



House of Commons
Committee of Public Accounts

Ministry of Defence: Major Projects Report 2003

Forty-third Report of
Session 2003–04

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

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The Committee of Public Accounts

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Summary

Introduction

The Major Projects Report 2003 provides information on the cost, time and technical performance for the 20 largest projects where the main investment decision had been taken and the ten largest projects in the Assessment Phase. For the 20 largest projects, the Ministry of Defence (the Department) forecast the costs (excluding two commercially sensitive ones) to be £51.9 billion, an increase of £3.1 billion in the last year and some 6% over approval. Projects that predate the Department's introduction of Smart Acquisition (Legacy projects) accounted for 87% of the predicted cost overrun, some £2.7 billion. The 20 Projects have slipped an average of 18 months beyond their expected delivery dates, with 9 months of this delay occurring in the last year. Legacy projects were responsible for 79% of this slippage, 114 out of 144 months. The Department expects all projects to meet their key user requirements on delivery.¹

The principles underpinning the Department's relationship with its contractors have evolved over time from a regime of substantial cost plus contracting in the 1970's, to competition and the commercial approach championed by Lord Levene in the 1980's, though never fully implemented, and now Smart Acquisition. None of these approaches have proved universally successful in delivering and sustaining military capability to cost or time, if only because they were never fully carried through as intended.

The principles underpinning Smart Acquisition accord with recommendations made by this Committee and its predecessors and are sound. However, there has been a gap between the theory and its application.

On the basis of a Report from the Comptroller and Auditor General,² we took evidence from the Department (on 23 and 25 February) and BAE Systems (on 23 February). We examined four main issues: the impact of the large cost overruns and delays; how the Department understands and manages risk; what more the Department and industry can do to develop a more constructive relationship; and the way ahead to prevent such poor procurement performance being repeated in future.

1 C&AG's Report, Executive Summary, para 8

2 C&AG's Report, *Major Projects Report 2003* (HC 195, Session 2003–04)

Conclusions and recommendations

- 1. The cost overruns and schedule slippages recorded in the Major Projects Report 2003 mean that the services will not receive the equipments they need when they have said they need them.** Where cost and time overruns on individual projects are significant the Department should better understand and be able to explain the adverse effect on the future Equipment Programme and the operational capabilities which the Armed Forces will have to forgo.
- 2. The Department has accepted a greater share of risk on the Astute and Nimrod projects, yet was unable to give firm assurances on timescales and costs.** By the time of the next Major Projects Report the costs should be well understood, and the Department should clarify the implications of the risks they are assuming.
- 3. The Department has developed Technical and Integration Readiness Levels to help understand programme risk.** Developing a constructive relationship with industry is central to successful project delivery. The Department should develop Commercial Readiness Levels to provide a quantified basis upon which to assess the strength of its relationships with industry on individual projects.
- 4. The Department's policy is to spend 15% of the initial procurement costs of a system in the Assessment Phase. Yet it currently spends less than 5%. It should follow its own policy.**
- 5. In a number of cases, such as the Astute submarine and the Support Vehicle, the Department and industry made poor decisions and committed to unrealistic programmes.** The Department is in a long lasting relationship with many of its suppliers where success will only be achieved by establishing programmes which hold the prospect of securing a fair risk and reward balance. The Department and industry should explore how better to share information on costs, risks and potential opportunities for mutual gain to help both partners to structure deals appropriate to the circumstances of individual programmes.
- 6. Experience on, among others, the Nimrod and Astute programmes, highlights that agreeing long-term fixed price contracts covering both development and production for complex defence equipment programmes is not workable.**
- 7. In the past, the relationship between the Department and its contractors has too often been characterised by an emphasis on what to do in case of failure and a culture based on the apportionment of blame.** In agreeing future programmes the Department and industry should define commercial arrangements which provide a financial incentive to both parties to improve on cost, time and performance estimates, without setting targets which are easy to beat and so provide a false impression of success.
- 8. The definition of value for money in the Defence Industrial White Paper is broad and, in theory, embraces the concerns of government and industry. However, tensions and misunderstandings remain.** In making future decisions it will be important for the Department fully to involve other government departments and

industry from the outset in evaluating the full range of potential outcomes, including implications for industrial capacity and skills.

- 9. Appointing Senior Responsible Owners to co-ordinate the delivery of major capabilities such as Carrier/Strike is sensible. As envisaged by the Department, however, the role seems to be without direct managerial or budgetary control.** The Department should provide a clearer account of exactly how Senior Responsible Owners will fit into the procurement system.
- 10. The Department should develop measures for the whole equipment lifecycle covering time, cost and quality issues.** The measures which the Department is introducing to measure improvements in procurement performance focus mainly on the acquisition stage.

1 The impact of the large cost overruns and delays

1. The Department accepted that the £3.1 billion increase in forecast costs and 9 month average increase in delays on projects in the last year were not satisfactory. It recognised that this poor performance would mean that the men and women on the frontline would be without the capability promised and that the life of existing equipment would have to be extended. For example, delays on the Astute submarine programme will mean that some existing submarines will have to be kept in service longer than planned. For at least an extra 3½ years the Armed Forces will have to do without the increased capability to operate in coastal waters, better intelligence gathering and improved Special Forces deployment capacity which Astute will offer. The Department does not yet know if it will need to refit existing submarines performing similar roles.³

2. The cost increases recorded in the Major Projects Report will occur over a number of years and, given that the Department has limited resources, will adversely affect the funding available for other projects. The Military and, ultimately, Ministers will determine which projects should be reduced in scope, delayed or have their lives extended through the annual Equipment Planning process. The process is intended to ensure the Department has a balanced, coherent and affordable 10-year defence equipment programme which best meets changing defence priorities. It is not however designed to identify what new equipment capabilities are being foregone to compensate for cost overruns and delays on individual programmes.⁴

3. Four older projects which began before Smart Acquisition was introduced in 1999, account for 87% of the predicted cost overruns and 79% of the in-year slippage in the Major Projects Report 2003. These projects are the Astute Class Submarine; Nimrod MRA4 aircraft; Brimstone (the Advanced Air-Launched Anti-Armour Weapon); and the Eurofighter Typhoon aircraft. **Figure 1** provides further details on the four projects.

3 Qq 1–2, 92–93, 305–306

4 Qq 94–97, 178–182; Ev 20–22

Figure 1: The “problem” projects in the Major Projects Report 2003

Project and main problems	Implications including total predicted cost and time overruns	Actions being taken to resolve the problems
<p>The Astute submarine programme suffered from technical and project management difficulties. The Department and BAE Systems acknowledge that they had misunderstood the risks and costs and underestimated the impact of the move of submarine design from the Department to a Prime Contractor. In particular, they underestimated the shortfall in skills and expertise in submarine design.⁵</p>	<p>Predicted cost overrun of £1 billion and time slippage of 43 months. BAE Systems bear increased costs of £250 million.</p> <p>The delay in delivering Astute has meant that the Department does not have the additional capability that Astute will bring – in better intelligence gathering; land attack and improved operation in coastal waters.⁶</p>	<p>The programme has been restructured with the Department and BAE System sharing the cost increases.</p> <p>The Department and BAE Systems have addressed skills shortages, project management failings and technical difficulties in using computer aided design⁷</p>
<p>The Nimrod aircraft programme has had a history of programme management, technical and commercial difficulties.</p>	<p>The predicted cost overrun is £394 million and time slippage of six years. BAE Systems bear increased costs of £800 million.⁸</p> <p>There will be three less aircraft than planned.⁹</p>	<p>The programme has been restructured with the Department and BAE System sharing the cost increases. The Department has staff co-located with BAE Systems and greater access to cost and programme data.¹⁰</p>
<p>Brimstone is an air launched anti armour missile. Development has been delayed by 12 months to allow trials of other higher priority weapons (Storm Shadow) to be completed for deployment in Iraq. It has also been delayed a six months to investigate a potential safety issue – a risk of missile collision with the aircraft after launch¹¹</p>	<p>Predicted cost overrun of £139 million and time slippage of 31 months.</p>	<p>Firing trials are continuing.</p>
<p>Typhoon is a fighter aircraft with an air defence and ground attack capability. It was approved in November 1987 to be delivered in 1998 at a cost of £17.4 billion.</p>	<p>Typhoon was delivered in June 2003 (four and half years late) and is now expected to cost £19.7 billion, some £2.3 billion more than approved.¹²</p> <p>The aircraft will have limited operational capability by 2006.</p>	<p>The Department is confident Typhoon will be a very versatile aircraft with great export potential. BAE Systems said that Typhoon represented very good value for money in terms of its capability and its cost.¹³</p>

5 Qq 16–22

6 Qq 2–3

7 C&AG’s Report, paras 3.2–3.15; Qq 77–84

8 C&AG’s Report, paras 3.16–3.23

9 Qq 28–42, 60–61

10 C&AG’s Report, paras 3.16–3.23; Q 22

11 C&AG’s Report, paras 3.24–3.29

12 *ibid*, paras 3.30–3.37

13 Qq 6–8, 55, 74, 135

4. **Figure 2** shows that the in-year forecast overruns on the four projects did not all reflect additional payments to contractors. Some 43% of the cost increase reflected internal resource costs, mostly additional interest on capital charges because of delays to the projects. Interest on capital is a non-cash cost that reflects the opportunity cost to the Government of the capital resources the Department has invested, based on the return the Government could have achieved by using the resources elsewhere. The Department acknowledged that the introduction of resource accounting had helped it to recognise that “time is money”, imposing a discipline to get on with a project and helping them to make time, cost and performance trade-offs.¹⁴

Figure 2: Breakdown of in-year cost overruns on the four older “problem” programmes

Projects	Interest on capital £m	Additional capability £m	Payments to industry £m
Astute	224	100	679
Brimstone	64	–	62
Nimrod	225	10	303
Typhoon	649	97	291
Total	£1,162m (43%)	£207m (8%)	£1,335m (49%)

5. Given the scale of the problems on the projects, and because the Armed Forces still needed the capabilities provided by the Astute submarine and Nimrod aircraft, the Department had been forced to adopt the “least bad” option and re-negotiate these contracts. On whether it was confident that the revised arrangements would deliver Astute and Nimrod to time and cost, the Department pointed to a number of encouraging developments but said it would be unable to give us any firm assurance until next year.¹⁵ The key features of the new arrangements are that:

- the Department will bear 70% of any cost overruns but receive only 30% of any savings, which looks to be an unfavourable balance;
- design and development has been split from production and no price has been agreed for the subsequent production stage.

6. The Astute and Nimrod projects are not the only ones where contract negotiations have run into difficulties. In 2000, the Department reduced the number of Brimstone missiles required by 25% and entered discussions with the contractor, MBDA, over the level of savings that might be released as a result. Brimstone is being procured under a fixed price contract and the Department and MBDA have not been able to reach agreement on an acceptable level of savings. The Department has therefore reinstated the requirement for the original number of missiles at no additional cost to the original price. The Department continues to negotiate with MBDA on other possible options such as allowing MBDA to buy back 25% of the missiles for sale overseas.¹⁶

¹⁴ Qq 6, 68, 177, 180, 184, 259–268; Ev 39

¹⁵ Qq 25–42, 60–61, 69–72

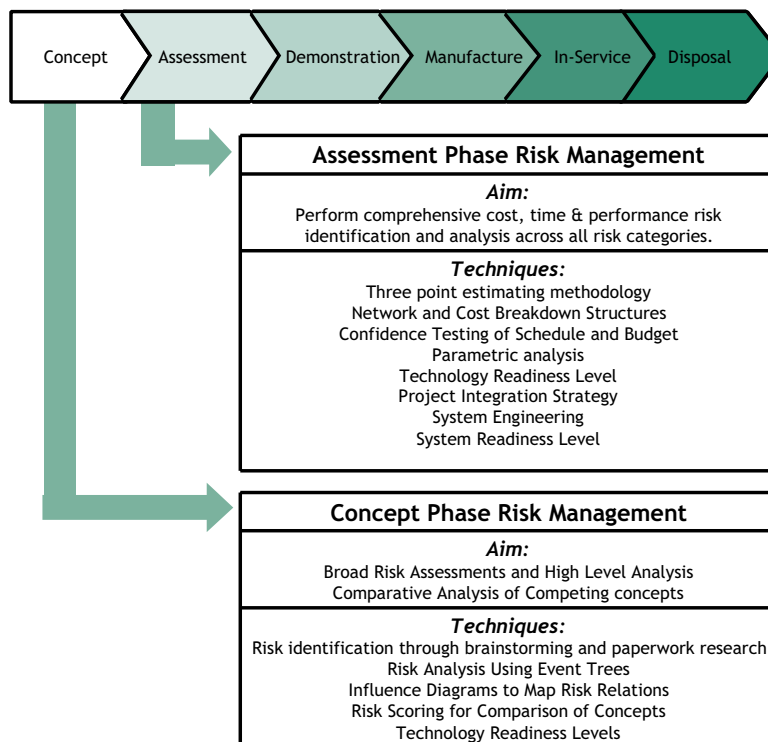
¹⁶ Qq 44–49, 55, 64, 180

2 Understanding and managing risk

7. One of the principles underpinning Smart Acquisition is to spend the right amount of time and money to reduce programme risk to an acceptable level before a project commits to the Demonstration and Manufacture Phase. The Assessment Phase is crucial to the successful delivery of the project to time, cost and performance. How much time and money should be committed in the Assessment Phase will vary from project to project depending on factors such as the maturity of the technology being purchased and the proposed procurement strategy (off the shelf; collaborative, non-competitive, PFI or Public Private Partnership). As a broad guideline the Department has stated that up to 15% of the initial procurement cost of a system should be spent in the Assessment Phase. At present the Department is spending on average less than 5% on the Assessment Phase.¹⁷

8. In some cases, spending more money or time in the Assessment Phase than originally planned may be the correct thing to do if it results in better risk mitigation for the post-Main Gate phase of the project. **Figure 3** summarises how the Department is now measuring and controlling risk to provide it with confidence that the Assessment Phase activity is achieving this desired outcome. Several of the measures which we have previously recommended, including Technology Readiness Levels are now in regular use.¹⁸

Figure 3: How the Department assesses risk in the early stages of projects¹⁹



¹⁷ C&AG's Report, para 2.3

¹⁸ *ibid*, paras 2.6–2.11 and Appendix 1; Q 284; Ev 41-42

¹⁹ Ev 41-42

9. One apparently good example of risk reduction is the Airborne Stand-off Radar aircraft programme which has successfully completed its design stage and is now entering what will be a challenging integration phase. Sir Peter Spencer attributed the success of the programme to date to spending the right amount of time to ensure the available equipment options were understood and the risks fully analysed.²⁰

10. Optimism continues to influence the initial appraisal of projects and the Major Projects Report 2003 clearly shows that the Department and industry do not always sufficiently understand risk when the Main Gate investment decision is made. The costs and in-service dates for more than two thirds of projects have drifted away from those planned. In a few cases such as the A400M aircraft and Type 45 destroyer, projects have exceeded the highest acceptable figures agreed at the time they were approved. The Department admitted that the figures showed that some projects had not been properly de-risked in the Assessment Phase and this was an indication that Smart Acquisition was not been applied thoroughly or consistently.²¹

11. Sir Peter Spencer, Chief of Defence Procurement, assured us that he was determined to resolve the problem of de-risking projects fully before approval was given to proceed to demonstrate and manufacture equipment. What was needed was an effective corporate governance system which ensured that forecasts were accurate. There were however still some projects where the damage done by inadequate de-risking had not yet been flushed out, which he was intending to do in the coming financial year.²²

12. Smart Acquisition principles were not fully applied to the Support Vehicle which is currently predicted to be a year late entering service. The Department decided to proceed without a formal Assessment Phase on the basis of three years work done to examine the suitability of the project for a Private Finance Initiative solution and because potential solutions were already available in the commercial sector. In retrospect, the Department accepts that it made a mistake in omitting the Assessment Phase and that both its and industry's understanding of the requirement was immature.²³

13. The Department decided against PFI procurement for the Support Vehicle project, concluding that a conventional approach offered better value for money. The principal reasons for this were difficulties in defining an output based specification; the limited opportunity for risk transfer; minimal potential for third party revenue; and little scope for either operational or technical innovation due, in part, to a demanding mobility requirement and operational readiness. The decision not to pursue a PFI solution for this programme did not preclude its use in other combat support areas.²⁴

20 Qq 302-304

21 Qq 239, 246, 275-276

22 Qq 239-245

23 C&AG's Report, Figure 18 and paras 3.38-3.43; Qq 187, 249, 307-314

24 Qq 308, 318; Ev 43-44

3 Building open and honest relationships with industry

14. The Defence Industrial Policy published in October 2002 recognised that the Department and its main suppliers are in a long-term mutually dependent relationship. The Policy states that a thriving, innovative and competitive defence industry is essential to provide the Armed Forces with the equipment which they require, on time, and at best value for money for the taxpayer.²⁵ The Department considers that its relationships with industry are generally good, although there have recently been well publicised tensions with parts of BAE Systems,²⁶ with which the Department has contracts worth some £37–38 billion.²⁷

15. The Chief Executive of BAE Systems told us that his company had made the wrong strategic decision to accept the Nimrod contract in the mid-1990's. At the time, the Board had been convinced by a presentation made by the programme management team who assured them that it would be a profitable contract.²⁸ As recent experience on the Support Vehicle programme highlights, a similar culture exists within the Department, and has led to short term decision-making and over-optimism in estimating costs and timescales on many projects. There are few examples where a judgement has been made not to proceed with a project, although the decision not to procure an acoustic sonar buoy for the Nimrod after estimates of the cost of the programme had tripled does provide an isolated example.²⁹

16. Following the publication of the Major Projects Report 2003, Sir Raymond Lygo, Chief Executive of British Aerospace during the 1980's, said that the company consistently underbid for contracts knowing that it could recover the true costs when the project was underway. This is a very serious charge and a practice which we would view as completely unacceptable if it were shown to be happening. Mike Turner, the current Chief Executive of BAE Systems, stated categorically that the company did not knowingly underbid for contracts. Sir Kevin Tebbit added that, even if underbidding had been prevalent during the era of cost plus contracting 20 years ago, the Department now had a sophisticated system to understand the price base of bids, and said he was absolutely certain that underbidding was not taking place today.³⁰ We will want to be satisfied of the continuing effectiveness of this system as we consider future equipment acquisitions by the Department.

17. The Defence Industrial Policy states that “the Government is responsible for providing the Armed Forces with high quality equipment at best value for money for the taxpayer. It is also firmly committed to the UK manufacturing sector, and to promoting a strong and competitive UK defence industry, bringing economic and technological benefits to the nation. The Government must take decisions within a policy framework that recognises

25 Ministry of Defence Paper 5, *Defence Industrial Policy*

26 Qq 191–192, 281

27 Q 42

28 Qq 28–30

29 Q 90

30 Qq 9–11

any tensions between these two objectives.” The July 2003 decision to purchase up to 44 Hawk 128 aircraft from BAE Systems to meet the requirement for an Advanced Jet Trainer provides a good illustration of these tensions.

18. The Accounting Officer’s analysis of the case for procuring the Hawk 128 took into account industrial capacity and employment arguments, but because of issues about the timing of the order, and on the grounds that an international competition would offer the most likely prospect of a value for money solution, he sought a Direction from the Secretary of State for Defence to proceed.³¹ In his evidence the Chief Executive of BAE Systems noted that BAE Systems would be making only a 7% return on the project, and argued that the Department adopted a very narrow definition of value-for-money which failed to take account of exports, wealth creation and the defence industrial base.³²

19. When the contracts for the Astute submarine and Nimrod aircraft were placed in the mid-1990s the Department considered that the best way of delivering the capability was by putting responsibility for managing risks in the programme, as well as in delivering the programme, on to a prime contractor. On these two programmes the approach failed. The Department is going without equipments they need, BAE Systems has lost £1 billion on the deals,³³ the Department will have to contribute an extra £1.5 billion and will receive three fewer Nimrod aircraft (worth £180 million) than planned.³⁴ The Department now believes that there is a limit to which it can transfer financial risk and that operational or time risk cannot be transferred.³⁵ The Defence Industrial Policy therefore states that “we will seek to provide a more appropriate risk/reward ratio for programmes with high technological risk”.

