate		March 2006	July 2006
Forecast ISD at Initial Gate			

March 2006

Memorandum from Avon Protection

Avon Protection, Britain's Wiltshire-based leading manufacturer of NBC respirators, has an interest in the General Service Respirator procurement that the Committee proposes to discuss on 27 June with witnesses from MoD's Defence Procurement Agency.

In 2004, Avon Protection tendered for the MoD contract to develop and supply some 312,000 of the new GSR, and was disappointed, and somewhat surprised, to lose the order to US-owned contractor, Scott Health and Safety. Avon had already secured an order in 1999 to develop and supply 2,500,000 units of a similar new product—the M50 respirator—from the US government, won in open competition. Avon was given to understand, in the DPA's contract award debrief, that our bid had been rejected on price, and on the belief in MoD that we would not be able to meet the MoD's delivery requirements as well as those of the US government.

In rejecting the Avon offer, the opportunity for interoperability in combat with our major ally was also lost.

We are therefore curious that two years later, reports from a variety of sources within the test and trials community indicate that the Scott GSR programme has development problems and trials have not gone well.

It is public knowledge that GSR is running late, that the In-service date has been missed, that it is now unlikely to meet its target of introduction into service this summer and that the Initial Operating Capability has been reduced from 45,000 to 25,000.

MoD/DPA has set a very high Protection Factor requirement which is significantly higher than the target set for NATO or US Forces, and we believe cannot be measured accurately yet on a wearer in a combat environment.

It is our understanding that problems with GSR include:

- Poor functionality—twin filters are very large and difficult to operate.
- Wearers find it very difficult to achieve a satisfactory fit on the face for testing to be carried out.
- Difficulties with inner filter becoming blocked by moisture (sweat) build up.
- Mask is unlikely to achieve the very high level of protection demanded due to the filter arrangement.
- Integration with weapons and equipment has proved unacceptable to users.
- Firing trials had to be abandoned as users were unable to obtain a sight picture.
- Speech transmission is unacceptably poor.
- Potential users have very low confidence level in future mask.

We would like the Committee to know that the British developed M50, or variant, could be made available now to the UK. This option would provide significant savings to the UK taxpayer in both initial purchase and whole life cost, provide a more robust and exhaustively tested gas mask for the UK Armed Forces and prevent the move of another industrial capability to the US.

22 June 2006

Sixth memorandum from the Ministry of Defence

PERFORMANCE AGAINST KEY TARGETS 2005–06

1. *For Key Target 2, actual average new time slippage was 0.7 months which was below the target of 1 month. Performance against this target used to be calculated on the basis of the 20 largest projects but, from April 2004, has been calculated on all projects over £20 million. Is the good performance on a large number of smaller value projects compensating for poorer performance on the largest projects?*

Analysis of the data shows that category C projects (ie those valued between £20 million and £100 million) encounter similar levels of delay as those with higher values. For example in 2005–06, there were 13 Cat Cs in a Key Target population of 46. On average the in year delay to those Cat Cs was one month per project so they scored slightly worse than the overall average.

It is relevant to recall the reasons for introducing the changes in setting this KT in 2004. It was considered that a larger project population gave a more representative measure of DPA performance than just the top 20 projects by value. It is also more appropriate because timely delivery of lower value projects may be just as important operationally as those in the higher cost bracket. From this time, performance has also been measured by comparing at the 50% confidence level. Previously comparisons had been made against the 90% confidence level which included contingency. The new regime is a tougher and more relevant measure of performance in delivering against the originally planned timescales.

2. *Delivering projects to time may be assisted by setting realistic in-service dates, procuring equipment off-the-shelf, and providing incentives for the contractor. To what extent have each of these played a role in the DPA's improved performance relating to time slippage?*

We see each of these factors as being relevant. We are focusing more closely on due diligence and in factoring in more appropriate incentive for industry to deliver on time. Off-the-shelf products, where available, reduce risk. The JAVELIN medium range anti-tank guided weapon is good example of mitigating some schedule risk by buying off-the-shelf. Although it has been in-service with the United States since 1996, JAVELIN did require an element of modification to meet UK specific requirements and to address interoperability issues. A consistent and robust approach to this procurement, and close co-operation between the DPA and DLO, the US Army programme office, the Javelin Joint Venture, enabled it to be delivered 13 months in advance of the date approved at Main Gate.