20. The Astute submarine and Nimrod aircraft contracts were placed with fixed price contracts covering both development and production. The Department and BAE Systems disagree on what the best pricing mechanism is for highly complex technology programmes where there is excessive risk. BAE Systems favours cost plus arrangements. The Department considers there are more robust arrangements which would protect the taxpayer as well as be fair to the supplier.³⁶ **Figure 4** illustrates how the various pricing options available may be better suited to particular combinations of risk and certainty of outcome. Using a variety of pricing methods should allow the Department and industry to achieve a fairer risk and reward balance appropriate to the circumstances of an individual programme. For example, a fixed or firm price may be more suitable for production work once the design is stable than for most early risk reduction work.³⁷

31 Qq 12–14

32 Q 15

33 Qq 29–32

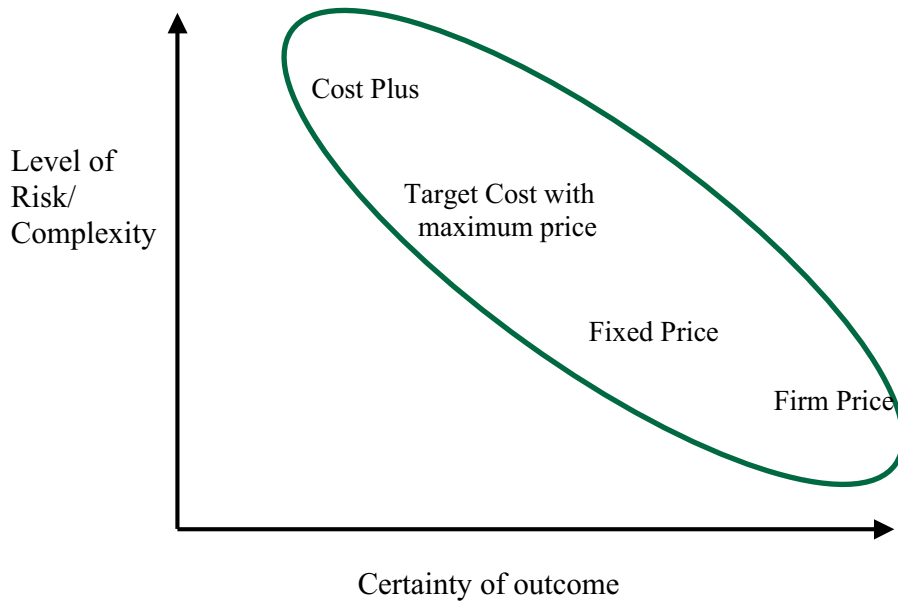
34 Qq 28–42

35 Qq 23–24

36 Qq 105–107, 140, 152–155

37 Qq 5, 59, 66, 73

Figure 4: Alternative pricing mechanisms



Notes

Cost plus: Where a contractor is paid his agreed costs plus an agreed profit rate.

Target cost with maximum price: A target cost is established together with an arrangement to share the amount by which actual costs are above or below the target between the Department and the contractor. There is a maximum price above which the contractor has to bear all the costs.

Fixed price: An agreed price that is subject to variation to take account of inflationary and/or exchange rate movements.

Firm price: An agreed price that is not subject to variation for inflation.

4 The way ahead

21. The Department acknowledged that Smart Acquisition had only been partially implemented and that some of its key principles needed to be applied more consistently. Recognising these shortcomings, the Department has undertaken a review of Smart Acquisition and has identified six areas where more needs to be done. The areas for improvement are to:

- improve the ability to manage projects on a whole life basis;
- facilitate effective trade-offs between capability performance, time and cost;
- create a better, more open relationship with industry;
- embed the concept of incremental acquisition;
- improve the approach to project approvals; and
- increase early investment to de-risk projects.³⁸

22. As successive Major Projects Reports have recognised, the Department has been trying to address some of the areas identified for improvement for a number of years without much success. For example, since 1999 the Department has emphasised the importance of taking key investment decisions on the basis of whole life costs. Yet it is only now that such data is being used to inform decision-making and, as the Department admits, the quality of the data is still very variable.³⁹

23. The Department has recognised that it must be candid about the extent to which the changes are being implemented and how successful they are. To this end the Department is better defining the processes, developing new performance measures and putting in place a compliance regime together with much stronger governance at Executive Board level. The performance measures which the Department is proposing to use are listed in **Figure 5**.⁴⁰

38 C&AG's Report, para 1.25; Q 216

39 C&AG's Report, Appendix 7; Qq 220, 288–289; Ev 42–43

40 Qq 216–219; Ev 40

Figure 5: How the Department proposes to measure the success of Smart Acquisition

<p>Defence Procurement Agency Key Targets</p> <ul style="list-style-type: none"> • Predicted percentage achievement of Key User Requirements • Average in-year variation of forecast In Service Date compared with the “not to exceed” approval • Average in-year variation of “not to exceed” forecast cost • Customer and Partner survey satisfaction rating • Achievement of planned efficiency measures • Percentage variance between planned and actual in-year asset deliveries <p>Internal measures of the success in implementing key enablers</p> <ul style="list-style-type: none"> • Through Life Management Maturity score at Main Gate* • Risk Management Maturity score at Main Gate* • Survey results of progress towards more open relationship with Industry • Percentage of projects following Incremental Acquisition strategies • Time taken for approval of Business Case submissions • Percentage of project cost spent in Assessment Phase • Rate of consumption of risk differential at Agency and project level <p>Note: * when the main investment decision is made</p>
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24. Our recent Report on the Apache Attack Helicopter⁴¹ highlighted the value of having a single focus for the programme management of all aspects of the delivery of a complex capability and not just for the procurement and support of the equipment. On the basis of best practice developed by the Office of Government Commerce, a Senior Responsible Owner has been designated for the Carrier Strike Capability. The principal components of the Carrier Strike Capability are the Joint Combat Aircraft, the aircraft carriers and the Maritime Airborne Surveillance Aircraft. The Owner will be responsible for ensuring that all elements of the Carrier Strike programme are managed comprehensively and coherently to ensure the capability set out in **Figure 6** is delivered. The Department envisages that the Senior Responsible Owner job will last only until Full Operating Capability has been achieved.

41 46th Report from the Committee of Public Accounts, *Ministry of Defence: Building an air manoeuvre capability – the introduction of the Apache Helicopter* (HC 533, Session 2002–03)

Figure 6: Responsibilities of the Senior Responsible Owner

Area	Activity
Equipment	Requirements and procurement are properly structured and particularly the Joint Combat Aircraft and the Maritime Airborne Surveillance and Control Aircraft projects are being effectively integrated with the Future Aircraft Carrier.
Sustainability	Logistics to support the equipment are cost-effective and deliverable in the operational environment.
People	Recruitment and employment of the right personnel to deliver operational capability.
Training	Individuals and collective training ensures that the force operates at maximum effectiveness.
Concepts and Doctrine	The concepts and doctrine will underpin the full exploitation of the capability, in particular with respect to network enabled capability and US transformation.
Structures	The single-service force structures contribute to the realisation of the optimum capability.

25. The Senior Responsible Owner will remain in post for 3–4 years and will operate with the direct authority of the Defence Management Board. He will exercise this authority principally by influence and persuasion, as he will not own the funds for the programme, these being held by a number of budget-holders across the Department. Where it is necessary to have management agreements in place with budget-holders these will be set up. The SRO and his very small team will not be doing the work of individual areas, but will ensure overall coherence.⁴²

26. Being associated with problem projects does not seem to affect individuals' careers, so we questioned the Department about incentives to encourage good performance. The Chief of Defence of Procurement said that he believed they had strong arrangements to recognise team and individual excellence which included the respect and recognition of peers and small financial bonuses. Although there were examples of excellence in project delivery, more consistent performance was needed across all projects. To this end, he was introducing a new performance management regime from 1 April, central to which was the appointment of three operations directors who would closely monitor project performance.⁴³

42 Qq 210–215; Ev 39–40

43 Qq 234–238

Formal minutes

Wednesday 21 July 2004

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Allan	Mr Frank Field
Mr Richard Bacon	Mr Brian Jenkins
Mrs Angela Browning	Jim Sheridan
Jon Cruddas	Jon Trickett
Mr Ian Davidson	Mr Alan Williams

The Committee deliberated.

Draft Report (Ministry of Defence: Major Projects Report 2003), proposed by the Chairman, brought up and read.

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

Paragraphs 1 to 26 read and agreed to.

Conclusions and recommendations read and agreed to.

Summary read and agreed to.

Resolved, That the Report be the Forty-third Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

Ordered, That the provisions of Standing Order No. 134 (Select Committees (Reports)) be applied to the Report.

[Adjourned until Wednesday 8 September at 3.30pm]

Witnesses

Monday 23 February 2004

Page

Sir Kevin Tebbit KCB CMG, Sir Peter Spencer KCB, Lieutenant General Rob Fulton, Ministry of Defence, and **Mr Mike Turner CBE**, BAE Systems plc

Ev 1

Wednesday 25 February 2004

Sir Peter Spencer KCB, and **Lieutenant General Rob Fulton**, Ministry of Defence

Ev 21

List of written evidence

Letter to the Committee from the Permanent Under-Secretary of State, Ministry of Defence

Ev 20

Ministry of Defence

Ev 20

Ministry of Defence

Ev 39

List of Reports from the Committee of Public Accounts Session 2003–04

First Report	Tackling fraud against the Inland Revenue	HC 62 (<i>Cm 6130</i>)
Second Report	The new electricity trading arrangements in England and Wales	HC 63 (<i>Cm 6130</i>)
Third Report	The Sheep Annual Premium Scheme	HC 64 (<i>Cm 6136</i>)
Fourth Report	Improving service delivery: the Forensic Science Service	HC 137 (<i>Cm 6155</i>)
Fifth Report	Warm Front: helping to combat fuel poverty	HC 206 (<i>Cm 6175</i>)
Sixth Report	Department of Trade and Industry: Regional Grants in England	HC 207 (<i>Cm 6155</i>)
Seventh Report	Progress on 15 major capital projects funded by Arts Council England	HC 253 (<i>Cm 6155</i>)
Eighth Report	The English national stadium project at Wembley	HC 254 (<i>Cm 6155</i>)
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Oral evidence

Taken before the Committee of Public Accounts

on Monday 23 February 2004

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Bacon
Jon Cruddas
Mr Ian Davidson
Mr Frank Field

Mr Brian Jenkins
Mr Gerry Steinberg
Jon Trickett
Mr Alan Williams

Sir John Bourn, KCB, Comptroller & Auditor General and **Mr Tim Banfield**, Director, National Audit Office, further examined.

Mr Brian Glicksman, Treasury Officer of Accounts, HM Treasury, further examined.

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL:

Ministry of Defence: Major Projects Report 2003 (HC 195)

Witnesses: **Sir Kevin Tebbit KCB CMG**, Permanent Under-Secretary of State, **Sir Peter Spencer KCB**, Chief of Defence Procurement and **Lieutenant General Rob Fulton**, Deputy Chief of the Defence Staff for Equipment Capability, Ministry of Defence, and **Mr Mike Turner CBE**, Chief Executive, BAE Systems plc, examined.

Q1 Chairman: Good afternoon, welcome to the Committee of Public Accounts. I apologise for the delay in starting, we were receiving a brief on smart acquisition, we now claim to be experts. Perhaps I can start by welcoming Mr Midaoui who is the President of the Court of Accounts in Morocco, you are very welcome and thank you for coming here this afternoon. We are having two sessions on the Major Projects Report 2003. This hearing is going to focus on the poor performance of four older projects and the second set on Wednesday will examine projects since the introduction of Smart Acquisition. For the session today we are joined once again by Sir Kevin Tebbit, the Permanent Under-Secretary of State, Ministry of Defence, by Sir Peter Spencer, who is the Chief of Defence Procurement, by Lieutenant General Rob Fulton, who is the Deputy Chief of the Defence Staff for Equipment Capability and by Mr Mike Turner who is the Chief Executive of BAE Systems. You are all very welcome, gentlemen, and thank you for agreeing to come and speak to us this afternoon. Sir Kevin, could I start by asking one or two questions, we see if we look at the Comptroller and Auditor General's Report on page 27 on paragraph 3.2 which deals with the Astute Submarine. It offers advanced capabilities compared to existing programmes but we also know there has been a 43 month delay in delivering them. Sir Kevin, what impact do you think that has had on Britain's ability to respond to the wide range of threats we face?

Sir Kevin Tebbit: Let me say at the outset that I entirely agree with the implication of your question that this is not good enough and we need

to do better. As of now the delay has not had an impact on the ability to maintain our submarine coverage and role. We have 10 submarines currently in the SSN so-called hunter/killer role. The delay will be reviewed and kept under review. I cannot say at this stage whether it means that we will need to refit existing SSNs that we would not otherwise need to have a further refit for or whether it can be managed by staggering deployment arrangements. That is certainly something that we keep under review to maintain and to ensure that we can maintain adequate coverage for these systems which, as you know, apart from the other things are cruise missile delivery systems and important to us.

Q2 Chairman: The new submarine has a lot more facilities for delivering special forces into theatre which existing submarines may not have had, would you like to comment on how this very long delay is going to militate against our ability to wage war?

Lieutenant General Fulton: Certainly, Chairman, we do not have the capability that the Astute will bring. The Astute will bring improved emphasis to operate in littoral waters as opposed to deep waters which the original SSNs were designed for, it will have better intelligence-gathering capability, better ability to operate SF from across the whole of the fleet and of course land attack to which the Permanent Secretary has referred. It is true that the Astute will bring better capability but for the time

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being we do have the S&T boats which are very capable in their own right as they have recently proved.

Q3 Chairman: Other members will come back to that. Could I refer you to page 28, 3.8 which says that the re-negotiated Astute contract has only agreed a price for the first submarine, does that mean that there is a prospect that for the second and third submarine the price may rise, there may be further delays and you may be put in certain difficulties?

Sir Kevin Tebbit: The figures in the Report are our estimates of the price for the submarines, that has yet to be negotiated. One of the reasons for amending the contract was to move away from the previous arrangement—which we would not do today, I have to say—whereby we put both the design and the development in the same contract as production and wait until we have a mature, fixed and reliable design before we move to that production phase for both two and three. I cannot say at this stage that this is a more reliable way of doing it than the previous contract allowed for. What I can say is that since we re-based the contract the programme has proceeded satisfactorily and various positive aspects have been achieved, we are now more confident that the programme is on the right footing. That is all that I can say at this stage.

Q4 Chairman: You understand our concern.

Sir Kevin Tebbit: Indeed.

Q5 Chairman: I am talking about a single submarine costing in the region of £1 billion, when you come to a second and third submarine far from reducing costs you might increase them, what commitment can you give to the Committee that you will be able to reduce costs and construction time in the future for your second and third submarines?

Mr Turner: Chairman, from what Sir Kevin said I was pleased to have confirmation that we will not follow this type of contract in future. I think we will have a stable design clearly coming out of the work that is now underway, indeed we achieved design freeze last autumn of the design phase of the programme. We are now working on the first submarine. In fact when we re-negotiated the contract with CDP a year ago now we agreed to incentives on the second and third in terms of the learning curve and we can obtain significant benefits in profitability, by coming down a 10% improvement in man hours or a 15% improvement in man hours there is more profit attached to the contract if we do that, and that is the incentive we have accepted. The key thing is that we do not have this overlap of design and production in future, it is just impossible. In terms of value for money for the taxpayer I just want to make the point that the equivalent submarine in America is far, far more expensive than these submarines, far more expensive and less value for money for the taxpayer.

Q6 Chairman: Let us continue on the value-for-money theme and have a look at the Typhoon, formerly known as the Eurofighter we have a £2.3

billion cost increase. We have a four and a half year delay to this Typhoon programme, do these aircraft offer value for money to the taxpayer?

Sir Kevin Tebbit: First I should say that virtually all of the cost increase which is shown for Typhoon is in fact the result of resource accounting, in other words it is a money value attached to time delay, it is a cost to the Defence Procurement Agency but it will be offset within the MoDs accounts by reductions in the costs borne by the frontline by not having the capability yet. It does not mean to say that it is not a bad thing, it means we are going to have to use our existing Tornado and Jaguar aircraft for longer. But there are balancing items. If you look across the whole range of these extra costs, 42% of those costs are broadly speaking internal Ministry of Defence accounting arrangements, they are not extra costs being paid out by the taxpayer to any of the companies. It is not, as it were, quite as bad as it looks but it is bad enough for me to be concerned and for us to want to push even harder on the programmes. In terms of value-for-money of the aircraft, yes, this is the biggest European defence collaborative project ever, it is worth £50 billion for the four countries concerned, and there are additional orders, Austria and Singapore are interested and there is a commitment from Greece. It is going to be a very large and successful project with the most versatile aircraft to date provided at the end of it. It is just a pity that it has taken so long to emerge from what is a rather complicated four-nation contract.

Q7 Chairman: The same question to Mr Turner, are you prepared to justify the increased cost in terms of value for money?

Mr Turner: I think we should say first of all despite what is often written in the press this is the capability that the United Kingdom Armed Forces need for the future in terms of peace-making and peace-enforcing. It was always designed at the very beginning for both the air-to-air role and the air-to-surface role, both of which are important in modern war-fighting and peacekeeping. The plan has always been that the air-to-air variance would come into service first, as it is doing now, to replace the Tornado ADVs with the air-to-surface capability following. In terms of value for money, again I make the point, in comparison with the American competitor, the F22, which is the nearest equivalent to the Eurofighter Typhoon, they are more than twice the price, so in terms of value for money for the taxpayer they are twice the price. For JSF, the Americans and partners are paying \$40 billion for just the design and development phase. Here we are talking about some £25 billion in total if you add the full development bill in to Eurofighter, with 232 Eurofighters, so compared with \$40 billion for just the design and development phase of JSF £25 billion for the entire design and development and supply of 232 Eurofighters is extremely good value for money for many, many years to come.

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Q8 Chairman: Eurofighter was perceived in the early 1980s to deal with the Russian threat, there is very little threat now, are you still convinced that operationally it meets its needs?

Sir Kevin Tebbit: Yes. It is a versatile aircraft. To the extent that we have increased costs this year, £100 million or so of that has been to bring forward into tranche one what would otherwise only have been in tranche two, changes which would make it a more versatile platform. I think that is the point. These days we probably have enough air defence; what we do not have enough of is precision attack aircraft. Remember these things do last a long time, we are having to look out to 30 years. Unless we have something that is very advanced and very sophisticated it quickly dates.

Q9 Chairman: Can I change tack a bit, Sir Raymond Lygo, a former Chief Executive of BAE Systems recently said that the company consistently underbid for contracts knowing that it could recover the true costs when the project was underway. How do you assure yourself this does still not happen?

Sir Kevin Tebbit: I do not know what Sir Raymond Lygo did in his day, I think that was rather a long time ago, at least 20 years ago, if not more. That may well have been in the old days of so-called cost plus contracts, I do not know. All I can say is that I am absolutely certain that is not the way that it is done today. There is the very sophisticated, and it needs to get even better, system of understanding the price base of the bid. Competition of course is competition and companies find the market level through that process. If there is not competition then there is a very sophisticated way of establishing what the right price is and what the right profit level is within that. I cannot comment for Sir Raymond Lygo but I am satisfied that the world is a very different world today.

Q10 Chairman: Mr Turner what has made you change your approach since Sir Raymond Lygo's day when you consistently underbid for contracts?

Mr Turner: We have never done that.

Q11 Chairman: Sir Raymond is wrong then?

Mr Turner: Absolutely wrong. Sir Raymond left the business in 1989, I have been with British Aerospace/BAE Systems for 37 years in commercial and business programme jobs and we have never followed that approach, never.

Q12 Chairman: Okay. You sought direction on the Hawk Trainer, did you not? There are factors such as the industrial capacity and employment as well as the cost and performance of the aircraft, how do you justify this decision of the Secretary of State?

Sir Kevin Tebbit: How do I justify his decision?

Q13 Chairman: Yes, to go ahead with it?

Sir Kevin Tebbit: If I may say so it is not for me to do so. I advised the Secretary of State and went through the proper process. He took my advice, discussed it with his colleagues in the Cabinet and

came to a decision. That is the Government's decision which I will implement to the best of my ability.

Q14 Chairman: What was it that led you to you seek the direction? Were you aware of the industrial capacity arguments and the employment argument when you asked for direction? Why did you seek the direction in those circumstances?

Sir Kevin Tebbit: I was aware of those considerations, they were not considerations that I ignored but I gave my advice which balanced, in my own view, the various considerations. Ministers then looked at these issues and made a decision. I cannot say more than that, the detail of my advice to the Secretary of State has to remain confidential. It is now a matter for the Secretary of State.

Q15 Chairman: Lastly, Mr Turner, why is the Hawk so central to the prosperity of your company?