3. *In its Major Projects Report 2005, the NAO reported that the decreases in forecast costs in 2004–05 were "primarily due to reductions in the numbers or capability of the equipment". To what extent did reducing the numbers of equipment ordered or reducing the capabilities of equipment contribute to the DPA achieving Key Target 3 relating to cost growth in 2005–06?*

Re-examining the numbers of equipment ordered and equipment capabilities led us to identify opportunities to reduce cost growth by some £145 million in 2005–06.

4. *What was the actual in-year cost growth for the defence equipment projects covered by Key Target 3?*

The actual cost growth was £65.674 million.

5. *Key Target 4 required the DPA to deliver greater than 90%, by value, of its forecast asset deliveries and the DPA delivered 107%. Does the DPA's achievement represent a catching up of previous slippages, or getting ahead of schedule for future years? Are Urgent Operational Requirements (UORs) included in the delivery figure?*

The Agency has achieved its asset delivery targets for the last two years, delivering 100% in FY 2004–05 and 107% in 2005–06. The target is based on forecasts set at the beginning of each financial year. There is therefore there is no catching up.

UORs contribute to the over-achievement seen in FY 2005–06 as these were not part of deliveries planned at the outset of the year. At £99 million they represented some 3% of the total deliveries of some £3.3 billion.

UORs that emerge in year are excluded from the baseline calculation but included in the overall delivery figure. This is on the basis that project resources could be refocused on delivering the UOR rather than the planned programme.

6. *The DPA delivered new equipment valued at £3.3 billion in 2005–06, but in 2004–05 the DPA delivered new equipment valued at £8.3 billion. Why was the value of new equipment delivered in 2005–06 so much lower compared with 2004–05?*

When equipment is delivered to the front line the value of the equipment itself is transferred and, at an appropriate point, so is the value of the investment made in developing the capability. There were significant development costs delivered in 2004–05 (£4.7 billion) for Typhoon which distorted the delivery picture. If these were excluded, the figures are more consistent (2004–05: £3.6 billion; 2005–06: £3.3 billion).

7. *In 2005–06 the DPA met, for the first time, all its Key Targets and delivered against the MoD's Public Service Agreement targets. What are the main factors that have contributed to the DPA's improved performance?*

The corporate performance improvement programme, "DPA Forward" underpins the improvements we are seeing. This has introduced new and rigorous processes right across the Agency's project activity, to ensure that estimates of time, cost and performance that form the basis of major decisions are sound and take account of risk. It has included improvements to the Agency's governance and links with industry. DPA Forward accelerated a process of continuous improvement that has in turn been built on with the changes proposed as part of the implementation of the Defence Acquisition Change programme.

8. *We have just passed the half way mark in the financial year 2006–07. How is the DPA doing against its 2006–07 Key Targets midway through the year?*

The Agency's Key Targets remain challenging, as they should be to remain relevant and appropriate in demanding year on year improvements. KT3 is under pressure because of further potential cost growth from the long standing legacy projects ASTUTE and T45. KT4 is at risk because of the re-timing of deliveries compared with the schedules set at the beginning of the financial year. Performance against those targets is being actively managed by the DPA Executive Board to mitigate the corporate impact of the project specific problems.

DPA FORWARD PROGRAMME/INTERNAL CONTROL WEAKNESSES

9. *Many of the changes in the "DPA Forward" programme are due to be implemented by late 2006. Will all the changes be implemented by the end of the year? If not, which planned changes will not have been implemented?*

In order to maintain focus on the implementation of the *Defence Acquisition Change Programme*, DPA Forward was brought to a controlled close in July 2006. Many of the changes introduced by the programme—such as Key Supplier Management, Performance Review & Assurance and the Corporate Management Information System—are now embedded in the normal business practices of the DPA and will be more widely adopted through the Defence Acquisition Change programme; a clear endorsement of the success for DPA Forward. Ongoing work is also being subsumed with the Defence Acquisition Change programme; this includes work on the Operating Framework, Effective Project Control, Performance, Time & Cost Trade Offs, future development of Key Supplier Management and Workforce Development and Incentivization. CDP and CDL's Joint Working initiative begun in 2003 has laid the foundations for combining DPA and DLO into the single DE&S organisation from 1 April 2007 as recommended by the McKane report on Enabling Acquisition Change.

10. *In the DPA's Annual Report and Accounts 2005–06, internal control weaknesses in the application of Earned Value Management, project cost estimating and risk management were identified. How are these weaknesses being addressed and in what timeframe?*

(a) Earned Value Management (EVM)

From January 2006 the DPA has mandated the use of Earned Value Management (EVM) on all projects valued at £20 million or above that are entering the Demonstration Phase. To ensure consistency of application of the technique across the Agency we have created two dedicated teams. One team is responsible for policy, information and advice, training sponsorship and the maintenance of industrial links through participation in the Defence EVM Implementation Group and the Association of Project Management's EVM Specific Interest Group. The other team provides "hands on" support to IPTs in their implementation of EVM and in reviews and audits of their contractors. We have also jointly developed with industry a template for contract Terms and Conditions which ensures that all implementations of EVM are in accordance with the EVM User Guide.

(b) Risk Management

In 2003 a team was established to assist IPTs to improve their risk management procedures. This team has developed detailed guidance and advice, has reconfigured our approach to risk management training, and has sponsored the introduction of computer-based risk management tools. Benchmarking exercises consistently identify the DPA's risk management as "Best in Class" for the approach, although we are working to further improve our deployment of process and procedure across the Agency. The risk team has been able to demonstrate a significant increase in awareness of the need for and benefits of effective risk management in the IPTs, and has measured real improvements in IPT processes and outcomes as a result. Risk management is a key part of the governance we apply to projects, and is a major element of the Project Review and Assurance process, also introduced as part of the DPA Forward corporate performance improvement programme.

A series of "Risk Master classes" have been initiated for IPT Leaders and other Senior Staff. These emphasise the importance of risk management to the overall business of the Agency, the linkages between project risk and corporate risk, and the cultural changes that we need to ensure a seamless and integrated approach to risk management at all levels of the organisation.

(c) Project Cost Estimating

The DPA has improved project estimating by taking into account trends observed in actual costs incurred for previous procurements. This recognises that it is challenging to improve on the historic trend, unless there is a step change in technology or manufacturing process. The DPA is now using this historic trend analysis to help validate project cost estimates prior to major decision points (such as CVF). This approach will be further strengthened by detailed, non-advocate advice and departmental initiatives as part of Enabling Acquisition Change to improve due diligence for major investments in the future, prior to the approval.

The DPA also uses the Treasury's Optimism Bias (OB) model as part of the risk analysis process for cost estimating. This enables a comparison to be made between the detailed (bottom up) assessment of risk and the (top down) OB indication. Any discrepancies are thoroughly reviewed and causes identified. The scrutiny of the business case reviews the outcomes of the process. The risk maturity assessments provide assurance that the risk management processes are being correctly applied in the derivation of project cost estimating.

Further key improvements in process have been identified for this year to provide improved project cost estimates. This includes gathering more detailed company data on competitive and non competitive contracts to inform future estimates, track progress, and analyse options. This will provide a more robust basis for trend analysis and decision support. We are working more closely with some major players in industry to assess their End To End estimating process and to be involved in the "Estimate Challenge" phase. This will provide improved confidence in industry figures and an opportunity to influence manufacturing methods.

KEY TARGETS FOR THE NEW ORGANISATION

11. *One of the aims of the DPA/DLO merger is to improve Through Life Capability Management. How will the expected improvements be tracked? Will there be new Key Targets covering this? Following the merger, will the DPA Key Targets covering equipment acquisition still remain, so that improvements in equipment acquisition can continue to be tracked?*

Current Departmental Public Service Agreement (PSA) targets that are equivalent to current DPA Key Targets 1–3, will remain in force throughout the new organisation's first year. Similarly we have to deliver against Customer/Supplier Agreements (CSAs) that are already in advanced negotiation between the DLO and its customers, which will run to end of 2007–08. But the clear thrust of the Defence Acquisition Change programme and Defence Industrial Strategy towards improving the management of acquisition on a through-life basis will require the introduction of targets focused on the delivery of the equipment and support component of Departmental through-life acquisition targets as well as the effectiveness and efficiency of the business.