Mr Turner: I think it was fairly central to the 2,500 people who made a living for many, many years on the Hawk. As a nation the original Hawk cost the taxpayer in today's money about £1 billion, since then we have had over £10 billion of exports, 19 countries, 800 aircraft, it has been an extremely successful aircraft. If we had not selected the Hawk but selected the Aermacchi 346—that I think was the recommendation from MoD officials—we certainly would not be in the position of winning the Indian contract, which I believe at long last we are in a position to do, and many more contracts in the future on Hawk. I think Geoff Hoon and Lord Bach did exactly the right thing. We have this major problem on the very narrow definition of value-for-money in MoD, it is the wrong definition and it would result in great losses to this country if we did not take the wider definition of the exports, the wealth creation and the defence industrial base into account, which Mr Hoon and Lord Bach did, thank goodness, it was the right thing to do for United Kingdom Limited.

Chairman: Thank you for giving a robust answer.

Q16 Jon Cruddas: Can I return to the Astute Submarine, the contract was place in March 1997 following protracted negotiations. Paragraph 3.3 on page 27 the Report says, "It was not until the formal Design Chill process in late 2001, and into 2002, that the full seriousness of difficulties began to be realised". Why did that occur so late compared to the protracted negotiations and on-going development since 1997? Does that say something about the project management?

Mr Turner: I do not think it does. In fact I do not believe you could get finer project management than we had on the Astute and for that matter Nimrod. You have to look at the mid-90s when GEC took this contract, they had no experience at all for being the prime contractor, no experience of design authority on a nuclear submarine, they had never made a submarine and yet they accepted a fixed price design and development and production contract of what the Americans call the most advanced technology project in the world, including going to

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the moon, and they got it wrong. We made a big mistake. We have now corrected that mistake and I think the programme is now going forward, as Sir Kevin said, belatedly on a sensible basis where the contractor is properly incentivised and is taking on the appropriate risk, which is now a sensible way forward.

Q17 Jon Cruddas: Sir Kevin, it was the first submarine to be designed entirely by the prime contractor, what have been the implications of that for you?

Sir Kevin Tebbit: What have been?

Q18 Jon Cruddas: Yes. What has been your experience of that?

Sir Kevin Tebbit: I think it is fair to say that both the Government and industry underestimated the impact on skills and experience and expertise of what was a gap in submarine production. In other words there was a gap from the end of the Trident Class build to the beginning of this. In that process the skills transfer which should have occurred from the Ministry of Defence, who previously designed these things, to industry did not take place fully enough. Clearly that expertise was not absorbed as quickly as it should have been, that is the first thing. The first experience was that, as it proved, there was not enough expertise there, built up quickly enough again, to deliver the contract on time. In other words building started but the design was not sufficiently mature enough.

Q19 Jon Cruddas: When did you discover or get an inkling that the yard was being overloaded?

Sir Kevin Tebbit: I do not know about being overloaded. Can I say that the contract also was very much a prime contract which placed responsibility on the contractor and put the Department at arm's length, therefore it was not until the autumn of 2002 that we became aware of just how serious it was. We were aware that there was some time slippage but not aware that the situation was serious, as indeed proved to be the case.

Q20 Jon Cruddas: Back to Mr Turner on that, you committed to the Astute programme knowing that the workforce had been down-sized, is that correct?

Mr Turner: GEC knew at the time there was no continuity and the Royal Corps of Naval Constructors at Barrow were not responsible for this submarine for the first time ever, yes they knew that. The expertise was clearly not built up in industry by GEC Marconi at the time.

Q21 Jon Cruddas: You knew there were prospective skill shortages?

Mr Turner: They believed they could build those skills up in time to do it.

Q22 Jon Cruddas: What comes out in the Astute case and the Nimrod case is in terms of the review of the procedures in the MoD if you look at Figure 20 in terms of the issue of co-location and in terms of the Nimrod case paragraph 3.23 "the Department has

co-located key projecting staff on BAE Systems' sites". The point I am getting to is there were structural problems in terms of skills, the capacity of the yard and other projects.

Mr Turner: There were very clear organisational issues. Marconi GEC clearly set up the prime contracting office in the South, clearly the yard was in the North at Barrow. When we at British Aerospace and Marconi came together we had undertakings that said that we had to keep them separate, they appear crazy in retrospect but that is what we were required to do. It was only at the beginning of 2002 we went to the MoD and said we should now bring these together and get an integrated view of the programme and that is what happened during the course of 2002. When that happened we realised we had a 36 month issue to tackle.

Q23 Jon Cruddas: This is for the MoD, is the question of strategic access to building facilities a generic issue or has it been amongst some of these projects because it seem to emerge on a couple of them at least?

Sir Kevin Tebbit: In the mid-1990s it was still the view in Government, Treasury as well as the Ministry of Defence, that the best way of delivering the capability you wanted was by prime contracting, which put the responsibility for managing risks in the programme as well as delivering the programme itself on to the prime contractor. The experiences we have had have suggested that was not the best way forward. We now go for a more partnered approach with closer engagement between the Department and industry to deliver what we need. In this case for an Astute in the late 1990s we had two people on the project with the company we will work up next year to something like 24 people. I think there is a measure of change. Experience is showing that we now need to place risk where it can best be managed rather than working purely from a doctrinal position of giving it automatically to the prime contractor and then standing back. I am conscious I am trespassing here on the expertise of the Chief of Defence Procurement.

Q24 Jon Cruddas: Do you want to comment?

Sir Peter Spencer: I do not think I have much to add, the principle is as has been described. These days with the benefit of hindsight we recognise there is a limit to which you can transfer financial risk. We have never been able to transfer operational risk or time risk but we assumed that incentivised contracts would bring enough motivation inside the company to ensure those two risks were not incurred because of the financial incentives on the company to deliver. If you get something that is very much more complex than assumed when it was originally priced you then discover the sums of money are huge and there is a finite amount as to how much you have been able to transfer financial risk. You need to talk about risk-sharing, risk-assignment and if you have a large chunk of technical risk then you need to resource that risk accordingly.

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Q25 Jon Cruddas: Just going one step further on risk transfer, a lot of this risk transfer ends up in terms of the taxpayer, and that is where this Committee comes in, in terms of Figure 19 on page 28, the restructuring of the risk transfer effectively on the Astute programme, as set out in paragraphs 3.8 and 3.9 leaves the Department taking a smaller share of any saving but still bearing 70% of overruns compared to the previous regime, is that an example of a restructuring that offers better value for money to the taxpayer than that which existed before this restructure? It seems to me to be a pretty good deal for the BAE actually.

Sir Kevin Tebbit: It incentivises the contractor to deliver the contract at a lower overall cost. The concept is that we do not have to spend more money on the overall contract for the contractor to get a higher profit, he can maximise the profit if he hits the incentivised levels. Effectively this is a greater incentive to him, he gets a bigger share of the profit.

Q26 Jon Cruddas: Conversely he does not take any greater financial hit in terms of the overruns despite the fact that this was a re-negotiation of the contract.

Sir Kevin Tebbit: He does not suffer a greater disincentive, he is given a greater incentive.

Q27 Mr Steinberg: One gets the impression reading the Report, Sir Kevin, that the previous government went into these contracts completely with its eyes closed and we now see the consequences of their actions. On the other hand if we read the Report carefully I would make the point, and we do not make critical points in this Committee if we can help it, this Government seems to be going into major contracts with its eyes closed, so nothing seems to have changed much. The only thing I can put it down to is they must get some dreadful advice from civil servants like yourself, why do they make so many mistakes?

Sir Kevin Tebbit: I do not think we do make quite so many mistakes. The four programmes that you are looking at, the four legacy programmes, they have caused a 6.1% increase in the total forecast cost of overall major projects, which will be incurred over a number of years. That is very disturbing for me because I have a budget which is growing by 5% over three years and clearly this cannot go on uncontrolled. What we have seen here is a reversal of what had been a very good trend for the last five years of reduction in the cost increase of our programmes. I take it very seriously. I am encouraged firstly by the knowledge that it is mainly to do with these four programmes, it is not to do with the whole population. I would submit to you, you can see it in the Report itself, for the newer projects, the so-called Smart projects, performance is much better by whatever measure you care to apply.

Q28 Mr Steinberg: The programmes we are talking about are basically legacy programmes and the Nimrod Programme is a prime example of what I mean, the perfect example. The contract has been negotiated from its original agreement three times simply, as I read the Report, because BAE could not

deliver what they were signing to deliver so the taxpayer has to pick up the Bill because BAE cannot deliver. Am I interpreting that correctly or not?

Mr Turner: BAE, now BAE Systems took the contract in the mid-90s which it clearly should not have done, it was the wrong contract but for strategic reasons, I remember at the time, we believed in order to keep continuity of the defence resources in the United Kingdom before we got on to the Typhoon and what is now the JSF Programme, it was a good idea at the time. We had a monopsony who said, "if you want to do business these are the terms in which we do business", we had no alternative, we wanted to keep our resources in place for the long term and we took that contract.

Q29 Mr Steinberg: You took a contract that you could not deliver, is that what you are saying?

Mr Turner: No. At the time the board was convinced—I was on the board but I was not responsible for this programme—a presentation was made to the board by the programme management team, even though no de-risking had been done—less than 1% was spent on de-risking and Smart Acquisition says 15%—with the contract beforehand. We were persuaded that this would be a profitable contract.

Q30 Mr Steinberg: By whom?

Mr Turner: By the project management team.

Q31 Mr Steinberg: In your company?

Mr Turner: In my company. We were wrong. When the MoD wanted to change the nature of the Nimrod specification and performance to make it more command and control and make it launch smart weapons report we had a negotiation with MoD to re-negotiate the price and that is what we have done.

Q32 Mr Steinberg: Why is it that you took a contract that you now admit that you should not have taken in the first place, why is it that the taxpayer loses out and not BAE?

Mr Turner: We have lost. I am afraid our shareholders have lost £1 billion in total on both Astute and Nimrod, most of it is on Nimrod, and that is a very, very heavy price to pay.

Q33 Mr Steinberg: The Government has lost £1 billion and three aircraft.

Mr Turner: I do not follow the numbers that way.

Q34 Mr Steinberg: It says so in the Report.

Mr Turner: There are costs of capital issues in there which I do not fully understand. At the end of the day the Armed Forces of the United Kingdom will get a very, very efficient system which is far cheaper than you will get anywhere else in the world. I might also say in the MoD's defence while the Report says about 6% overspend on all of the programmes in here, if you look at the equivalent in the United States it is over 20%. Whilst we have room for improvement we are still better than the United States.

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Q35 Mr Steinberg: We are not here to investigate the United States, we have a bad enough job investigating ourselves. The taxpayer, as I read the Report, I may well be wrong, has lost £1 billion and three aircraft out of this deal. BAE have not lost a great deal, Mr Turner is telling us they have lost £1 billion as well?

Sir Kevin Tebbit: The payments to industry are £303 million, we have paid £10 million for additional capability, which is the area that was being discussed, by converting aircraft for more general use, and the interest on capital there is £225 million, that is to say internal accounting arrangements, which covers the time delay, so the figures are lower than that. That does not mean to say that it is not serious.

Q36 Mr Steinberg: You also lost three aircraft because you agreed to build three aircraft less in the contract?

Sir Kevin Tebbit: Yes, indeed, from 21 to 18.

Q37 Mr Steinberg: What are three aircraft valued at?

Sir Kevin Tebbit: Until we price the aircraft I cannot tell you, we have not specifically priced them yet.

Q38 Mr Steinberg: Come on, what do they cost, £1 million each, £100 million each or £50 million each? You buy the bloody things, come on, how much does an aircraft cost?

Sir Peter Spencer: In terms of straightforward unit production cost the target cost at the moment is between £53 million and £60 million.

Q39 Chairman: We have lost £180 million worth of aircraft in the renegotiating of the deal.

Sir Peter Spencer: In terms of living inside the budget that was one of the measures which was taken.

Q40 Mr Steinberg: We have lost just under £1 billion in capital and revenues and we have lost three aircraft valued at about £150 million. That is not a bad deal for BAE. The Chairman made a point which you denied, the chairman inferred that Sir Raymond Lygo said that they would take on a contract because they simply know that at the end of the day they have the Ministry of Defence by the proverbials and they are going to have to pay regardless of what happens. That is true. You know that if things go wrong the taxpayer is going to pick up the bill and in this case the taxpayer picked up something like £1 billion, plus three aircraft valued at £150 million, that is not bad.

Mr Turner: Mr Steinberg, it cost our shareholders £800 million on Nimrod.

Q41 Mr Steinberg: You took the contract in the first place, nobody forced you to, Mr Tebbit did not come along with a gun and say, "You have to take this contract".

Mr Turner: We took it. That is why we had to take what I call the medicine of £800 million for our shareholders.

Q42 Mr Steinberg: Why should I and everybody sitting in this room who pay their taxes basically pay your company a subsidy of £1.2 billion because you made a mistake?

Mr Turner: The mistake has cost our shareholders £800 million. The taxpayer will still get value for money.

Sir Kevin Tebbit: Mr Steinberg, the figures are not as large as the ones you suggested but I do take your point in general. The reason we did not enforce the contract is the real point, the reason we did not enforce the contract is because we accepted that the damage that this was doing to the company was such that we had to take cognisance of it. If we carried on as we were there was a real risk that we would not have got the capability at all. Why should the company continue to spend a fortune and keep producing to meet the contract when they have a responsibility to their shareholders, we had to take into account the company's position, we do have a defence industrial policy, we have something like £37/38 billion worth of business over a very long period of years into the future with BAE Systems. We had to take into account our own need of this capability. We judged that from where we were last year that proceeding to re-negotiate the contract with incentives and tighter arrangements in it was the best value for money in the circumstances.

Mr Steinberg: You know I have a time limit, I do not want to be rude.

Chairman: He does not want to be rude to you!

Q43 Mr Steinberg: Sir Andrew Turnbull said that I was not to be rude to you. Could we move on, you read the Report and you see long overruns, extra costs and being forced to take actual weapons that we do not even want because the company will not re-negotiate. Here the company are making mistakes, the Department are making mistakes, everybody is making mistakes and here we are we have to now accept a weapon that we do not even want, it is going to be put into storage, left in storage or you might be able to sell it to somebody else who may use it at a later date.

Sir Peter Spencer: I think there is a misunderstanding.

Q44 Mr Steinberg: It is in the Report. I said this last week, we read different reports, you get a different report to us, I am sure you do.

Sir Peter Spencer: Can I finish?

Q45 Mr Steinberg: Let us hope that we are reading the same Report, Sir Peter.

Sir Peter Spencer: If you look at the breakdown of the cost overrun of Brimstone you will find that the large majority is interest on capital because the programme has been extended by the MoD twice by periods of 12 months, the first to align the weapon programme with the aircraft programme and secondly during the course of last year's operations in Iraq and prior to that the requirement was deemed to be more important to get Storm Shadow fitted

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ahead of time so that could be deployed operationally. These weapons will still be extremely useful, there was in the light of—

Q46 Mr Steinberg: These weapons could be extremely useful!

Sir Peter Spencer: I said “will be”. We have had a very successful series of firings, the weapon outperforms its spec and it will be brought into service as soon as we are able to.

Q47 Mr Steinberg: Do you have more than you want, is the Report correct there?

Sir Peter Spencer: There was a judgement made that with the benefit of hindsight we would have bought a smaller number of weapons than we originally contracted for. We were unable to agree terms with the company acceptable to us and to the taxpayer on which they would take them back.

Q48 Mr Steinberg: It is not acceptable to say that we have got some weapons that may be useful.

Sir Peter Spencer: Will be useful.

Q49 Mr Steinberg: In hindsight we ordered too many, it is with the taxpayers’ money you are ordering too many.

Sir Peter Spencer: If you look at the time this order was taken you would had to have had the gift of foresight to know about changes in operational circumstances. These days we go for a more incremental form of acquisition. In the context of whether or not we have the right number as of today’s judgment of operational circumstances with the benefit of hindsight we would have bought a few less. Unable to get the company to agree to take them back we have put them back into our costings.

Q50 Mr Williams: We are looking at major contract reports, really these four could be in a report tabled “BAE’s major contract failures”, could they not?

Mr Turner: I do not know what other ones you are thinking about.

Q51 Mr Williams: Let me clarify that and see if you agree on the facts, in the case of the Astute Submarine that has already been put to you, £1 billion over costs and 43 months late, is that a correct summary?

Mr Turner: Yes.

Q52 Mr Williams: Nimrod, 21 aircraft due by 2003, re-negotiated three times, the first aircraft will not be available until 2009, nine years to cover a project you took to deliver in three years, that is correct, is it?

Mr Turner: Correct.

Q53 Mr Williams: If we look at the Typhoon, BAE cost overrun of £2.3 billion and 54 months late in delivery, is that correct?

Mr Turner: This is not down to BAE

Q54 Mr Williams: It is Rolls Royce as well.

Mr Turner: There are a lot of factors in that.

Q55 Mr Williams: You seem to be the major players in all of these managerial disasters, because that is what they are. When we come to Brimstone we find you have 37% in the company that produced Brimstone (Advanced Air-Launched Anti-Armour Weapons) that when it is launched it has a tendency to collide with the aircraft that launched it. Instead of selling it why do we not give it to our enemy!

Mr Turner: As you have already heard, it is an ideal weapon, it is above specification. I accept no responsibility whatsoever for any delays or cost increases on that weapons system.

Q56 Mr Williams: If you take the Astute Submarine again, I said that it is a managerial failure on your part, undeniable that it is.

Mr Turner: I deny it.

Q57 Mr Williams: I do not think you have cause to sit there and say otherwise.

Mr Turner: I deny it.

Q58 Mr Williams: You deny it.

Mr Turner: Yes, I do.

Q59 Mr Williams: Where were you when you did not identify the risk with the computer aided design and seven years later were unable to address them, you had to go to someone else to solve them?

Mr Turner: GEC took the contract in good faith at the time believing they could perform in line with the price and deliver the requirements. Clearly they had never done this before, they made certain assumptions, there had been no de-risking, less than 1% of the value of the contract was spent on de-risking, and that is a lesson to be learned. They clearly took the wrong contract, it was wrong at birth and I cannot believe that any project management team in the world could have done any better than the GEC Marconi team and the BAE Systems team have done in trying to recover the situation. I should also mention to you that the American help they called upon to speed up the process—because they had spare resources—is five times the price of ours in the United Kingdom.

Q60 Mr Williams: You see in the case of the Nimrod, Sir Kevin, you apologised for the delays in the Nimrod and the costs increase, you got angry with the company and told them, we will teach you to mess us about, we are going to reduce your risk and we are going to give you extra incentives. Some of us might have said why on earth should you give them extra incentives and take risk from them when they are manifestly incapable of providing things they contracted to sell you?

Sir Kevin Tebbit: As I have explained we got to a hugely undesirable position with these contracts. We had to judge what the best way forward was, we judged, and this was a collective Government

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decision, this was negotiated between the Ministry of Defence and Treasury, that the way we decided to go represented the best value for money in the circumstances. An alternative was to throw away investment, the alternative would have been more expensive to get the capability we needed and therefore we judged this to be the best way forward in the circumstances and the contracts which have been really based on much better lines are working much better than previously. I am not defending the performance in the past, what I am saying is that the alternatives to what we did would have been less satisfactory than what we did, it was the least bad alternative.

Q61 Mr Williams: Is the reality of the situation you had you no weapons to use to defend yourselves contractually, the reality is that they do what they like and you have no alternative. Before you deny that, and I hope you will not, I am sure you will not, can I refer you to your own ministry's memorandum of 30 May last year to the Defence Select Committee, there in relation to the Typhoon you say, "As the only suitably qualified United Kingdom firm to undertake the development and manufacture BAE Systems and Rolls Royce were the natural choice of United Kingdom Partners". You had no one else, that seems to be your big problem, they had you over a barrel. In the same paragraph on page 27 of your memorandum you say, "the Typhoon project is fundamental to maintaining industrial capability in the United Kingdom". It is interesting it seems almost more of a priority to maintain the industrial capability than the defence capability. Is the reality they have you over a barrel and that quotation confirms, if I may return to Mr Steinberg's phrase they have got you by the proverbials and there is not a thing can do about it.

Sir Kevin Tebbit: I think our proverbials are both being squeezed, if I may say so, the company through its share price and the Government through extra costs. Mr Turner correctly said that although it is extra cost it is still cheaper than the alternatives, I do have to underline that. We do have a defence industrial policy which is based on a view that it is important for Britain to keep for strategic reasons a defence industry that is vibrant, is go ahead and is still exporting incredibly well round the world, and that is happening. If we took a different approach and followed the logic of what you said it means we would be buying off the shelf from the United States probably—

Q62 Mr Williams: I understand that.

Sir Kevin Tebbit: Prices would go up, prices would get even more expensive and quite possibly the capability would be denied us.

Q63 Mr Williams: I was an industry minister at one time and I was a minister involved in the decision to go ahead with the Euro aircraft.

Sir Kevin Tebbit: I do not regard that as being over a barrel. A defence industry which can still export to the tune of £5 billion to £6 billion a year is not a weak organisation that has us at a disadvantage either. It

is simply that these particular contracts proved to be contracts where we sought to transfer more risk to the private sector than the private sector could actually handle, and that is the lesson we have to learn.

Q64 Mr Williams: The reality is that however you address it you have no choice, there is nothing much you can do, it is a one-way system, they are taking the money from you but on the one occasion, the one occasion, you wanted to re-negotiate, in the case of Brimstone you wanted to reduce the numbers was there any *quid pro quo* there? Not at all. For three years you negotiated with them and they still will not do a deal with you in relation to that. All they wanted was to take the taxpayers' money.

Sir Kevin Tebbit: There is actually a deal with Brimstone, not the one we were looking for, which was for 25% to be taken back. 75% of them are really important and needed for anti-armour. We do have an agreement with them about exports which is to some extent helpful. Can I return to the point about the difficulties of our system, it is true that there are cost overruns but in at least one of these cases, and I suspect more than one of these legacy projects, they would be a lot more expensive if we did it in any other way. Mr Turner is absolutely accurate in what he says about America's submarine production. If it were possible to build outside of the United Kingdom, and I have to say it is not because of legal and other obligations, it would cost us a lot more than the re-negotiated price.

Q65 Mr Williams: Back to reality, you have a sad situation, I do not blame you, you do not have any alternative, they are the only supplier you have.

Sir Kevin Tebbit: My point is we are not negotiating from a position of weakness because these are still very competitive prices we are talking about.

Mr Williams: I think the Committee would be rather astonished by that statement.

Q66 Chairman: To the fair to Mr Turner he is dying to get in. You have to address this point which Alan Williams has put forcefully to Sir Kevin that as the only supplier you have the Government over a barrel. Try and give us your best defence now.

Mr Turner: You say that, sir, having written off the £1 billion and the reaction I have had from my shareholders I think I have lost most of my proverbials. In terms of having no alternative, if the United Kingdom MoD carried on with its procurement strategy of the mid-90s I can tell you the only alternative would be the United States and that would cost far, far more money for the United Kingdom taxpayer if it wants to keep its Armed Forces doing what it does round the world because we would not stay in this business. We have been very clear on the Carrier, for example, where we are insisting on the de-risking contract before we enter into firm arrangements in terms of cost and delivery. We have learned our lesson, in fact if I said to my shareholders tomorrow we are walking away from MoD business I think they would be delighted.

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Q67 Mr Williams: You may have learned your lessons but it is the taxpayer who pays for your lessons, not your shareholders.

Mr Turner: The shareholders have paid a huge price, more than £1 billion, they have subsidised the United Kingdom defence budget by over on £1 billion.

Sir Kevin Tebbit: Another way of putting this is we did not release the company completely from its contractual obligations, we said that we would negotiate that there needed to be shared pain and shared responsibility and that is what happened, we both contributed to the costs of the new contracts, which we have now negotiated, and are determined to deliver. That now includes a contract on Nimrod as of today.

Q68 Mr Williams: At the end of the day you are saying it is cheaper to do it this way but at the end of the day you have a £3 billion cost overrun and we do not have any of the equipment meaningfully in operation. We have been paying money for nothing that troops can use effectively at the moment.

Sir Kevin Tebbit: We have not paid it. These figures are a total forecast of the costs over the years to come of what these projects might now cost, these are not costs already incurred. I do need to come back to the point on Resource Accounting, 42% of the costs shown in this Report—that is our calculation, I do not know if the C&AG would confirm that—are internal accounting, broadly speaking internal balancing figures within the Department, they are not money paid to industry or anybody else, it reflects the time delay.

Q69 Mr Williams: Can I ask you to have a little gamble, you say they are not costs to the taxpayer but they might be in future.

Sir Kevin Tebbit: No, I did not say that.

Q70 Mr Williams: What money would you put on delivering the current estimate and how much would you put on it being overrun on the current estimate?

Sir Kevin Tebbit: I wonder if I can ask the Chief of Defence Procurement.

Q71 Mr Williams: Have a gamble?

Sir Peter Spencer: I do not gamble.

Q72 Mr Williams: It is not a bad thing, how do you pay off?

Sir Peter Spencer: We reset performance time and cost of Astute Class Submarine. We are in the game of managing risk, there are still risks which we have to mitigate and buy out so we have made a best estimate as to how Astute is going to come out. We have a very much better handle on it now but it will still be some time before we can be certain. That will occur when we agree the prices for the second and third submarines. The programme is certainly under much better and stronger control and importantly it is meeting the key milestones which have been set, most importantly the design freeze which was referred to earlier was achieved slightly ahead of the planned programme. There are encouraging signs of

real progress keeping up to date with the revised plan. So far as Nimrod is concerned we are still doing a little bit more work but the production design for Nimrod is more advanced than it is for the submarine. Interestingly the bit which at the beginning of the programme looked to be most difficult, which is the mission system, is already integrated on the ground and being used in real exercises with real data and with other military assets to prove it can process the data in the way which was intended. When the first aircraft flies, that is programmed for the middle of this year, we will then be in a position to know whether or not the remaining risks for the air vehicle, which has been the causes of this problem, have been reigned in. At that point because we have such a high percentage of the production design in place we will effectively be flying a production aircraft with one or two minor loose ends to sweep up. Under those circumstances I think we will be very much more confident in future as to where those two programmes end up.

Mr Williams: I look forward to seeing you next year.

Q73 Mr Field: Mr Turner, can I ask you one follow-up point, you said that you if you walked away from MoD contracts your shareholder would cheer, why do you stay?

Mr Turner: Because we believe we can actually make a profit in the future by staying because I think at least we have a wider understanding of value for money for the United Kingdom economy and we have Smart Acquisition, certainly in the conversations I had with Sir Peter since he came into the job of actually Smart Acquisition, particularly in terms of de-risking. I am very encouraged we are spending a significant amount of money ahead of committing to firm prices and firm dates.

Q74 Mr Field: At the end of the day you will walk away with profits from these projects?

Mr Turner: Certainly on the Carrier and on Typhoon we will walk away with profits. I am not so sure on Nimrod and Astute, in your accounts and in our planning we are assuming no profits on both of those programmes, it is something that we have to carry forward. Whilst our shareholders are not happy it is a year ago now since we took this step and we have our obligations to MoD to complete those programmes.

Q75 Mr Jenkins: My first question you have almost answered, Mr Turner, because Mr Field jumped in and got in on what I was going to ask you. I was very concerned for your shareholders and I was getting worried in case I may have some shares in your company somewhere. I did not understand you were looking after the British economy as well, I thought you were just looking after my interests as a shareholder and you would get every penny back at the end of the day on this project, otherwise—

Mr Turner: No.

Q76 Mr Jenkins: There must be other projects from which you will get your pennies back otherwise you would go out of business. All companies follow that

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same guiding principle: if you do not make a profit you go out of business. You are in there to make a profit. If you get it wrong, and occasionally you do get it wrong in business, you pay the price.

Mr Turner: 80% of BAE Systems is performing extremely well. It is not the MoD DPA business that is doing that, that has cost us a great deal of money over recent years. The 80% of the business is subsidising the 20% in UK MoD major programmes and that has got to change, and it will change.

Q77 Mr Jenkins: I would like to go back over a question you have been asked a couple of times, and that is the delay in recognising the computer aided design equipment. In the Report it says it took about seven years before you actually got to grips with it and you brought in Electric Boat. You said at the time that it did not take seven years, it took seven years before you brought the team in to sort the problems out because they had similar sorts of problems with their submarines and they had the expertise you needed to get to grips with the problem. Is that right?

Mr Turner: What happens is clearly in the early years of the programme you are building up the resources and doing the additional design work. It is only when you get to the detailed design work that comes out of the CAD CAM process, the mating process, that you realise that you have incompatibilities. That was when we went into the investigation at the end of 2000 and it was during the course of 2002 when we put the two things together, the PCO on the receiving end of this and the shipyard which was trying to manufacture the submarines, that we established the truth of where we stood on the programme. What emerged was that Electric Boat (GD) had similar problems on the Sea Wolf and the Virginia class that cost the US taxpayer far more than like for like it is costing the UK taxpayer. It still did not cost GD shareholders anything like it has cost my shareholders—a great deal of money. We did learn the issues in 2002 and we could have carried on without the help of Electric Boat (GD) and built up our own resources but because of the requirements of the Royal Navy and the defence of the nation we employed these people, GD, the Americans, at a price of 5:1 of the UK resources that we have with the backing of MoD.

Q78 Mr Jenkins: You have to pay for expertise and skill.

Mr Turner: No, it was resource.

Q79 Mr Jenkins: It was a resource, you just bought extra bodies?

Mr Turner: Extra bodies.

Q80 Mr Jenkins: Sir Kevin, were you totally aware of this problem with regard to the situation?

Sir Kevin Tebbit: I think it is fair to say in terms of the company that none of us was aware of this. The Americans first independently found that the assumptions they had made on this computer assisted design for submarines for SSNs was not working correctly. We did not have access to that

information until they decided to share it with us. In fact, the Americans have been uniquely open and willing to share with us their books and how they had originally calculated just how many millions of man hours you need to do this because it is a very complicated business, submarine building, and they found that computer assisted design was not working as expected. Had we known that earlier, we would have been able to react earlier and as the company would have reacted earlier, but it was only when they shared this information with us—something we should not normally have expected—that it came to the front.

Q81 Mr Jenkins: You signed the Report off, Sir Kevin, and I just go by the Report, as you know. The words in the Report led me to believe that the company knew there was a problem but they did not come to grips with that problem for some time. Would you accept that from the Report?

Sir Kevin Tebbit: I understand that—

Q82 Mr Jenkins: I want to know if you were aware of that problem.

Sir Kevin Tebbit: No. I was talking about computer assisted design. I am not sure whether that was referring directly to that. I think the reference in the Report was that the company was aware that their submarine programme was off-track. We were not fully aware of how far it was off-track.

Q83 Mr Jenkins: That is what I was trying to get to, the closeness between your department and the industry working on this contract. You said, and I wrote this down: “We had to take into account the position of the company. We will be working with BAE for the next 30 years”, so you could not see them going up the wall, in effect, by penalising them very heavily.

Sir Kevin Tebbit: That was a general comment.

Q84 Mr Jenkins: It also flagged up the issue that we as a government, taxpayer, are not there to look after any particular company because when we set the Astute contract we set it with GEC Marconi in 1997, a company which, I presume, you then expected to deal with for the next 30 years. Would that be right?

Sir Kevin Tebbit: Yes, but we are not in the business of bailing out companies for the sake of it, or even for the sake of British industry. The point I was making was that we had made a judgment that any alternative than paying extra for these contracts was going to be more expensive for the taxpayer and, therefore, would be worse value for money in terms of getting our forces the equipment we needed than any of the alternative approaches. That was the point I was making, I was not making a point of supporting one particular company or another.

Q85 Mr Jenkins: I am glad about that because I want to make sure we are not supporting a particular company because it might well get us into trouble later down the line, as you will appreciate. The market will always fill a gap. If one company goes

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out of business I expect another company will come in to fill that gap and it might be a foreign company but they will still be working with British shipyards and building British defence goods. Do you feel that might be the case?

Sir Kevin Tebbit: In our Defence Industrial Policy we accept that overseas companies who manufacture and add design or technology value in Britain are included in our Defence Industrial Policy, that is true.

Q86 Mr Jenkins: I flagged up the fact that you said, or I thought you indicated, if that company was made to pick up the full tab we might not get the product but in essence today we have not got the product, have we, we are years and years behind?

Sir Kevin Tebbit: My point was that the product would be even more expensive and would take even longer if we had gone to an alternative supplier.

Q87 Mr Jenkins: Were you right to make that assumption?

Sir Kevin Tebbit: We did studies.

Q88 Mr Jenkins: Is it your job or Sir Peter's job to come up with an estimate and say "This is what we estimate the product will cost"?

Sir Kevin Tebbit: It is Sir Peter.

Q89 Mr Jenkins: "We put this estimate using all our experience, our expertise, using the best plans by industry, it will cost us x amount of pounds". When you then see an overrun and slippage in time and costs, is there a point where you must go back and say "We now realise this is a non-goer, we are going to cut this project"? Do you ever get to that situation?

Sir Peter Spencer: Certainly we get to that situation where if the project goes outside the tolerances which are allowed, or in Smart Procurement terms the level at which the approval is set, then the project leader, with his military customer, has to resubmit that project back to the Investment Approval Board to test the project represents value for money to say whether or not the project should stop or be continued.

Q90 Mr Jenkins: Have we ever stopped a project?

Mr Turner: Can I just help you on that. I did some investigations as to where we have done the proper de-risking of the contract and came to a point where we jointly agreed we should not go forward. Not long ago we had the case of an acoustic sonar buoy for the Nimrod programme where the initial estimates done by ourselves and MoD were £100 million but during the course of spending £10 million, which is quite a lot of money against a £100 million contract compared to some of the projects we read about in here, the view was that it would be at least £300 million and that programme was stopped, so we have done it.

Q91 Mr Jenkins: So we have stopped projects. I have got to ask, because it is in the back of my mind, when we put our estimates in are we too tight with regard

to the cost of the project and are we working in collaboration with the supplier against the Treasury who would never okay the project if they knew the true cost to start with?

Sir Peter Spencer: The answer to the second question is no, we are not. In terms of how we do our estimates, there is a difference between a project which is competed and a project which is single tender. If a project is single tender we have access to the detailed make up of those costs and we have our own pricing and forecasting group who go in and study the various components of the estimates, particularly labour rates, cost of materials and overheads. The position is different in a competitive project, such as Nimrod, where for the company, because it has bid in competition, it is its own business as to how it has put those estimates together.

Q92 Mr Jenkins: In reply to the Chairman, when the Chairman asked you about possible costs of keeping our present submarines on duty longer because the Astute is not coming on, you said "I have not yet looked at that problem".

Sir Kevin Tebbit: No, I did not say that. What I said was we keep this under review. We have yet to take a decision as to whether we need to add refits to the existing submarine fleet or whether the necessary operational requirements can be made by reorganising their patrol arrangements. I think that is what I said, not that we have not started to look at it. We have not come to a decision as to whether we need to add refits.

Q93 Mr Jenkins: Given the timescale slippage and cost overruns you are looking at them?

Sir Kevin Tebbit: It is General Fulton who keeps it under review.

Lieutenant General Fulton: Yes.

Q94 Mr Bacon: If you would like to turn to page 195 of the Report, it talks there in the Glossary about the equipment programmes about two-thirds of the way down: "The Department's budgeting plan for expenditure on the Equipment Programme. It examines costs over the 10-year plan, and creates and considers options to match the required spend profile and Defence priorities." Could you say how important is the Equipment Programme to the MoD in planning the procurement of equipment and systems?

Sir Kevin Tebbit: Clearly it is vital. Today's capability is the result of the planning judgments and decisions made over the last 30 years. We have to meet today's challenges with readiness of forces today while at the same time putting in place the systems, the programmes, that will keep us at the winning edge ten or 20 years in the future and in order to do that we have to look across a whole range of Equipment Programmes in train, decide whether the operational priorities are changing so that we need to speed up and put more emphasis in some areas or reduce, delay, extend other programmes according to changing defence priorities. We have to profile the overall programme

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so as to keep within our expenditure levels on a year-on-year basis. As I think you are implying to me, this is not just a question of the total cost of individual programmes, it is a question of how we profile the totality of our programme over that 10 year period.

Mr Bacon: I could ask you loads of questions about this but what might be better is if you could send a short note to the Committee which covers those points in more detail and in particular if you could give us some idea of how the Equipment Programme is compiled, how it is used, how frequently it is revised, who sees it, does the National Audit Office see it and can we see a copy.

Mr Field: That is a year's work for you.

Q95 Mr Bacon: Is that all right?

Sir Kevin Tebbit: If I could take your questions in reverse order.

Q96 Mr Bacon: The question is can you send us a note on all of those?¹

Sir Kevin Tebbit: I have to tell you that I regret the answer to the last question from long convention, something I know Michael Heseltine had an interesting time over in his day, will be no. Ministers reserve the right to vary their judgments.

Q97 Mr Bacon: But for the rest?

Sir Kevin Tebbit: It is quite straight forward. It is reviewed annually and General Fulton has the job of putting that programme together on a regular basis. If you want him to say more about that now, I am sure he would be happy to.

Q98 Mr Bacon: No, I would rather have it in a more detailed note according to the parameters I mentioned, that would be very helpful. Mr Turner, BAE Systems commissioned a study from Oxford Economic Forecasting recently and it was entitled "*The Economic Contribution of BAE Systems to the UK Economy and Implications for the Defence Procurement Strategy*". On page seven of that it says: "The MoD is not organised in such a way as to maximise the chances of achieving the desired defence capability for the UK". Do you agree with that?

Mr Turner: Yes.

Q99 Mr Bacon: Sir Kevin, do you agree with that?

Sir Kevin Tebbit: I am sorry, I did not hear the first part.

Q100 Mr Bacon: I will read it out again. "The MoD is not organised in such a way as to maximise the chances of achieving the desired defence capability for the UK". I am asking if you agree with that.

Sir Kevin Tebbit: Who said it?

Q101 Mr Bacon: This was from—Actually, who said it would not alter whether it was true or not in your opinion.

Sir Kevin Tebbit: The statement which is—

Q102 Mr Bacon: If I said it was the Secretary of State you would, of course, say that you agree. It was not the Secretary of State, although it would have been rather fun if it were. It was the study commissioned by BAE from Oxford Economic Forecasting and it says: "The MoD is not organised in such a way as to maximise the chances of achieving the desired defence capability for the UK". I am really asking do you agree with that.

Sir Kevin Tebbit: I do not agree with that. I fully accept we need to do better, that is true of the industry as well as the Department. I believe that the Smart Acquisition reforms that have been under way for some years are the right way to go. I am glad that Sir Peter Spencer here has reinvigorated those with his "stocktake" and the work of McKinsey last year. I believe we are optimised to get the best value for money out of a spend which has to be limited by budgetary pressures.

Q103 Mr Bacon: One of the other points which is made in the study is that—I quote from one of the conclusions—"If competition is the bedrock of UK defence procurement decisions that is likely to favour foreign competitors who do not need to compete for their home market". My question to you is about the first half of that sentence. Is competition the bedrock of UK defence procurement decisions?

Sir Kevin Tebbit: Yes, it is.

Q104 Mr Bacon: Do you agree with the second half of the sentence that it is therefore likely to favour foreign competitors who do not need to compete for their home market?

Sir Kevin Tebbit: No, I do not agree with that. If I had done we would not have had a vibrant export industry in the defence sector had we followed the approach you are suggesting.

Q105 Mr Bacon: Mr Turner, do you think we should return to cost plus?

Mr Turner: I think in cases where there is excessive risk, where it is highly complex and high technology, as in the case of Nimrod, Astute and Typhoon. The Americans learned the lessons from 15 years ago, we have clearly learned the lessons now, I hope, and will see that demonstrated on the Carrier programme going forward. Until you have an understanding of the requirement and the design is stable you should not enter into firm commitments.

Q106 Mr Bacon: Your study which you commissioned also says in paragraph 2.3.6: "The quality of the defence capability is not known at the Main Gate". Do you agree with that?

Mr Turner: Main Gate has been taken too early in the past. Clearly there is an issue, and maybe the Treasury do have a role to play here, where it is very difficult for MoD to proceed with programmes as they clearly wish to until there is a robust estimate and timescale and service date. I think one of the problems that MoD officials wrestle with is clearly

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ministers like to stand up in this House and say “This is the cost. This is when it will be in service” and I think we have to restrain them from doing that until it is sufficiently risk-free in line with Smart Acquisition that has taken place and that is where I am pleased to see, as I said on the Carrier, we are moving to that approach.