A single target cannot capture performance appropriately across the range of roles detailed above and we recognise the need for a basket of metrics to drive improvement. MoD Head Office is leading on the definition of new targets consulting with single Service users and the NAO.

SMALLER SIZE PROJECTS

12. As part of its inquiry the Committee selected four smaller size equipment projects to examine. Can you update us on how each of these projects is currently doing: specifically, how is each doing against their approved costs and in-service dates? Have there been any major changes to these four projects since our oral evidence session at the end of June?

The table below provides detail on changes since the project information was provided to the Committee in June 2006.

	<i>Change in Forecast Cost (£ million)</i>	<i>Explanation</i>	<i>Change in Forecast ISD</i>	<i>Explanation</i>
Anti Surface Warfare (ASUW) ²	- 3.0	This is the combined effect of a reduction in the VAT rating for Phalanx 1B, a change in the risk provision and programming and contractual adjustments	No Change	
General Service Respirator (GSR) ³	+ 0.5	Additional funding required for User Trials	+ 10 months (now Oct '07)	Additional Performance and User Trials required by the Customer
Maritime Training System (MTS) ⁴	No Change		No Change	
Thermal Sighting System (TSS) ⁵	No Change		No Change	

13. At the evidence session on 27 June the Committee asked why the four smaller projects we selected appeared to be performing better against approved costs and in-service dates than some of the larger defence equipment projects. Dr Watson told the Committee that "short projects do tend to be slightly more successful, but we do not have that kind of separation" [Q7]. Is the DPA planning to undertake such an analysis to identify relevant lessons for larger equipment projects?

Yes. Learning From Experience is required for all projects, regardless of their size and this is shared across the organisation so that previous pitfalls can be avoided. It is through this medium that lessons from all projects are shared. We are working closely with the NAO in implementing their Gold Standard for effective project control in order to standardise good practice in controlling all projects. The NAO Gold Standard defines the drivers for successful project delivery which are applicable to projects of all sizes. In the Defence Industrial Strategy (DIS), the Department recognised specifically the benefit of adopting more flexible and agile approaches to procurement. Such approaches have been successful in delivering Urgent Operational Requirements and are currently more typical of smaller projects. DIS also recognised the importance of more agile strategies in procurement, such as better use of off-the-shelf solutions and commercial arrangements that provide more effective incentives to suppliers to deliver innovative solutions and better value for money. A particular facet of small projects is the ability for the project stakeholders, including the front-line users to work as a small, effective team in delivering the project. DIS recognised the importance of better team behaviours and relationship management as part of the core business of all our acquisition. The new DE&S organisation is being constructed in a way that will better enable stakeholder relationship management both within the Department and between the Department and suppliers.

The Agency has already introduced new and rigorous processes to ensure that estimates of time, cost and performance are fully informed before major decisions are taken.

The Department is also developing an Acquisition Operating Framework, based on work that emerged from the DPA Forward initiative, which will create a consistent and clearly defined framework for how we conduct, govern and control our projects. As part of the pilot phase for the Acquisition Operating Framework, small project teams will be assessed alongside larger teams and good practice pulled through

² Defensive weapons for use against fast attack craft.

³ Replacement of the in service respirator to improve levels of protection, equipment compatibility and to be more user friendly.

⁴ Shore based Warfare Operator Training capability for legacy platforms & the T45 Destroyer.

⁵ A Thermal Sighting System for the Self Propelled High Velocity Missile Weapon System.

into the framework that will be applied to all projects in future. The Programme and Project Management section of the AOF will be foundation for project management and control in the new Defence Equipment & Support organisation.