Q107 Mr Bacon: Sir Peter, you said earlier that these days with the benefit of hindsight you recognise that there is a limit to the degree to which you can transfer risks to a supplier. As I understand it, to put it in a nutshell, in a fixed price contract industry bears the risks after the Main Gate and in a cost plus contract the risks are borne by the Government. You have already said that you recognise there are limits to the risks that you can transfer. I put the same question I put to Mr Turner: should we not be thinking about moving back to cost plus?

Sir Peter Spencer: No, because there are other contractual arrangements which are more powerful and which better protect the interests of the Government as well as protecting the interests of suppliers.

Q108 Mr Bacon: Could you say what are the three-point estimates for Astute and Nimrod?

Sir Peter Spencer: No, I cannot. I can send you a note.

Q109 Mr Bacon: Sir Kevin, do you know what they are?

Sir Kevin Tebbit: Not off the top of my head I do not. You mean the actual figures of—

Q110 Mr Bacon: They are two of the four biggest Legacy systems we are looking at today. Does nobody in the room know what the three-point estimates are for Astute and Nimrod?

Sir Peter Spencer: I know what they are but I will send you a note.

Q111 Mr Bacon: You know what they are?

Sir Peter Spencer: Yes.

Q112 Mr Bacon: You do. Can you tell us?

Sir Peter Spencer: No, I will send you a note.² We are still in the process of discussing some of these issues with the company. Some of this is commercially sensitive information.

Q113 Mr Bacon: How confident are you that those three-point estimates are robust?

Sir Peter Spencer: It is the same answer as to the question that was put to me earlier which is that we have some way to go before we continue de-risking these two programmes. That is the whole purpose of the work which we are doing together at the moment which is centred upon target costs which we are driving towards.

Q114 Mr Bacon: So they are not robust at the moment?

Sir Peter Spencer: When we have got better information then we will inform—

Q115 Mr Bacon: You would not describe them as robust at the moment?

Sir Peter Spencer: I think they are a great deal more robust than they were before these problems erupted, but that would not come as a surprise to you. As I said earlier, both of these programmes are now under much stronger management.

Q116 Mr Bacon: Sir Kevin, one of the most surprising things I heard you say this afternoon when you were talking about the submarine was you said you were not fully aware of how far it was off track.

Sir Kevin Tebbit: Correct.

Q117 Mr Bacon: In the Oxford Economic Forecasting study that I referred to, one of the striking sentences, and actually it is not that striking or unusual or difficult to grasp, some might regard it as commonsense, is the following: “The customer/supplier relationship is the key to success”. You could not buy a paperback on project management or look at any study that has been done starting with—the first one I looked at anyway—the Cabinet Office study on using consultancy published in August 1994, but there have been many more and many since, you cannot look at any of these studies that have been done on project management in government without reading something along those lines, “The customer/supplier relationship is the key to success”. It says here in paragraph 3.6, which is on page 28, “It is now apparent that neither the Department nor BAE Systems fully understood the risks of introducing computer aided design to a new class of submarine.” In your earlier reply you said, “We were not fully aware of how far it was off track”. Why were you not fully aware of how far it was off track? Surely if you were managing the project as closely as you should have been, even with a prime contractor you should have been in and out of each other’s pockets to the extent that you had a very clear idea precisely and almost to the minute, certainly to the week, of the extent to which it was off track.

Sir Kevin Tebbit: We were relying on the information through the Prime Contract Office.

Q118 Mr Bacon: Is that not part of the problem with prime contractors?

Sir Kevin Tebbit: Perhaps Sir Peter could say more, but we were dealing with a contract negotiated in 1996–97 remember.

Sir Peter Spencer: If I could put this in context. This is the first submarine that has been prime contracted, designed by industry. Previously that work was done in-house and we contracted separately for those components. The aim, which was achieved, was to tie it up in a single contract and pass it to industry as the prime contractor because our experience in the past had been that when we contracted separately for the hull and for the propulsion systems and the working systems, delays in one contract caused

² Ev Not printed—restricted commercial in confidence

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damage on other contracts and we got caught in delay and dislocation costs on a lot of occasions. The expectation was industry now had the project skills to do that rather better than we do in-house. One of the concerns of the fixed price contracts was that if you had a very close relationship between the Ministry as the customer and industry as the supplier then inadvertently you would end up changing some of the requirements of that contract. There was a deliberate effort, and that was seen to be the way of doing it at the time, to have a slightly more arms' length relationship with the expectation that the metrics which were being monitored were actually a true measure of the progress of the programme. We believed that it was industry's concern to actually be the experts in the detail but there were a considerable number of metrics which were being monitored.

Q119 Mr Bacon: By MoD?

Sir Peter Spencer: By the MoD through the Prime Contract Office which was, as described earlier, separated from the shipyard.

Q120 Mr Bacon: Yet Sir Kevin still stated, "We were not fully aware of how far it was off track", so the metrics were not the right ones.

Sir Peter Spencer: At that stage the Prime Contract Office, with whom we were dealing, was not aware of how much it was off track inside the Barrow-in-Furness design office.

Q121 Mr Bacon: Are you saying they were using the wrong metrics?

Sir Peter Spencer: They were certainly using metrics which were not so penetrating as to go inside to the design programme and measure the earned value. In other words, they were measuring the number of hours spent on design, not what that number of hours spent on design had actually achieved against the budgeted hours.

Mr Bacon: It sounds like the Labour theory of value, I thought that went out with the fall of the Berlin Wall.

Q122 Mr Davidson: I wonder if I can start off by asking General Fulton a point about equipment capability because there is an issue for us about assuming in good faith that all this material that we are now discussing is up to standard. I have just come back from Norway where I saw the Royal Marines were using sleeping bags that are worn out and clearly inadequate and as a result a number of marines had frostbite. What confidence can we have that this major high tech equipment is adequate when you are incapable of providing Royal Marines with adequate sleeping bags?

Lieutenant General Fulton: I do not know the background to the sleeping bag story so I cannot comment on the sleeping bag story at all, I am afraid. The confidence in terms of the equipment capability in the sorts of high tech programmes that we are talking about this afternoon is exactly that which the Chief of Defence Procurement has been talking about in terms of understanding the risk—

Mr Davidson: Okay. I only have a short period of time. If we cannot get an answer on the sleeping bags, and maybe there is an issue of confidence, perhaps you could give us a note on how it is that the Royal Marines in Norway are using inadequate sleeping bags?³

Q123 Chairman: It is a tiny bit wide of what we are talking about this afternoon but can you give us a note on sleeping bags?

Sir Kevin Tebbit: I am very concerned to hear this, this is the first time I have heard it. Clearly it should have come up the chain of command.

Chairman: It was in all the newspapers this morning.

Q124 Mr Davidson: Just because it is in newspapers does not mean to say that the MoD sees it.

Sir Kevin Tebbit: Usually we expect the Royal Marines to report this through proper channels.

Q125 Mr Davidson: They have told me that they have pursued this through the proper channels but have received no satisfaction, which raises another doubt which I will raise when I get the note on this.

Sir Kevin Tebbit: I am happy to give you a note.

Q126 Mr Davidson: Mr Turner, I wonder if I can ask you a couple of points. We have already discussed about the Astute contract and how GEC Marconi, if I understand what you were saying, got it wrong and there is an issue about whether or not they under-bid and so on. Can I just clarify, when you bought over GEC Marconi and presumably did due diligence, did you also misunderstand the nature of the contract? I understand that GEC Marconi made a mistake, I am not quite clear how it became something that you were prepared to buy over with the contract in that state.

Mr Turner: In 1999 when we did acquire GEC Marconi it was only limited due diligence. We were only allowed to do a certain amount of limited due diligence. Clearly the timescale was it was only at the end of 2000 when I personally became concerned with my colleagues. I was running the shipyard at the time at Barrow, it was one of the responsibilities I had, and my colleague in the PCO had concerns about how the Prime Contract Office was performing. It was only when we decided that we should put the two organisations together, we got approval from CDP to do that, it was part of the undertakings, we then had to form a combined team and it took many months and it was not until the beginning of November 2002 that we realised we knew the facts that the delay was not less than 24 months, in which case we could have taken it within our contract price, by then it was clear it was 36 months. That is the problem with not doing sufficient de-risking because, again, not only do you get a better feel of the cost and the timescale but you set up the right metrics, you set up the robust metrics on EVM and on the life cycle management and if you do not have the proper de-risking, the 15% average, you have a real problem from the word go.

³ Ev 20

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Q127 Mr Davidson: We will come in the next session to where we are now. Looking back, here are two major companies, two major British suppliers, both of whom seem to have got this wrong, firstly the initial company and then yourselves when you bought GEC Marconi. Are you satisfied that the mistakes that were made then cannot be repeated, that the mechanisms are in place which will avoid any reoccurrence?

Mr Turner: I can assure you they will not be taken in the future. Indeed, I have mentioned that GEC and British Aerospace for strategic reasons took these contracts and that may have been a problem, that they wanted to be convinced that they could do it at the price and timescale. On the Carrier, even before we won the competition to be the preferred prime contractor, I was asked by very high level people in MoD would we take any firm price arrangements and I said “No, give it to Thales, we will not take it on that basis”.

Q128 Mr Davidson: Can I come back to the manpower levels in Barrow referred to in paragraph 3.5. You had so much design work in Barrow that you were unable to cope with all the contracts that were there. If I remember correctly you were told that was the position by the workforce at the time and yet the workforce reductions were still made. Can you clarify why that position then arose?

Mr Turner: The reductions we made were on the production side where we clearly had too many people in the shipyard. Where we were short of resources was on the engineering side. As I have already mentioned, we agreed with MoD that we should bring spare resources that Electric Boat in America had. It was not on the design side, we had a shortage of design expertise and resource.

Q129 Mr Davidson: Can I just ask the NAO, the bottom section of paragraph 3.5 states: “there were fewer skilled and experienced staff to cope with the complex task of designing a submarine and the use of a computer-based tool . . .”, and that really is about design staff and that was my understanding of the position confirmed by the unions rather than on the manufacturing side.

Mr Banfield: Our summary there was based on general reductions in staff numbers rather than referring specifically to development or design.

Q130 Mr Davidson: Okay. Could I turn to Sir Kevin on the question of Nimrod? The relevant paragraph, 3.17, tells us that you renegotiated the Nimrod contract price. Presumably you renegotiated the price on the basis that the first two times it was not right. What guarantee can we have that you have actually got it right this time and will we find ourselves in a year’s time, a couple of years’ time, going for the fourth and fifth renegotiations?

Sir Kevin Tebbit: I cannot give you absolute assurances but, as the Chief of Defence Procurement said, we have now got the contract on a much better basis. There was a design review last November.

Q131 Mr Davidson: Basically that is a no, there is no guarantee?

Sir Kevin Tebbit: No, it is not. I cannot make absolute promises in this area but I am confident that it is much better based than it was. You see, we have not priced the actual production run of the aircraft. We have got a contract which has so far only priced the design and the development, we will then move to pricing the production of the aircraft. At the moment I have to say this is for the future.

Q132 Mr Davidson: This is pretty much an open-ended contract; there are no clear, firm estimates of how much this is going to cost us at the end of the day for production.

Sir Peter Spencer: It is not open-ended because we are no longer committed to go into production if we do not like the prices.

Q133 Mr Davidson: So after all this money being spent we may end up buying no aircraft, is that the case?

Sir Peter Spencer: It is a possibility covered by the contract but it is highly improbable.

Q134 Mr Davidson: So that is a yes, it is possible we may end up in the position where we have spent all this money with no aircraft.

Sir Peter Spencer: This is why we split the contract up.

Q135 Mr Davidson: Okay. I wonder if I could just seek clarification as to when we anticipate Typhoon being available for operation. Can somebody tell me that?

Sir Peter Spencer: The plan date is it will have limited operational capability in 2006⁴ when the first squadron—

Q136 Mr Davidson: 2006. Is that an estimate with 50% reliability? I want to be clear how firm that assurance is.

Sir Peter Spencer: 50% would be on the basis of current plans.

Q137 Mr Davidson: Thank you, Sir Kevin, can I just clarify the question of the relationship between the MoD and British Aerospace. If I picked it up correctly you were basically saying that had you enforced the terms of the relationship you had previously with BAE they would have gone out of business and basically been bankrupted. That is the message I took from what you were saying.

Sir Kevin Tebbit: That is not what I said.

Q138 Mr Davidson: Is that incorrect then?

Sir Kevin Tebbit: I have no idea whether the company would have been bankrupted; I doubt that it would have been. What I said was that we could

⁴ *Note by witness:* The current 50% confidence forecast date for the first Typhoon squadron to begin work up is 2006. The “Beneficial Use Date” which is aligned to the date that squadron pilot training is due to start, is forecast for 2005.

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not carry on as we were, there was no incentive for the company to complete the contract because it was losing money on the way it was going.

Q139 Mr Davidson: I understand that they were losing money. You were saying they could have pulled out then presumably. I am just seeking clarification as to the nature of the decision that you were making. I took from what you said that had you not amended the terms British Aerospace might either have pulled out of defence or have gone bankrupt and I am seeking clarification as to whether or not that was the case and whether or not the decision along those lines was taken at a level above your pay grade?

Sir Kevin Tebbit: They were not performing on contract so they would have failed to perform on the contract and the most likely thing that would have happened is that they would have been in default of the contract which would have placed us in a long and unhelpful period of litigation. You are asking me to speculate because we did not go down that road, but that would be the most likely result in the situation that you are postulating, not bankruptcy.

Q140 Mr Davidson: Can I just ask Mr Turner, during one of the earlier exchanges you mentioned you thought that your shareholders had been subsidising the MoD. While it is true that you have not been recovering all your costs from the MoD, surely this is the price of taking risks as a company? Some contracts you will make a profit on, some you will make a loss on. Presumably you cannot work on the basis that any contract on which you make a loss you are providing a subsidy to the MoD, surely it is a question of swings and roundabouts. Is this attitude that any loss suffered by yourselves is a subsidy not at the heart of some of the difficulties there have been between the MoD and yourselves?

Mr Turner: There is risk and there is excessive risk. We and GEC took excessive risk on both Nimrod and Astute. As I have already mentioned, the Americans have learned that lesson and, in fact, we are very happy to do business with the United States. For example, on Joint Strike Fighter, which is a cost plus contract, we make 12.5% profit cost plus. That is a contract with MoD through Lockheed. Like it or not that is the way that certain contracts with excessive risk need to be managed in the early days before that risk is mitigated to a level that is acceptable for industry to take a risk. Industry took far too much risk in the past and we, BAE Systems, are not doing it in future. There is a far more attractive market in the United States if the MoD terms of trade do not change. We have made that absolutely clear for a number of months now, and that is the case on the Carrier.

Q141 Chairman: Could you please look at page 27, paragraph 3.5, at the bottom where it says: "In addition to this heavy workload, the workforce at the shipyard in Barrow-in-Furness had been downsized so there were fewer skilled and experienced staff to cope with the complex task of

designing a submarine, and the use of a computer-based tool to manage the design". You have seen this Report. Were you given a chance by the MoD to comment on this Report?

Mr Turner: We had a presentation by Mr Banfield before it was published. We did not read it in detail. The reference there is after the Trident Submarine and the nuclear deterrent was completed the management, GEC at the time, VSEL, had no alternative because of the gap between the end of Trident and the start of what was called Trafalgar batch 2, which became Astute, but to significantly downsize the workforce. Undoubtedly a lot of expertise went out of the yard and there was a gap in maintaining that expertise. Indeed, surface ships, LPDs, were put into the yard at the time, again loss-making, again fixed price, and again very good value for the taxpayer, partly funded by our shareholders. We are not doing it again.

Q142 Mr Davidson: Since you have raised the question of the other contracts, would you not agree that there was a very strong view at that time that some of the ships taken into Barrow were taken in on a loss-making basis in order to try and drive what was then the Kvaerner Govan yard out of business by under-cutting them?

Mr Turner: Those are not the conversations I have had with GEC Marconi as to why they took those contracts. They were looking clearly for maintenance of resources in the yard. What has been lacking in the UK defence industry for some time was a strategy on both the air side and the naval side to keep continuity in workforce and resources otherwise you get these problems. At the time they believed they could make money out of the LPDs and the AOs but unfortunately, again, it has cost our shareholders a couple of hundred million pounds. Bad decision.

Q143 Jon Trickett: I do apologise for being late at the beginning. I wanted to follow up on these exact points. It does seem to me however the decisions were made by management that Barrow was left unable to cope with the computer based design tool which was required to do both the contract for the Astute submarine and also the other contract as well. That is the nub of paragraph 3.5. Have we established that is common ground between us that is what happened?

Mr Turner: There was a gap in continuity of work at Barrow. Unlike on the Clyde, where because of exports we had continuity with a smooth introduction, continuous work for CAD CAM on the Clyde, we did not have that in Barrow.

Q144 Jon Trickett: The Department totally misunderstood the need for that expertise, did it not, Sir Kevin? In the following paragraph, 3.6, it states: "It is now apparent that neither the Department nor BAE Systems fully understood the risks of introducing computer aided design to a new class of submarine." Particularly given the fact that we have just heard that many of the skills had been lost as a result of the workforce at Barrow, was that the case?

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Sir Kevin Tebbit: With the benefit of hindsight that is right but at the time we did not realise that there was such a great loss of skills.

Q145 Jon Trickett: What then happened was we kind of patched together a solution bringing in people from an American company, Electric Boat, who are part of the General Dynamics company, and what happened as a consequence of the vacuum left by the lack of leadership on CAD CAM was we then had to bring in people from the States, did we not? That is how I read these paragraphs 3.13 to 3.15

Sir Kevin Tebbit: What actually happened was the Americans had experienced similar difficulties, although we had not been aware of it at the time, when they were using CAD, so it was very sensible for the company to bring in these Americans who were willing to share, extraordinarily, their experiences with them. It was that way round, it was not that we had to bring in the Americans because we could not do it ourselves, it was because they had very useful experience in that area.

Q146 Jon Trickett: Paragraph 3.13 tells us that the Astute Class CAD work was done by people from the General Dynamics company, a subsidiary of their company. You said that was providential, I might suggest that there was a different motive entirely of the Americans wanting to integrate themselves into the leadership of a British company. Paragraph 3.14 describes what actually happened. Eight design staff were put into Barrow and are now operating in a fully integrated way inside Barrow on the engineering effort there as a result of the crucial mistakes which had been made at an earlier stage in Barrow. One of these people is at the most senior management level at Barrow, that is what this paragraph says, is it not?

Sir Kevin Tebbit: I think you have to address this to the company because we have learned the company has done this but it was their decision to bring in these people.⁵

Q147 Jon Trickett: I am going to ask you about defence procurement policy and competition. You used the word “bedrock”, that competition is the “bedrock”. I want to persist with yourself, Sir Kevin. You agreed this Report, did you? I accept that these were management decisions which were taken by the company but this Report says that the Department was happy with those decisions. The Report is saying that one of these people is integrated at the most senior management level and that a further 50 staff based in the United States are also working on the project. The scale of the relationship now between the Electric Boat company, which is part of General Dynamics, and BAE is quite striking, at least in relation to this matter, is it not? The paragraph then goes on to say: “There is a highly co-operative relationship between BAE Systems (Submarines) and Electric Boat (GD) . . .”

⁵ *Note by witness:* The integration of staff seconded from General Dynamics is a matter for BAES, but the decision to bring them in was a joint one between MoD and BAES under the February 2003 Agreement.

Sir Kevin Tebbit: Yes. Sorry, what was your question?

Q148 Jon Trickett: I want to establish that as a premise to my question really which is about the nature of competition. I want to ask you about Sir Robert Walmsley, who I see is going to be a non-executive director of this American company afterwards. You might be able to perceive my train of thought. Are you happy that there is sufficient competition now in this particular area of work, computer aided design? Have we not got a British company here which has become dependent to some extent on General Dynamics?

Sir Kevin Tebbit: My answer to that is we have a policy which is that we build ships in the UK and that will continue to be the case. The Electric Boat (General Dynamics) assistance has been extremely helpful. It is not something that I would regard as undermining our basic policy. We would not be, as it were, competing contracts for submarine building with the United States, that is a national and strategic requirement. Indeed, I am not sure that we could have submarines built by the United States even for legal reasons. I did not read the sinister implication in using Electric Boat’s experience, it seems to me a very sensible thing.

Jon Trickett: We all know the story of the Trojan horse. I am interested in a report in yesterday’s *Observer* that Sir Robert Walmsley, who I think was your predecessor, Sir Kevin, is shortly going off to be non-executive director of, guess who, General Dynamics. That might suggest, I do not know if it does, a corporate strategy by General Dynamics that it wants to get into a closer and closer relationship with the British defence industry and finding somebody who understands procurement better than Sir Robert Walmsley and yourself is hard to imagine. Has that thought occurred to you because the *Observer* is suggesting the possibility of some sort of merger of strong co-operative working between BAE and this company.

Chairman: I think it is a very interesting question but it is very difficult for Sir Kevin to respond.

Jon Trickett: He himself said that the bedrock of his policy was competition and I am just wondering whether he has a view.

Q149 Chairman: Certainly you can give a general view if you wish but I do not think it is fair to ask you to comment on Sir Robert’s employment.

Sir Kevin Tebbit: Just a comment on the process. In the UK we do have a Business Appointments Panel independent of government.

Q150 Jon Trickett: I am not asking you about that. I am asking you whether or not the corporate strategy of an American competitor, BAE, attempting to lead towards a merger—this is a hypothetical question probably—would trouble you in terms of competition policy?

Sir Kevin Tebbit: It simply would not arise in terms of submarine activities because, as I have explained, there is firstly a national policy and, secondly, the terms of our 1958 US/UK Nuclear Agreement

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would mean that we would have to remain in business ourselves, we could not rely on the United States or there would be a proliferation of nuclear technology which would not be permitted. I think I can give you a general assurance on this area of nuclear submarine activity. As far as Sir Robert Walmsley is concerned, I really must say that appointment was approved by an independent panel who looks into business appointments and satisfies itself that there would not be either a conflict of interest or a perception of a conflict of interest.

Q151 Jon Trickett: The *Observer* alleges—I do not know whether the Chairman will allow me to ask this question or not—that Sir Robert was involved in letting contracts to General Dynamics, and he is about to become a non-executive director of that company. Is that the case? Was he involved in letting those contracts?

Sir Kevin Tebbit: As I say, the Business Appointments Panel is able to set out conditions affecting the nature of employment people can take and they have done so in this case.

Chairman: I think I am going to stop that line of questioning now on advice. There is no need to carry on on Sir Robert, there are plenty of issues to deal with.

Q152 Mr Field: Mr Turner, can I just ask you a couple of questions. Probably all of us have an idea, a model, of what we think of you and what we think of the top brass at the Ministry of Defence. My view of you is that you go in there to negotiate the best deal for your shareholders and your workforce, and I think that is a proper way of dealing with the Ministry of Defence. My worry is whether the Ministry of Defence are always up to what you might be about. I am intrigued by you saying that you are much in favour of this cost plus way of bargaining with them. Can you tell me in that process who determines what the cost is?

Mr Turner: The cost is the cost which is overseen by the prime contractor, in this case it would be ourselves, and obviously by MoD. I do not see any alternative in the early phases of highly complex, high tech programmes, to being on a cost plus basis. Clearly you get to a point of target cost incentive arrangements that we have now applied to Nimrod and Astute but in the early phases there is no alternative to meeting the contractor's cost overseen by MoD.

Q153 Mr Field: Previous Conservative ministers were so concerned about how VSEL were behaving over the big contracts they had that they decided to drip feed the company as a way of controlling these costs. Although they did this on a monthly basis the profits of the company kept increasing, which suggests to me that you are brighter than they were.

Mr Turner: We have not been very bright, have we, because it has cost our shareholders over £1 billion and it will be many years hence before on our MoD Major Programmes Business, assuming we get it

right, we get a return on the investment we have made on behalf of our shareholders. We are a long way down.

Q154 Mr Field: That is on contracts that were not cost plus on which you have lost, is that correct?

Mr Turner: Correct.

Q155 Mr Field: I am not putting the question to you that you should not be making profits because if you do not then quite a few of our constituents would be out of work. I am not pursuing that with you, all I am saying is that the system of contracts which you prefer not to negotiate for are ones on which your shareholders lose money. On the other one, the cost plus, last time round Conservative ministers had privately said that they were unable to control what they thought the costs were.

Mr Turner: I do not think that is the case. With the right partnership between industry and the MoD you can control these costs. In fact, there is an alternative. I believe there is now nobody in the UK, maybe overseas suppliers, as was inferred, who are prepared to take a strategic view of the UK market, like GEC did to get into the prime contracting business that otherwise British Aerospace had dominated. British Aerospace had the Nimrod contract on a prime contractor basis to keep those resources, anti-submarine warfare systems, integration systems, engineering, the very high tech resources, in the UK. I suspect there is no business in the UK at that level any more prepared to take that strategic view of life, it has cost shareholders far too much money.

Q156 Mr Field: We have the interests of taxpayers as well as our constituents, would not a better way round be to try and negotiate a contract under which also you can claw back on the profits?

Mr Turner: I think that would be fine. I think on SC43, SC48 in 1968 Ferranti made too much money out of Bloodhound and that was exactly what was negotiated. All I want to do, and I made this point on Hawk, is make 7% return on Hawk and I think that is reasonable. We are a lot of money out. The beginning of your question was have we taken advantage of MoD; I think MoD has taken advantage of us.

Q157 Mr Field: That is going to stop?

Mr Turner: It has stopped.

Q158 Mr Bacon: General Fulton, you hold the defence procurement budget, is that right?

Lieutenant General Fulton: I am responsible for drawing up the equipment plan and making recommendations through the Defence Management Board to ministers. I draw the distinction that I do not hold it, I simply make recommendations on what it should look like.

Q159 Mr Bacon: Nonetheless, you are the man on top of the numbers.

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Lieutenant General Fulton: Yes.

Q160 Mr Bacon: I just want to know how much is in your contingency reserve.

Lieutenant General Fulton: I do not have a contingency reserve.

Q161 Mr Bacon: At all?

Lieutenant General Fulton: No.

Q162 Mr Bacon: Sir Peter, do you?

Sir Peter Spencer: We have contingencies associated with every single programme, yes.

Q163 Mr Bacon: How much is in your reserve altogether?

Sir Peter Spencer: As of today—I can only give a very approximate figure—as we go to contract, and you have seen the risk differentials which are identified in this, around 10%.

Q164 Mr Bacon: 10% of what? Give me a number.

Sir Peter Spencer: The risk differential is up to 10% in terms of—

Q165 Mr Bacon: 10% of what money? How much is in your contingency reserve?

Sir Peter Spencer: We do not use the term “contingency reserve”. We identify contingencies that—

Q166 Mr Bacon: In a jam jar under the bed, whatever you call it, how much is there spare?

Sir Peter Spencer: There is no jam jar under the bed.

Q167 Mr Bacon: How much is there to spare?

Sir Peter Spencer: Nothing to spare.

Q168 Mr Bacon: You must have put some aside just in case. Whatever term you use, a contingency reserve or something else, how much is there in it?

Sir Peter Spencer: We would need to do a calculation for you because I do not carry one figure in my head in that context.

Q169 Mr Bacon: When you say 10%, you mean 10% on average on each programme?

Sir Peter Spencer: Up to around 10% is the typical figure at the beginning of the development stage of the programme. They vary very widely depending on the type of programme. Some have very low risk because they are repeat production orders, some have much higher contingencies because they are complex systems.

Q170 Mr Bacon: What is the overall equipment budget?

Sir Peter Spencer: In capital investment about £4.5 billion per annum. In terms of money which we expend but do not expense as capital that is around another £1.5 billion. My programme is £6 billion per annum.

Mr Bacon: Mr Turner, I wanted to ask you about the Carrier Programme on Wednesday but I gather that you are not going to be here, so if I can ask you quickly about that now?

Chairman: No, I do not think you can. You have had your 15 minutes.

Q171 Mr Steinberg: Mr Turner, you talk about how your shareholders have been subsidising the taxpayer. How many dividends have you paid out since you took over the contracts?

Mr Turner: On the back of making money on 80% of our business that is not MoD we have been paying dividends, yes.

Q172 Mr Steinberg: How many have you paid out over that period?

Mr Turner: What do you mean, how many? We pay them twice a year.

Q173 Mr Steinberg: How much each time?

Mr Turner: Last year it was about nine pence.

Q174 Mr Steinberg: Nine pence on a share?

Mr Turner: Nine pence per share.

Q175 Mr Steinberg: Total overrun costs are about £5 billion, is that right, or just less than £5 billion?

Sir Kevin Tebbit: On the Major Projects report?

Q176 Mr Steinberg: Yes.

Sir Kevin Tebbit: In-year it is an extra £3 billion, which is 6% of the total cost of the overall Major Projects group.

Q177 Mr Steinberg: So £3 billion?

Sir Kevin Tebbit: Yes, of which 42%, just under half, is internal costs within the MoD, not costs payable to contractors.

Q178 Mr Steinberg: Where does that money come from, reserves or do you have to get extra from the Treasury?

Sir Kevin Tebbit: This is money that will be paid over lives of programmes. This is not this year’s costs, or even next year’s costs, it is a stream of costs across a long-ish period. Each year we re-base our programmes. We look at all of the programme population, Rob Fulton does this, to work out what needs to be accelerated or slowed down in order to accommodate the profile. The key thing is not the total cost in the short run but how the profile looks on an annual basis. My job as the Accounting Officer is to make sure that we come in within the budget each year.

Q179 Mr Steinberg: So if that is the case then presumably if you are overrunning on something else you have to cut back somewhere?

Sir Kevin Tebbit: In-year, yes. It is a very complicated process because there are an awful lot of programmes running, some moving faster, some moving slower.

 Ministry of Defence and BAE Systems

Q180 Mr Steinberg: There must come a reckoning day.
Sir Kevin Tebbit: Yes. Looking at this year, for example, very specifically we brought on Storm Shadow rapidly in order to use it operationally in Iraq. We deliberately slowed Brimstone in order to make room for that. It comes through as costing £120 million-odd in the programme but that is resource costs, not costs paid to the contractor.

Q181 Mr Steinberg: I am not sure whether this question is either relevant or answerable but what I am trying to do is to find out exactly what the overrun cost of defence is.

Sir Kevin Tebbit: It does not work out like that.

Q182 Mr Steinberg: How much is Iraq costing?

Sir Kevin Tebbit: It does not work out like that. Let me agree with you to this extent: we cannot go on having in-year costs of 6.1% on the programme. It does not affect this year because these are costs that are spread out across a whole range of years, but we have to get it better. It was much higher than this five years ago, we have come down from about 9% annually, last year it was minus 0.4%,⁶ which was

⁶ *Note by witness:* In MPR2002 the total forecast costs of £45.4 billion were £0.2 billion below approval.

very good news, this year it has gone up to 6.1%, we have to get better and we are determined to do so. On Wednesday you will be hearing, I hope, about the various initiatives and changes that we have brought into effect in order to get a better grip on this programme. I am confident that we will be doing that but it is something that has to be done.

Q183 Chairman: I think that is a good note on which to finish, Sir Kevin. As you have said, we clearly cannot go on like this. I think this has been a very interesting hearing and in our report we will have to study the differences of emphasis between the answers you have given us this afternoon and the answers that Mr Turner has given us. Clearly you have an industrial strategy which is to maintain a military/industrial capability in this country for defence but Mr Turner has made it clear to us that he is not happy with the present arrangements or the arrangements anyway which appertained in the mid-1990s. The fear that many of us have is that your strategy, in fact, given the structure of the industry is to maintain BAE in business come hell or high water.

Sir Kevin Tebbit: BAE seems to think we have done the reverse to them, so one of us must be wrong.

Chairman: Thank you very much.

**Letter to the Committee from Sir Kevin Tebbit KCB CMG, Permanent Under-Secretary of State,
 Ministry of Defence**

SLEEPING BAGS TO THE ROYAL MARINES IN NORWAY

I promised to write to you concerning claims that the sleeping bags issued to the Royal Marines training in Norway are inadequate for arctic conditions. We have investigated these claims and I can assure you that they are unsubstantiated.

The sleeping bag “system” issued to the Royal Marines is amongst the best in the world. Its layered system is designed to be used anywhere from the sub-zero temperatures experienced in the Arctic through to warmer climates elsewhere. It consists of an outer Gortex “bivvy” bag, the main sleeping bag and a roll mat. Whilst it is true that the insulation in the sleeping bags can degrade over time, adequate stocks and arrangements are in place so that faulty ones can be exchanged. Out of the two thousand three hundred sleeping bags issued to the Royal marines in Norway, only nine have been exchanged as at 20 February 2004.

Of key significance is that, to date on the Winter Deployment 2004, no Royal Marine has been diagnosed as suffering from a cold weather injury as a result of inadequacies in the sleeping bags issued.

26 February 2004

Supplementary memorandum submitted by the Ministry of Defence

Questions 94–98 (Mr Bacon): Provide the Committee with a short note on the Equipment Programme covering in particular how the Equipment Programme is compiled, how it is used, how frequently it is revised, who sees it.

OVERVIEW

The Equipment Planning (EP) process annually produces a set of programming assumptions, which, when confirmed through the investment approval process, and approved by Ministers, become funded programmes for the delivery of defence equipment. The EP uses a ten year budgeting horizon but extends to the second decade and beyond for planning purposes.

The project approval process considers the business case for a given project, sets its performance, cost and time envelope, confirms funding availability in the EP and approves or declines project action. Two approval “gates” are used to grant approvals, Initial Gate, between Concept and Assessment phases, and Main Gate, before Demonstration and Manufacture. The official-level approval authority for major defence

equipment projects is the Investment Approvals Board (IAB), consisting of the Chief Scientific Advisor (CSA), the Vice Chief of the Defence Staff (VCDS), the Chief of Defence Procurement (CDP), the Chief of Defence Logistics (CDL) and 2nd PUS. Approval for smaller projects is delegated, depending on the project cost.

The principal output of the EP round is a set of detailed planning assumptions and financial data about the proposed content and timing of the future equipment programme. This forms part of the internal advice to Ministers on the overall affordability of the defence programme and of individual projects at the time they come forward for approval. It therefore anticipates decisions still to be taken by Ministers. In parts it also contains information which is commercially sensitive. Such information is covered by Exemptions 2 and 13 of the Code of Practice on Access to Government Information and is therefore not released to the public. However, costs and other programme information from the EP are used by other Government Departments, and the NAO in the construction of the Major Projects Report.

DETAIL OF HOW THE EP PROCESS WORKS

The EP is the annual culmination of the Equipment Capability Customer's (ECC) work to produce a balanced, coherent and affordable defence equipment programme. It is a 10 year plan reflecting the acquisition costs of defence equipment.

The EP process starts with a Capability Audit, described below, which identifies and prioritises a number of key areas of capability deficiency for EP action. Ways and means to address these deficiencies are formulated by the Directors Equipment Capability (DsEC) into "Options", which request future funding and specify key requirements to fill a capability gap. These "savings" and "enhancement" Options are applied to the previous year's plan to produce the annual EP.

The EP has limits on expenditure, its Resource Control Totals (RCTs), within which it must be constructed. The RCTs are specified in terms of Capital and Resource elements.

In order to construct the EP in line with the outcomes of the Capability Audit and to follow Strategic Guidance regarding Defence priorities, targets are set for the DsEC to produce savings Options against their current funding allocation. These savings targets are intended both to reach the RCT and to make headroom for enhancements and re-balancing of the EP.

The DsEC then generate and prioritise Options in consultation with their key stakeholders, such as Front Line Commands, PJHQ and the DPA, to produce a tower of options, in preference order, for that particular DEC's area of responsibility. Both the acquisition and anticipated whole life costs of the Options are considered in this assessment.

The Options towers are then prioritised relative to each other—this ensures that balance across the capability spectrum is addressed—and an overall "order of buy" of the proposed Options is generated. This is the list, in priority order, of the options that should be considered for inclusion in the EP. In a tight round this will largely consist of savings Options with minimal enhancements.

Packages of Options are then constructed from the order of buy and Options are assessed and re-profiled to ensure the packages stay within the budgetary constraints set by the RCTs.

The proposed EP is then submitted through the key equipment stakeholder committees to the Policy and Programme Steering Group for review and approval. It is then combined with the Departmental Short Term Plan (STP) and submitted to the Defence Management Board (DMB), Chaired by the Permanent Secretary and forwarded by him to Ministers, for final approval, before submission to the Treasury.

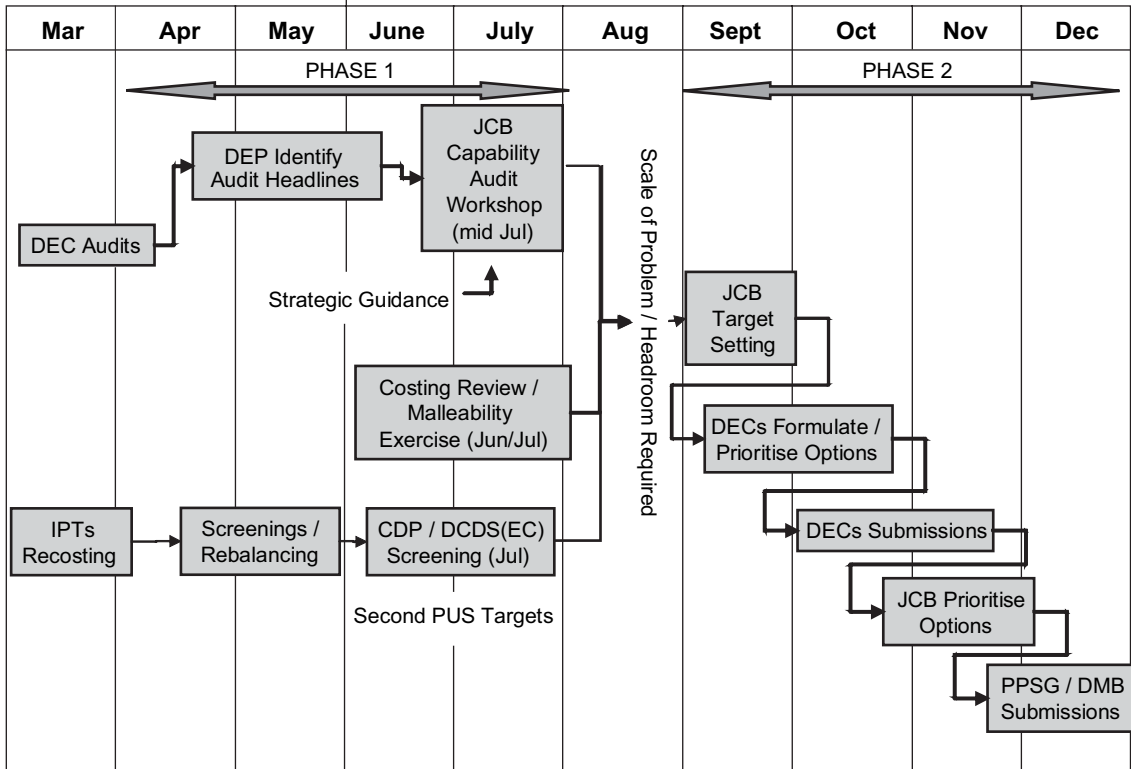
THE CAPABILITY AUDIT PROCESS

Capability audit is a key activity at the start of the EP process. Its purpose is to test whether current equipments, and those provided by the EP in future timeframes, generate the capabilities required to meet the needs of operations as defined in the Defence Strategic Plan and Defence Planning Assumptions.

The audit examines operations across the spectrum of conflict in a number of timeframes and takes account of the need to plan for concurrent operations. Capability is defined in terms of a common taxonomy across the ECC. DsEC are nominated to lead the audit for particular areas of the taxonomy and are likely to be auditing the contributions to their area of capabilities that are sponsored by other DsEC. They will take account of inputs from a variety of sources including audits by Front Line Commands and lessons learnt from recent operations. The output from the Capability Audit identifies and prioritises a number of key areas of deficiency for EP action.

The following diagram shows the key elements of the annual Equipment Planning cycle.

EP Annual Cycle



Wednesday 25 February 2004

Members present:

Mr Edward Leigh, in the Chair

Mr Richard Bacon
Jon Cruddas
Mr Ian Davidson
Mr Frank Field

Mr Brian Jenkins
Mr Gerry Steinberg
Jon Trickett
Mr Alan Williams

Sir John Bourn KCB, Comptroller and Auditor General, National Audit Office, further examined.

Mr Brian Glicksman, Treasury Officer of Accounts, HM Treasury, further examined.

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL:

Ministry of Defence: Major Projects Report 2003 (HC 195)

Witnesses: **Sir Peter Spencer KCB**, Chief of Defence Procurement, and **Lieutenant General Rob Fulton**, Deputy Chief of the Defence Staff for Equipment Capability, Ministry of Defence, examined.