14. *What are the main reasons why smaller size equipment projects tend to be more successful than some of the larger equipment projects?*

There are a variety of reasons why smaller projects could be deemed more successful than some of the larger projects, particularly from an in year cost variation position. Smaller projects, that is, the Category C projects between £20 million–£100 million may involve less risk, be less technically demanding, be of shorter duration, have less integration issues, are unlikely to involve collaboration and have fewer stakeholders. This is not to say that some smaller value projects do not involve some or all of these. By contrast the level of technical difficulty is often greater in the larger projects because there is a much greater element of development to meet more demanding performance criteria. The Department has recognised that the degree of complexity in a project is an important factor in assessing how it should be managed. We are working closely with the Australian DMO in defining project complexity and pulling together a skills competence framework that will improve the Department's ability to manage large, complex projects. Larger projects, for example warships, also tend to involve higher degrees of integration and dependencies with other programmes which also adds to their risk and complexity.

FUTURE CARRIER

15. *Defense News of 2 October 2006 reported that "French industry has slashed the chances of building a second aircraft carrier, reducing the prospective value of French shipbuilder DCN and the amount Thales will pay for its 25% stake". There have been reports that there is uncertainty as to whether the French will proceed with building a second aircraft carrier. Are these reports of concern and, if true, are they likely to impact on the UK's carrier programme?*

It is for France to comment on their programme. The reports have no direct impact on the UK programme. Co-operation was only agreed on the basis that it must deliver savings without delaying the UK CVF (or French PA2) programmes, so the UK programme is not directly affected by any changes to the PA2 programme. We continue to co-operate during the demonstration phase to produce a Common Baseline Design that will meet requirements for CVF and PA2 and to explore areas of commonality which will bring savings in design costs, procurement, in-service support and through life technology insertion.

URGENT OPERATIONAL REQUIREMENTS

16. *What impact will the recent UORs for Armoured Fighting Vehicles (AFV) have on the FRES programme? In order to be consistent with the Defence Industrial Strategy should the AFV fleet be addressed as a whole rather than for FRES to be treated in isolation?*

Operational experience, especially in Iraq, has illustrated the rapidly developing threat to our troops on the ground; particularly the threat posed by mines and improvised explosive devices. The majority of UORs that have been applied to in-service armoured vehicles have been aimed at providing improved protection against these and other threats. This experience has reinforced the need for adequately protected armoured vehicles, a factor that is being taken fully into account in taking FRES forward. The way forward on FRES is being developed within an overall AFV strategy that is consistent with the Defence Industrial Strategy, at the same time ensuring that the unique challenges presented by FRES are properly addressed.

FUTURE RAPID EFFECTS SYSTEM (FRES)

17. *When is the new acquisition strategy for FRES expected to be finalised?*

Confirmation of the optimum acquisition strategy for FRES is one of the key objectives of the initial Assessment Phase. Senior stakeholders are fully engaged and we expect to put proposals to HMT and OGDs this autumn with a view to making a public announcement before the end of the year.

18. *How will the MoD ensure that the new acquisition strategy for FRES will be stable?*

The stability of the programme will be achieved by agreeing an incremental delivery of capability with the Army sponsor; by careful selection of the companies best suited to deliver this challenging capability through life, and by high quality due diligence before each investment decision.

19. *How will the new acquisition strategy for FRES take account of the Defence Industrial Strategy?*

The Defence Industrial Strategy sets the context within which the FRES acquisition strategy is being developed. We will secure the appropriate level of operational sovereignty through life by proactive management of IPR matters. We will secure value for money in a strategic alliance which will benefit from a stable programme of incremental development which will sustain an efficient production programme and a rolling programme of technology insertions through life.

25 October 2006

Seventh memorandum from the Ministry of Defence

1. *The number of DPA staff employed when the current CDP took up post and the number employed now [Q127].*

In FY 03/04 when I took over running of the Defence Procurement Agency, there were 4,618 Full Time Equivalent persons employed in the Agency (both Civilian and Service). At the end of September 2006, this had risen to 5,398. However there has been significant change in the way the organisation has been operated, particularly the joint working with the Defence Logistics Organisation (DLO) which has culminated in the development of plans for the formation of Defence Equipment & Support from April 2007. Joint working has created common teams supporting both organisations, specifically the People Team and the Technical Enabling Services; these are “hosted” by either the DLO or the DPA. The growth shown is a result of transfers between the two organisations, principally the setting up of the Technical Enabling Service. Overall there were net 1,000 (approx) transfers into the DPA from the DLO and this increase was partially offset by a reduction of 220 staff in other DPA activities. If the transfers are discounted, on a like-for-like comparison, there has been a reduction of 4.76% (ie 220 personnel) from our baseline in FY 03/04.