Q184 Chairman: Good afternoon. Welcome to the Committee of Public Accounts where this is the second meeting that we are having this year on the Major Projects Report. On Monday, of course, we were joined by Mr Mike Turner of BAE Systems and Sir Kevin Tebbit. We welcome back to our committee Sir Peter Spencer and Lieutenant General Rob Fulton. You are very welcome. We were looking at the older, poorly-run projects on Monday. Today we are focusing more on the new, better-run projects and we will be looking at the progress of Smart Acquisition and how it is delivering defence equipment, we hope, cheaper, faster and better for the future. Can I ask a couple of questions relating to Monday to start with just to tie some things up? Perhaps, Sir Peter, you could help us with this. On Monday, the Permanent Under Secretary informed us that 43% of the cost overruns were internal costs rather than actual amounts paid out to the contractor. Could you provide us with a note to clarify what he meant?

Sir Peter Spencer: Yes, of course.¹

Q185 Chairman: On Monday he also mentioned the operation of the defence industrial policy, you may remember. Could you please summarise to us the key tenets of this policy and how you make it work in practice? You will recall that on Monday Mr Turner also had some rather less flattering comments to make about it.

Sir Peter Spencer: There are a number of strands in the policy itself. Key to it is a more constructive engagement between the Ministry of Defence and its industrial suppliers with more cross-departmental discussion well in advance of major procurement decisions. All of this is designed to create a clearer understanding in the minds of the industry as to how we plan to go forward with a specific programme, in the sense that in the past occasionally we have gone to competition, the results have come forward and

then there has been a bit of a discussion about the consequences of that competition in the context of what it means for UK industry. The judgment which is enshrined in this policy is that those sorts of issues are better discussed in advance of inviting any tenders. In other words, my job as the Defence Procurement Chief Executive is to say from a narrow procurement point of view that best value for money would be in this case achieved through competition. The only suppliers who are credible might include one on-shore and several off-shore. I could at that stage then form a judgment and give advice that in the longer term the damage we might do to the UK industrial supplier by setting up a competition which that supplier might lose could be so damaging in the context of other defence procurement and in-service support activity that there were wider value-for-money considerations which were longer term than the simple short term narrow objective of getting the best price for a particular piece of equipment. I might, however, be in the position from a purely procurement point of view of saying that actually there is no reason why it would matter to us what happened to this particular UK company if it were not to win this competition but there are wider reasons which the government might wish to take into account, and under those circumstances my job is to provide as accurate and as objective and as dispassionate an assessment as I can of what the best estimates of those costs might be from the different procurement sectors and then to engage first of all at official level and then at ministerial level as to what the government might care to do about it. The important thing is that we do it the right way round and we clear the pitch of those uncertainties before we start. That is a major part of it. There are several other strands relating to getting better co-ordination across government and between government and industry with our research programmes and getting better value out of our collaborative programmes both in the European context and in the US context.

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Q186 Chairman: If we are looking at these 20 projects we see that they have increased by £3.1 billion. What will be the impact of the cost overrun on your future programme? What projects will you have to delay or cancel?

Sir Peter Spencer: It is a very difficult question to give a precise answer to in terms of cause and effect because the annual process is incremental and the job that General Fulton and I tackle together is to say that against the forecast of costs for all of these programmes last year, against the revised costs that we know now, some will go up and some will go down. There are those that go down and the large majority of these tend to be the less complex projects because by definition the ones you look at are the more difficult ones with greater risk. Some of that increase gets absorbed by “unders” elsewhere. We then look at the net effect and as the military customer what General Fulton then does is determine to what extent he might wish to re-schedule some of those programmes, but it is done in an aggregated way as opposed to a project-by-project way.

Q187 Chairman: That is a very elegant answer but you have not actually given any sort of answer, but maybe it is not possible to give one at present. Other members can pursue that if they wish. Can I deal with one particular project, the support vehicle? It is mentioned in paragraph 3.42. There was a 12-month delay. Do you now regret your decision to by-pass the assessment phase? After all, the Smart operation is supposed to be about having the best assessment phase, is it not? Here was an example where you ignored your own guidelines and as a result there was a 12-month delay.

Sir Peter Spencer: With hindsight we would not have left out the assessment phase but, to put it into context, people were convinced that there was such a clear-cut case here for going to get something from the commercial sector which was readily available and did not need time and effort or money spent in reconnaissance that they were able to go more or less straight to contract. As they did the work in more detail they discovered that actually the commercial sector had not really understood the requirement, nor had we really understood the way in which it—

Q188 Chairman: Which is why we are supposed to have Smart Acquisition, is it not?

Sir Peter Spencer: But we have not spent much more money on it. In fact, we have spent very little in terms of financial resource. What we have actually spent is more resource in terms of time and intellectual effort.

Q189 Chairman: There has been speculation that you may have to reduce the size of the aircraft carriers. In *The Times* today, 25 February, it says, “Carriers’ costs rise by £1 billion. The cost of building the Royal Navy’s two new aircraft carriers will rise by more than 30% to about £4 billion under an agreement close to being signed by the Ministry

of Defence and BAE Systems”. Is this true? What does it say about the robustness of your cost estimating?

Sir Peter Spencer: We are still in the assessment phase, so we have neither determined formally the in-service date nor the approved costs of this programme. Nor have we yet determined precisely the physical dimensions. So far as the military are concerned, they are looking at the capability in terms of the effects that this combat system with its aircraft will produce and the General will enlighten you on what those might be. We at the moment are doing precisely what Smart Acquisition demands, because the costs capability trade-offs determine the best point of balance in a de-risked programme where you have got much more confidence in your ability to deliver, so this is the opposite of what has happened with certain other programmes where we have gone straight into believing a price at face value without really burrowing into the detail.

Q190 Chairman: But you are not prepared to share with the committee whether this article in *The Times* is broadly correct or not?

Sir Peter Spencer: There are significant inaccuracies in that article.

Q191 Chairman: Other members can pursue the aircraft carrier point if they wish. I am sure they will want to. Paragraph 1.25—and you have referred to this already—says that you need “to create a better, more open relationship with industry”. There have been enormous problems in the past. We heard the very robust comments of Mr Turner on Monday. Do you have any comment to make on what he said?

Sir Peter Spencer: I think that he reflects a particular view from his company which is not shared by most of the companies with whom we do business, most of whom are very profitable on the defence contracts which they have accepted. In terms of enlarging upon the more open relationship with industry, I might go into some of the detail of the initial stage if that is what you want.

Q192 Chairman: Briefly, if you wish to.

Sir Peter Spencer: One of the things which industry, quite rightly, mentions quite often is the difficulty of dealing with such a diverse organisation as the Ministry of Defence when I spend six billion a year with industry, the Chief of Defence (Logistics) spends a similar, slightly larger sum, and General Fulton spends quite a lot of money on the research programme. Each of us has got an arrangement now for doing key supplier management and what we have done is work together as the three organisations who spend the vast majority of the money with industry to identify a single point of contact who on a day-to-day basis will deal with a particular company, a two-star level contact, either civilian or military, who will represent all three organisations at board level and have regular meetings to discuss with the company how we think they are doing on their programmes. We are producing a database which informs all of us how well they are doing on their various contracts and we

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will take that into consideration when we do future business, in other words their success or otherwise on various projects, and we share that information with them. We also invite them to give their views to us on how well we are doing. One of the points which is made, and rightly, is that we take far too long over contractor selection and we are inconsistent in making it clear to companies between different projects as to the criteria of selection in a competition, and I accept the proposition that if we make it clear to them what the criteria for selection are going to be they are more likely to give us a tender which is compliant, which will speed up that process and give us a better answer. All of that is intended to give a much more grown-up and sensible way forward. The final strand of this is to get engaged with them in defining a rather better set of contracting arrangements which are more appropriate for the business which we are in and I have been doing a fair amount of benchmarking against the civil sector where the record of the best companies who do procurement is one which we would seek to emulate, and there are organisations in oil and gas and construction who have very complex, high value projects which have got a lot to teach us. Part of the support I am getting is from Sir Peter Gershon and his people in the Office of Government Commerce, because I think we need to look in the mirror, accept that we do not like what we see and look round to see where other people are doing it better and emulate it. That is at the heart of what I am doing in terms of interacting with industry as part of reinvigorating the Smart Acquisition programme.

Q193 Jon Trickett: I am interested in the inter-relationship between the joint combat aircraft and the aircraft carriers. Can I ask the General first: the Report describes the post-Cold War period as having made the current aircraft carriers to some extent militarily inappropriate. Could you describe very briefly why the current carriers are no longer appropriate in the post-Cold War environment?

Lieutenant General Rob Fulton: The present CVS were designed in the Cold War era, and therefore were designed to tackle the sorts of tasks that were appropriate then, at various stages in their lives the anti-submarine battle, or indeed the immediate air defence of the fleet. Now what we seek is a weapon system that is capable of delivering effect which may be interdiction at range from the aircraft carrier, the projection of power from sea on to the land.

Q194 Jon Trickett: The Cold War ended about 1990?

Lieutenant General Rob Fulton: In 1989 the Berlin Wall came down but the bringing together of the transformation of the UK armed forces was really marked by the Strategic Defence Review of 1998.

Q195 Jon Trickett: In relation to the aircraft, I understand that the Harrier fleet is broken into two different types, the Sea Harrier first. I understand that is coming to the end of its life.

Lieutenant General Rob Fulton: That is correct.

Q196 Jon Trickett: When do you determine that it will come to the end of its useful life?

Lieutenant General Rob Fulton: Sea Harrier is being phased out over—I cannot remember the exact date but over the next few years and it is progressively being replaced by the Harrier GR7. 2006, I am told.

Q197 Jon Trickett: I was going to say I thought it was the next two years. The Sea Harrier will then be gone. The Sea Harrier was built to operate out of the aircraft carriers. Is there a difference in military capacity between the Sea Harrier and the Harrier GR7 which is currently being used because of the obsolescence of the Sea Harrier?

Lieutenant General Rob Fulton: Yes. The Sea Harrier was principally designed as an air defence aircraft and the GR7 was designed as an attack aircraft.

Q198 Jon Trickett: So therefore the situation at sea is aircraft carriers which are no longer militarily appropriate in a post-Cold War era, although they can be adapted, and Sea Harriers which are designed to go on the carriers which are themselves now being phased out and we are now relying on the Harrier GR7 which is a different kind of aeroplane to the Sea Harrier. I would draw the conclusion from those several statements that the project to build a new aircraft carrier and to replace the Sea Harrier is becoming increasingly urgent. We are now some years into a post-Cold War world and the Sea Harrier in any case is obsolete and is being replaced by the current GR7, which is not the same kind of aircraft. Is that broadly correct in my non-military language?

Lieutenant General Rob Fulton: If what you are saying is that we would like to bring the aircraft carrier and the new aircraft into service as soon as possible, then yes.

Q199 Jon Trickett: I have terrible fears about the co-ordination of the two projects, the building of the new aircraft to replace the Sea Harrier and the building of the aircraft carriers. I want to turn to Sir Peter Spencer first if you are the appropriate person to answer these questions. The decision to build a new aircraft carrier was made in 1998. It is now 2004. We have just heard that the current carriers are not appropriate for post-Cold War. You are dragging your feet as a department, are you not, in this? We are six years on and you have not even let a contract yet although you have let a contract for the aircraft which are meant to land on this carrier.

Sir Peter Spencer: The co-ordination of those projects was managed very carefully and in order to strengthen it the department recently appointed a so-called Senior Responsible Owner to ensure the coherence of all of the capabilities which are needed, including other things such as infrastructure, training and people. So far as the coincidence of the in-service phase is concerned, the fact of the matter is that it takes longer to design and develop a fighting aircraft than it does a ship. Although politically the

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decision has been taken there is a final decision as to when this carrier comes into service which will be made at the Main Gate approval when we have got a de-risked solution where we understand the performance, time and cost parameters.

Q200 Jon Trickett: Supposing the aircraft carrier comes first and the aircraft come some time later, even though the aircraft contracts have been let. The Harriers which will be left at that stage will not be able to be properly maintained on the new aircraft carriers. Is that correct?

Sir Peter Spencer: If we did not do anything about it, but if something catastrophic happened to the Joint Strike Fighter and hypothetically but highly improbably the carrier was in service and GR7s or GR9s, as they will be upgraded to, were available, then we would operate them from the new carrier in the same way as we operate them from the existing carriers.

Q201 Jon Trickett: Will it be possible physically to maintain the Harriers on the new carrier and drop them down into the new engine room?

Sir Peter Spencer: The new carrier is going to be several times larger.

Q202 Jon Trickett: So will it be possible? Just yes or no.

Sir Peter Spencer: Yes.

Q203 Jon Trickett: Will you give me note on how that can be done in the time because I was informed by somebody who knows that that was not going to be very easily manageable. In terms of the relationship between the two contracts, one has been let and the other has not. I notice that on the aircraft carrier it has taken six years—and this is a point which I asked a few moments ago which I do not think you properly addressed—to get to the stage of letting the contract. When will the contract be let?

Sir Peter Spencer: I cannot be absolutely certain but we expect to place it some time this year.²

Q204 Jon Trickett: Are you not disturbed, as a layman such as myself is, that there is this disjunction between the two contracts?

Sir Peter Spencer: There is no disjunction, and I will tell you why: because you will not get to the end any faster by starting too early. It is a recipe for getting to the end later and spending more on it.

Q205 Jon Trickett: So we finish sooner by starting later?

Sir Peter Spencer: This is what all of this is telling you about Smart procurement, the need to invest properly in the assessment phase programme and the intellectual effort.

Q206 Jon Trickett: If you were betting man, which I know you are not from the other day, I would be prepared to wager a fiver with you that we end up

in terrible trouble in co-ordinating the two contracts. Is it true that there will be a partnership structure of some kind between two American companies to build the aircraft carrier? You will just leave them on their own, provided with a spec with you are satisfied with?

Sir Peter Spencer: You said American companies?

Q207 Jon Trickett: Between two suppliers.

Sir Peter Spencer: At the moment the arrangement is for us to deal with two suppliers in partnership who are putting together proposals.

Q208 Jon Trickett: Does that not make the thing even more complicated?

Sir Peter Spencer: It may make it more complicated but it certainly makes it more effective than either party were judged to be capable of doing by themselves.

Q209 Jon Trickett: I want to ask this final set of questions on the way in which it is going to be managed. Here we have two closely integrated and very complex contracts, one for aircraft and one for carriers. The contractual structure of one seems to me to be quite novel in the sense that you are setting up this partnership arrangement and you have described that you are setting up this new management role with, I think you said, a senior responsible officer?

Sir Peter Spencer: A single responsible owner.

Q210 Jon Trickett: What does that mean exactly?

Sir Peter Spencer: It is somebody who is directly accountable to the Defence Management Board to ensure that all strands of work which are related to delivering the final military output are coherent and are proceeding in the right timescales and are properly resourced and have been given the right level of attention.

Q211 Jon Trickett: Is that a person that has already been identified?

Sir Peter Spencer: He is in post.

Q212 Jon Trickett: Is he a civil servant or a military person?

Sir Peter Spencer: He is a two-star military person, Rear Admiral Nigel Guild.

Q213 Jon Trickett: Will he have the authority to arrange the contracts? Will he control the budget or merely have the capacity to arrange any variations in time or contract in order to ensure that the two things are brought on stream simultaneously, as is obviously necessary?

Sir Peter Spencer: He will not actually manage the contract or the budget but he will have authority to persuade, cajole, encourage people to get things into line and will be obliged to go straight back to the Defence Management Board chaired by the Permanent Under Secretary, Sir Kevin Tebbit, and the Chief of Defence Staff if there is any part of that construct which is not operating in a way

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which meets with his satisfaction and is going to deliver his outcome. Effectively he is authorised to ensure the right actions take place.

Q214 Jon Trickett: So he is responsible but has no power?

Sir Peter Spencer: He has a lot of influence. He does not have the power to direct a particular change but then a lot of people are in that position and still manage to achieve their objectives.

Q215 Jon Trickett: Will he be in post in 2012 to be held responsible?

Sir Peter Spencer: I don't think so, but the aim is to make sure that tenure is an issue and that he is there for a significant period.

Jon Trickett: I think this is a very interesting proposal in management terms, two very complex contracts which have got to be brought in simultaneously. It would be helpful to me and maybe to other members of the committee to have described in more detail the management arrangements and the responsibilities which this person is going to have and the future of the defence of our nation.

Chairman: I am sure the Ministry can do that.³

Q216 Mr Steinberg: Sir Peter, although Smart Acquisition is a relatively new initiative designed to ensure cheaper, faster and superior equipment, is there any evidence to show that it is succeeding in meeting its aims? If you read the Report, there appears to be more evidence to show that it is not meeting its targets because there are still long delays and increased prices. Can you explain the actual situation?

Sir Peter Spencer: The situation is encapsulated by the National Audit Office Report which recognises that the so-called Smart projects are doing better as a class than the legacy projects, but there are worrying signs that they are not going to deliver the results that we expected, notably because of the way in which risk differential, as it is called,—in other words, the contingency which is put in to cover against difficulties that might occur—is being consumed so early on in the process, and if you are analytical about this and you look at the history of other projects and you recognise the point in the lifecycle where trouble emerges, then we should be extremely cautious, which is why I initiated the work which I have done on arriving in this post.

Q217 Mr Steinberg: So there are problems with Smart Acquisition but what you are actually saying is that you believe that it is a better system than we had previously?

Sir Peter Spencer: It has only been partially implemented and if you look at the seven principles which were identified there are a number which need to be put into place more comprehensively. If I can just give you a quick example, we are not spending anything like the amount of resource we should on complex projects in the assessment

phase. In other words, we are not de-risking the capital investment decision which we make. My job is to manage uncertainty and risk and we have to do that better.

Q218 Mr Steinberg: On page 17, paragraph 1.25, the Chairman touched upon this in his opening remarks and asked you specifically how you were implementing point three, “to create a better, more open relationship with industry”, and you gave a pretty comprehensive answer to that question. Clearly in this paragraph it seems to say that not enough has been done to ensure that Smart Acquisition will succeed. It then goes on with the six points, the third one of which you have covered quite comprehensively. It is okay, is it not, to have theoretical solutions to problems but those theoretical problems have to be put into practice? How do you intend to put those other theories into practice?

Sir Peter Spencer: Because in order to do those things you have to make sure you can measure that you have done it and be candid and honest with yourself and your people about the extent to which it is being done. Therefore, for each of those things we are working up under the new arrangements something which we can measure to show we are doing it, and I can give you examples of each of them if you are interested.

Q219 Mr Steinberg: No, no. If you want to give a note perhaps that would be the best way.⁴

Sir Peter Spencer: Most importantly, we are making sure that the processes are better defined, that the results are measured, that there is a compliance regime. There are 700 projects of that kind, so there will be a compliance regime to make sure that everybody is doing it and much stronger corporate governance at the executive board level.

Q220 Mr Steinberg: You say that, and obviously we hope you are very successful. One thing that sticks in the crop of most members of this committee who were there at the time, and I mentioned this only a fortnight ago in the debate on the floor of the House, was what appeared to us to be the debacle of the Apache helicopter where we had the brand new Apache helicopters, state of the art machines which could have been used apparently in the war in Iraq but were in store because there were no pilots to fly them; they had not been trained. In this Report it seems that you are going down exactly the same line with the new Typhoon aeroplanes. You are not splitting training and manufacture. You seem to have the same contract as you had for Apache. Do lessons never get learned or am I misinterpreting what is in the Report?

Sir Peter Spencer: I think there is a misunderstanding of the status of the trainer which is on track in this case. What I would say in terms of whether or not we are addressing that particular problem, such as the attack helicopter, is that the

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first bullet, “to improve the ability to manage projects on a whole life basis”, is precisely what we are talking about because what we are making sure is that not only do we deliver the equipment but that it is affordable and sustainable through life, that we are identifying the people who need to man it, that we are identifying what they may need to do to get trained, and we are making sure we put the infrastructure into place so that we can look after it as well. This is part of the remit of a Single Responsible Owner who looks across all of what in army terminology are called the six lines of development to ensure that there is coherence and that we do not do the attack helicopter again.

Q221 Mr Steinberg: What you are actually saying is that you are not making the same mistakes as you made with the Apache helicopter in terms of training and doing the same contract?

Sir Peter Spencer: So there will be no excuse to make because we now know how to do it and have a compliance regime that should deliver.

Q222 Mr Steinberg: Do you think you have made a mistake in splitting the landing ship contract?