2. *The progress in identifying skills gaps for the merged DPA/DLO organisation and how these are being/will be addressed, including whether the required training funding has been committed [Q139].*

Improving skills across our the workforce is an essential part of implementing the Defence Industrial Strategy. Within the DPA/DLO, a number of initiatives have been launched building on successful activity in both organisations in recent years. Skills Champions in five key areas (Commercial, Project Management, Financial, Logistics and Science & Technology) are developing skills growth plans. We do not underestimate the substantial change programme required and while the level of investment required to deliver this is still being assessed it is likely to be significant.

Specific actions to date and planned are as follows:

COMMERCIAL

The Defence Commercial Director is responsible for developing an MoD-wide commercial skills improvement programme to provide the business with high performing people with the requisite commercial acumen, now and in the future. The programme contains a number of initiatives including additional recruiting from outside the commercial function and the targeted deployment of specialist commercial resources from within MoD and from the interim market. It will also address the key issue of reward and recognition.

We have been running a Commercial Business Graduate Scheme since 2002 and 46 people have successfully graduated. The scheme will continue until at least until FY 07/08 during which we expect to take on a further 20 graduates. Each graduate costs approximately £57k to put through the scheme over a two year period. These are talented people and our seed corn for senior commercial positions in the future.

In addition we are investing in home grown talent through skills development and Continuous Professional Development (CPD). So far, in FY06/07, MoD has spent about £750K on internal commercial courses delivered by “Defence Procurement Management Training—Centre for Acquisition Training” (DPMT-CAT).

The professional “standard” for the Commercial function is professional attainment of the Chartered Institute of Purchasing and Supply (CIPS). In FY06/07, CIPS funding held centrally totalled £235K. This is for individuals to undertake Professional CIPS qualifications and Certificate of Competence examination fees. Currently MoD is sponsoring 54 students through their CIPS qualifications and 80 individuals sat the certificate of competences exams in April 2006, with an overall pass rate of 88%.

We have invested £340K in a Blended Learning package that was launched in September 2006. This provides a mix of classroom and e-learning capability for commercial and other acquisition team members. So far we have had about 500 registrations to undertake training and initial feedback has been very positive.

FINANCE

Increasing the professionalism and skills amongst our finance community is a major work stream and we see this as key to improving management of the business as well as supporting the wider initiative for Professional Skills in Government.

We have established the skills requirements for senior finance posts in Integrated Project Teams across the DPA and DLO and have undertaken work to identify where shortfalls exist. We have then targeted appointments to these posts to ensure they are filled by suitably qualified and experienced staff and sought to provide appropriate skills training for others.

We already have some 280 professionally qualified accountants across the DPA and DLO and a further 100 at various stages of training for formal CIMA qualification. However, we have identified the need to increase the numbers of qualified and suitably experienced personnel more quickly than we can get those under training qualified. As a consequence we have undertaken two external recruitment campaigns. These have resulted in three appointments to date. In addition we have established and funded a Graduate Recruitment Scheme for Trainee Accountants to provide a pool of people able to fill senior posts in the future. We have 11 graduates on the scheme—which started last year—and currently plan to recruit up to 10 a year.

The funded programme of specific DPA and DLO finance training we currently have in place is aimed at improving the skills of both finance specialists as well as the broader acquisition community in areas where our analysis tells us we have the biggest need. This is underpinned by a wider MoD training and licensing scheme—The Certificate of Resource Management—which is administered in conjunction with Association of Accountancy Technicians. To date, 2,298 licences have been awarded across the DPA and DLO.

PROJECT MANAGEMENT

We plan to implement a Project Management Licensing Scheme across all Project Managers in the DPA and DLO. A pilot of this scheme has been successfully completed with some 170 project managers. The costs for full roll out have been identified and are currently being prioritised.

We will redevelop the Programme and Project Management (PPM) training and education within MoD to provide a blended learning solution taking account of the inclusion of PPM as a core element in the Department's Single Skills Framework and increased MoD-wide need for PPM training.

Currently the DPA and DLO spend approximately £1.5 million per year on centrally funded Project Management training delivered in-house. Individual IPTs also fund training specific to their needs from within their individual budgets: this amounted to approximately £.5 million for 2005–06. Approximately £120k per year is allocated centrally from the DPA for the Project Management Development Programme (PMDP) which is currently supporting 80 active members. PMDP members follow a structured development programme that includes professional qualification through the Association of Project Managers (APM). Numbers on the scheme are increasing by 50 members per annum

3. *Whether the route clearance package UOR for Afghanistan outlined by Mr Lancaster [Q151] was the only available one on the market [Q152].*

There is currently no formal UOR for the procurement of either “Buffalo” or “Husky”, which are equipments currently used by US Forces. The requirement for a route clearance capability to support current operations is being assessed by the Equipment Capability Manager and this may lead to a UOR in the future if required.

4. *How the Astute class submarines differ from the existing classes of submarines with regard to replacing components [Q187].*

The Astute Class is easier to maintain than current classes of SSN. Improvements to the existing processes for replacing equipment are detailed below:

- The design of the boat has ensured that repairable equipment can be accessed or replaced with minimum disturbance to other equipment.
- Larger access hatches have been fitted. For the first time in an SSN there is a logistics and an escape trunk in the main machinery space which allows for easier movement of equipment.
- There is no requirement to refuel the nuclear plant at mid life as the reactor is fuelled for its full 25 year life.
- More reliable equipment has been fitted which has improved efficiency, namely the Main Static Converters which are solid state and have replaced the rotating motor generators.

- The maintenance routines are based on reliability-centred maintenance analyses which produce optimised maintenance/replacement regimes which reduce non-operational time and support costs. This application of reliability-centred maintenance will lead to increased platform availability of around 75% for Astute compared to 69% for the current Trafalgar class.

5. *An explanation of the decision which has resulted in job losses at Rosyth [Q200].*

The combined size and scope of the three upkeep packages (HM Ships LIVERPOOL, CHIDDINGFOLD, and GRIMSBY) to be undertaken by Babcock Support Services Limited at Rosyth is broadly comparable to that originally specified by the Department in February 2006, although some of the tasks did change, for example to take account of additional repair work on HMS GRIMSBY. Along with the upkeeps of HMS CUMBERLAND (to be completed by Devonport Management Limited at Devonport, Plymouth) and HMS IRON DUKE (to be completed by Fleet Support Limited at Portsmouth), this work is part of the “Liverpool 5”, the first work package to be managed under the developing Surface Ship Support arrangements. The Department is not aware of any specific decision that resulted in 90 job losses at Rosyth. These were deferred from earlier in 2006 and do not represent any additional job losses on top of those previously announced by BSSL, the owners of Rosyth Dockyard.

In addition to this work, Babcock is a member of the Aircraft Carrier Alliance and is currently playing an active part in the Demonstration Phase of the Future Carrier project. The shipbuild strategy announced in December 2005 currently envisages one of the lower blocks being built at Rosyth, where the ships are also planned to be assembled.

6. *Confirmation as to whether or not the MoD pays for Spectrum charging on overseas operations [Q212].*

To date we have not paid any spectrum charges for deployed operations; although there have been suggestions from certain countries that we should pay for use on exercises, this has not progressed further.

7. *An explanation of what Plan B is in relation to the JSF programme and the status of Plan B [Q208].*

The Joint Strike Fighter is our “Plan A” for the Joint Combat Aircraft programme. We continue to work closely with the United States in order to ensure the UK’s operational sovereignty requirements are met so we can sign the Production, Sustainment and Follow-on Development MOU. We are unable to go into specifics about our contingency plans. The Minister for Defence Procurement has previously made clear that such plans as are needed to maintain a fallback “Plan B” are in place.

1 November 2006