Sir Peter Spencer: Between BAE Systems—

Q223 Mr Steinberg: The reason I say that is that it seems to me quite clear that, regardless of what was said on Monday, and I think I used the expression “you are caught by the proverbials”, like it or not, you are. You do not seem to have many options—of course, that is not your fault; that is the industry—and once they get hold of the contract then it appears to me that they can more or less hold you to ransom. By splitting a contract and giving it to two manufacturers does that not give two manufacturers the opportunity of holding you to ransom?

Sir Peter Spencer: It spreads risk. It also causes complications.

Q224 Mr Steinberg: It does?

Sir Peter Spencer: Yes.

Q225 Mr Steinberg: If that is the case, why did you give BAE half of the contract when it was Swan Hunter who actually designed the project, who are going to build the project but were only given half of the contract itself? Why would you do that? Why did you give BAE half of the contract? Why not give Swan Hunter the whole contract?

Sir Peter Spencer: The thinking at the time was centred upon the need to sustain the industrial base of shipbuilding. In that context there is a workforce at Govan, there is a workforce on the Tyne, and—

Q226 Mr Steinberg: So it was a political decision for jobs, basically?

Sir Peter Spencer: I have to be a little bit careful because I was not part of the decision.

Q227 Mr Steinberg: I do not criticise that at all. I think that is good.

Sir Peter Spencer: What I am saying is that there are occasions where the judgment has to be made for the longer term. We knew we had a large shipbuilding programme in the offing. We needed to look at the industrial base which was available and to ensure that we did not gratuitously lose some of it when there were options open to us for value-for-money prices which could deliver the outcome which the military needed but at the same time sustain the industrial base.

Q228 Mr Steinberg: I do not criticise that at all. I would support that kind of policy if that is what it was done for. Can we turn to page 105, 1c “Procurement strategy”. I have got to be quite honest: I do not really understand this. What it says here is that Swan Hunter from Tyneside, and you understand why I am picking on this particular item, “Design & build” two of the ships or docks, and their contract type was a firm price, and I read that to mean that there is a price been given and that is the price that they are going to be paid, and they got it through UK competition; yet for BAE Systems the contract type is “maximum price to be converted to firm price”, and I do not understand what that means, and they did not appear to do it through contract, through tendering. If I am right in my interpretation, why was Swan Hunter treated differently from BAE Systems?

Sir Peter Spencer: Because the actual price will be paid for a shipbuilding project.

Q229 Mr Steinberg: This does not mean that BAE can come along at a later date and say, “It has cost us 2% more or 3% more”, and therefore they will get a bigger slice of the cake, if you like, on the basis that they are negotiating whilst the building is taking place whereas Swan Hunter have a firm price regardless? It does not mean that, does it?

Sir Peter Spencer: What I was about to say was that the way a ship is built, of course, will reflect the different overhead arrangements charged by different companies. A company like British Aerospace will have a different overhead structure than a company like Swan Hunter, so in terms of matching the numbers there is bound to be a discussion on that. There was also a discussion in terms of the prices which under the circumstances were going to be paid because a follow-on build contract, which is what is being done by BAE Systems Marine, is predicated on the supply of design information from the lead yard, and so there are bound to be some differences in the way in which the detail of the contract is put into place and that reflects itself in terms of additions which will in turn reflect itself in the prices.

Q230 Mr Steinberg: But at the end of the day will the end project be exactly the same from both yards?

Sir Peter Spencer: It is because they are being built to the same design.

Q231 Mr Steinberg: Therefore that is why I cannot understand. Why will the prices be different?

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Sir Peter Spencer: They will be essentially the same but there will be some variations to take account of the fact, as I have just described to you,—

Q232 Mr Steinberg: Who is doing it cheaper?

Sir Peter Spencer: I am not prepared to give details of commercial information in a public forum.

Q233 Mr Steinberg: I do not see how that is commercial information. It is just a simple question: is Swan Hunter providing it cheaper or is BAE Systems doing it cheaper? I cannot see what is commercially sensitive about that.

Sir Peter Spencer: I can assure you that when I send you a note you will realise why it is commercially sensitive.⁵

Q234 Mr Jenkins: When you read this Report were you disappointed in the state of play today?

Sir Peter Spencer: Disappointed but not surprised because I had already done my due diligence on the Agency.

Q235 Mr Jenkins: Because what you were saying earlier I thoroughly agree with, in so far as you looked at the commercial role and you were seeing large complicated complex projects come in roughly on time and roughly to price, and yet we do not seem to have that same ability within our own structures. We agree with Smart Acquisition but it has not been thoroughly implemented yet. Have we got a difficulty here with the culture? Are we finding it a struggle to get people to accept that this is the way forward?

Sir Peter Spencer: I think we have moved on hugely in five years. I have got independent people to come in and take a look and their view was that whereas five years ago the whole of what was then the Procurement Executive was in denial that there was a problem, they now find there is a totally different approach, that there were now people who were frustrated that these things were not delivering. There are a lot of projects which do deliver well, but my job is to make sure that the totality of the programmes deliver well. There is no point in my hiding behind examples of excellence and using that as an excuse not to do better because that is to remain in denial. What we have got to make sure is that there is a more consistent performance so that we do deliver and that people expect us to deliver.

Q236 Mr Jenkins: I find this difficult, and I go back to the Apache and the fact that we have got the helicopters but someone forgot to put the training in place. If I were to go back into my company I would say, “Right: who is leaving? Who am I sacking? Someone is responsible and someone is going to go”. Was anybody even mildly criticised for overlooking the fact that we were not training the pilots to utilise these aircraft?

Sir Peter Spencer: I do not know on the attack helicopter. I can give you a more general answer compared with other programmes. First of all, one

of the things which was put into place with the Smart Acquisition introduction was a much greater degree of competition for the team leaders and we routinely compete these posts and we open them up to competition from outside. For example, the team leader for the Type 45 destroyer is a soldier because he had a very strong track record of delivering successful projects and we are interested in people's track record of success, and there are competitions running most of the time for these big and important project leadership posts. So far as the people involved with Astute and Nimrod are concerned, there are now different people leading those projects. It coincided with when their predecessors were due to leave anyway, but we have put a great deal of care into picking people to put in. If I can just take the Astute project, he is somebody who has a very strong track record of building projects elsewhere and is now having to rescue this project and also to lift the team spirit in that team, to take it forward, because they cannot have their heads hanging down for ever; they have got to get on and deliver it, and so there is a very strong element of leadership and encouragement in all of this as well as the expertise in brokering it.

Q237 Mr Jenkins: I can understand the difficult and complex nature of these projects, believe me, and I know how difficult it is to estimate work. I used to do it for a living at one time but, relying on my past experience and talking to individuals, I had to do military estimates on price and on time, and that is why the company paid me. We seem to have a culture where if somebody does not come up on time, does not come up on price, they get moved to another department, another job, and somebody else comes in to rescue it. When do we start saying, “Look: amongst these big projects, if it is going to be additional cost to us, why have we not put some incentive in place to make sure they come in on time and on price?”? Why are we just on a level playing field constantly? It does not matter what you do: you get paid, you get your pension at the end of it whether you are good, bad or damned awful.

Sir Peter Spencer: It does matter and I have introduced a performance management regime which kicks in on 1 April against the new base line programme. Central to this is the appointment of three people as operations directors who are going to take a very close interest in the performance of each of these projects. One of the things which in the medium to longer term we need to put in place is the incentivisation along the lines that you have described, although I have to say that the people who do this do not actually do it in the hope of earning extra money for doing it. There is a great deal of peer group respect and a lot of street cred if you are the project boss and that is why they do it. There is a very strong public sector and public service ethos down there that wants to deliver. Nevertheless, recognition is something which is important. We have got some strong arrangements at Abbeywood to recognise both team and individual excellence. It does not

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come with large sums of money but small bonuses which get distributed from time to time and public recognition go a long way to people wanting to take it on.

Q238 Mr Jenkins: You lose street cred in a job when maybe you are the only one that goes wrong but, when we see the history of these projects and assignments, how can you lose street cred when everything else is in the same boat? The majority go wrong.

Sir Peter Spencer: Because I believe that we have certainly slowed down the rake's progress. To put this into context, there were several years where the time slippage results which were being recorded by the previous MPRs were much less. The question I asked myself with MPR was, is it a spurious result or is it a sign of a more systemic problem? My diagnosis is that there is a more systemic problem which we need to tackle head on and that is why I am doing what I am doing. In terms of street cred, if you pick it up, like the team leader of the Astute project which is so far down the pipe, you can only measure it on your personal progress from the point at which you took over. That is where street cred comes from.

Q239 Mr Jenkins: I appreciate that where the problem has gone wrong it is an awful task and takes a long time to pick up all the pieces, but we are now in this new environment, this Smart Acquisition, which always makes me smile. I noted one of your answers when you said that Smart Acquisition is only partly implemented because basically we still do not put enough resources in at the start at the point where we are now going to do the evaluation through risk reduction, etc, so we know that when we get to the end of that line we have a confidence level of 95% that we are going to be on target and on time, so if they are not doing it what is your job actually?

Sir Peter Spencer: My job is to stop it happening and to stop the proposition from going forward, and that I do. I can say "no" in nine other languages.

Q240 Mr Jenkins: So how many jobs have you stopped going forward because they have failed to put resources in, they have failed to meet the risk reduction targets?

Sir Peter Spencer: I can quote the carrier, for example, because it was my personal initiative that said, "I am not convinced that we have got a proper understanding of the costs and performance and time trade-offs here". There was a pause while we reconfigured and I had a conversation with the General to say, "We are looking at this. We need to understand better. We need to understand how much more to invest here, and I am not going to go forward with a proposition which is at best 5% cross my fingers, close my eyes and hope that somebody will pick up the consequences".

Q241 Mr Jenkins: I want to help you because I want you to have the power and use the power to stop this not being done effectively in other than what you believe is the right way.

Sir Peter Spencer: I have and I do.

Q242 Mr Jenkins: You do use that power?

Sir Peter Spencer: Yes, I do.

Q243 Mr Jenkins: So we are not going to come back here and sit at this table in a year's time or two years' time and find projects that have now been initiated that have failed to go through this rigorous assessment process?

Sir Peter Spencer: Not from now. You will find, as is identified in this Report, that there are still some projects where the damage has not been flushed out of the system and that is what I am doing in the course of this current year; I can certainly start at the beginning of the next financial year, 1 April, so we have got realistic, we have stopped hiding. The problem with what we measure is that we measure forecasts and the question is that you need to have a really forensic, good, corporate governance system which is ensuring that the forecasts we are dealing with are the ones that we have the collateral to support so that we know where we stand.

Q244 Mr Jenkins: I did not go back into the past because I do not profess to understand the problem we have got. It is much more important to understand the solution that you are offering.

Sir Peter Spencer: That is fair enough.

Q245 Mr Jenkins: And I take it that you are going to be there for a number of years. We are not going to be sitting facing somebody else in 18 months' time or so who does not remember your policy or the one before?

Sir Peter Spencer: I am looking at a sensible tenure and I also expect the project leaders to be in place for four to five years because cause and effect for what are clearly understandably complex projects does take a long time to kick in and you want people to be around to answer for what they have done.

Q246 Jon Cruddas: Can I refer you to figure 18 on page 25 of the Report? This concerns projects which are at a relatively early stage in their life cycle but have consumed relatively high levels of their risk differentials. Just so that I can understand this graph, which is quite complicated, can you correct me if I am wrong? Take the four categories at the bottom of this, the BVRAAM, for example. Does this mean that it is 23% towards maturity in terms of its in-service delivery date but it has reached 100% of its risk threshold in terms of the in-service date, in terms of you having any confidence in it coming in anywhere this side of the last date of delivery as it were? Is that what that means?

Sir Peter Spencer: Yes, it does.

Q247 Jon Cruddas: So we are a quarter of the way through the project and you are 100% sure that it is not going to be ahead of schedule?

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Sir Peter Spencer: What we are saying is that unless some means is found of accelerating the programme, and if the project comes out at the time that it is currently being forecast at, then we are right on the maximum acceptable time. That is not a comfortable position to be in a quarter of the way through the programme, which echoes the point I was making earlier.

Q248 Jon Cruddas: For the one above that, the A400M, that would mean, in terms of its having a 250% in-service date risk differential, that that has exceeded by two and a half times its in-service date whilst only a quarter of the project has been completed? Is that right?

Sir Peter Spencer: Yes, it is. That is what the figures are telling you.

Q249 Jon Cruddas: Similarly the one above, the Support Vehicle (Cargo & Recovery) is 271.4% in terms of its in-service delivery whilst 31% of it has been built, effectively?

Sir Peter Spencer: We have not even started on that yet. It is the point at which we started the clock running, which was the Main Gate investment decision when the parameters were set. In all three cases there, if we use the analogy of somebody running a 1500-metre race, we fired the gun but the runner did not start running because we did not place the contract. The reason we did not place the contract was that in the first two cases we ran into problems getting final agreement with our international partners, who happened in both cases to be Germany, before we were ready to go to contract. In the third case, which we covered earlier, it was because we did not do an initial pre-Main Gate assessment phase and we underestimated the complexity of what we were doing. In all three cases, in terms of how we have enabled performance to look, we have measured it against a time when the gun was fired, not when the contract started running.

Q250 Jon Cruddas: Can I just flip that over and look at this graph through the cost risk differentials rather than the time risk differentials? Again, would you just clarify what this means? Take the Sting Ray Torpedo Life Extension. As I understand it this is 71% built in-service date achieved and 188% used up in terms of the cost risk differential.

Sir Peter Spencer: Correct.

Q251 Jon Cruddas: Does this mean that it will cost nearly twice as much?

Sir Peter Spencer: No, no. It means that of the contingency which is identified we are going to use up all of the contingency and some more but, in the case of Sting Ray, virtually all of that is the addition of interest on capital for assets in the course of construction because of changes in the time line of the programme. In other words, it stays on my books for longer and therefore I get charged interest on capital for longer. It is not actually money we are going to pay out additionally to the contractor.

Q252 Jon Cruddas: And I do take it that some of these in terms of the costs are going to be the other way as well?

Sir Peter Spencer: Yes, so we get “unders” as well.

Q253 Jon Cruddas: Going back to the BVRAAM, this tells us that 23% in terms of estimated in-service delivery, we are running at 84.5% in terms of the cost risk differential?

Sir Peter Spencer: Yes.

Q254 Jon Cruddas: Can I turn to figure 17?

Sir Peter Spencer: Can I just say that in both of those cases, BVRAAM and A400M, part of the cost growth has been the German government reducing its offtake and there being an impact on our costings.

Q255 Jon Cruddas: The only point I was nudging towards was that under the new acquisition regime you are reaching the outer edge of some of these risk differentials at quite early stages in their delivery.

Sir Peter Spencer: I agree and you are right to identify it. It is a health indicator and it is a health indicator pointing in the wrong direction, which is why we are doing what we are doing.

Q256 Jon Cruddas: There are a few red lights flashing?

Sir Peter Spencer: Yes.

Q257 Jon Cruddas: Can we turn to figure 10, page 14? As far as I can see this shows that in the last year costs have increased by £471 million because of problems with the contracting process—the second row down.

Sir Peter Spencer: Yes.

Q258 Jon Cruddas: But the majority of that, to the tune of £285 million, has been on the Smart projects rather than the legacy ones. Why is it that we are underestimating the challenge of agreeing contracts and how are we going to improve that? Is this a systemic problem or is it a project-specific one that has disproportionately affected the aggregates?

Sir Peter Spencer: The A400M is project-specific relating to problems of getting Germany to the table and relating to the fact that in reducing the number of aircraft that Germany decided to reduce its buy from 73 to 60 it reduced the total number for four or five nations to 180, which was the minimum economic quantity and pushed the prices up for everybody else. It also delayed the programme and that has had some effect on the resource costs that we have got in there. As far as the Type 45 is concerned, that is a problem which is largely driven by the increase in prices over that which was expected for buying the main weapons system, the principal anti-air missile system, for Hulls 2 to 6. There had been an assumption based on the earlier work as to what prices we were going to get out and an assumption was made. When it got put to the test in terms of contractual negotiations the best price the team leader was able to obtain showed a movement of £124 million.

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Q259 Jon Cruddas: Can I ask one final question and that is about the move away from cash accounting to accruals based accounting? I have not seen a transcript of Monday's session but I think Sir Kevin said about the £3.3 billion estimate that half of it—
Sir Peter Spencer: About 42%.

Q260 Jon Cruddas: 42% was about the changes in terms of the accounting procedures.
Sir Peter Spencer: It was either 42 or 45. I am told 42.

Q261 Jon Cruddas: One of the conclusions in this Report at paragraph 1.3 is that £3.3 billion in 2003 suggests a reversal of the improvements in cost control indicated over the last couple of years. Is the inference from this that the move from cash accounting to accruals based accounting accounts for these changes?

Sir Peter Spencer: No, I think what it means is that the numbers you produce exaggerate with respect to cash accounting the damage which you incur. In other words, if we had been looking at this in a former life—

Q262 Jon Cruddas: That is the question I should have asked.

Sir Peter Spencer:— we would have had a figure of something like £2 billion as opposed to £3.1 billion.

Q263 Jon Cruddas: What are the benefits for accruals based accounting for your department because the whole logic of it, and I quote from the NAO Report in terms of wanting resources to deliver better public services. It says that accruals accounting shows departments' expenditure and income as it occurs rather than when amounts are paid or received. This provides an appreciation of the real costs involved in providing a service rather than what is simply paid out in cash. Financial statements as in the private sector now show departments' assets and liabilities as well as the effects on depreciation and the capital charges. The point is, is not the £3.3 billion a better rounded understanding of the situation that the department faces rather than simply saying that on the previous system this would have been much less?

Sir Peter Spencer: I think what Sir Kevin was trying to draw a distinction between was that we did not pay £3 billion in cash additional to industry; we paid £2 billion. He also pointed out the benefit of this system, which is that it instils a discipline in getting on with things. Frankly, it also puts us in the same culture as industry is in because time is money. The trouble when you just pay cash is that you do not observe that, whereas time really is money here and my passion in life is to get people to attack the time line and to do the performance and cost trade-offs along a time line because that will automatically bring costs down, not only the interest on capital but the other costs as well.

Q264 Jon Cruddas: So you are a passionate supporter of the move to accruals based accounting because of the discipline it brings?

Sir Peter Spencer: I said I was passionate about attacking the time line.

Q265 Jon Cruddas: It is a tool by which you can deliver?

Sir Peter Spencer: Yes.

Q266 Jon Cruddas: And this is a transitional problem, the £2.2 billion to the £3.3 billion, if you like, and now it helps you in terms of delivering discipline within these projects?

Sir Peter Spencer: Yes, it does, within the DPA, but there is a compensating reduction on the balance sheet of Strike Command or the other commands because they will not be picking up the costs of ownership which are charged to their budgets once they take delivery of these equipments. Therefore the net increase across defence is the £2 billion.

Q267 Jon Cruddas: I think I have got that.

Sir Peter Spencer: We are playing shops, you see. While I own something I pay interest for it. When I hand it over to the General, if he were one of the front line commanders, he would then pay interest on it. The fact that I pay interest on it for longer and it appears as a hit on my book is compensated by the fact that there is a reduction in his costs. However, there are consequential problems which are highlighted in this Report with other things which you have to continue to have for longer than you planned.

Q268 Jon Cruddas: And there are presentational problems as you move from one system to the other?

Sir Peter Spencer: Yes.

Q269 Chairman: Just to clarify this figure 18, page 25, if you look at it, I think I am right in saying that there are five projects that have either hit or breached their not-to-exceed thresholds. Why do you not formally reconsider whether they should be continued in their present form?

Sir Peter Spencer: In every case where a project has gone through its upper limit it will have been re-approved, in other words, submitted for whether or not it should continue or should be re-approved against revised performance time and cost parameters.

Q270 Chairman: Does this mean very much then, this threshold, because these five projects have already hit it, in some cases fairly early on in their life, and you just decided to carry them on?

Sir Peter Spencer: The judgment goes along the lines of, do we still need the capability, is there a better way from where we are now of delivering that capability and what will be the consequences if we do without it, and that judgment is taken.

Q271 Chairman: So this really is a paper exercise? You cannot not have a Type 45 destroyer, can you?

Sir Peter Spencer: You could identify how you are going to live within your original budget.

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Q272 Chairman: What, knock things off the capability of the destroyer?

Sir Peter Spencer: The Type 45 is inside its budget. What you have seen is a movement in year. What it has come to is the limit of what was set as the approval of the latest acceptable in-service date, so if it moves any further it will need to be re-approved.

Q273 Chairman: But there are examples which are already over. You are caught between a rock and a hard place, are you not?

Sir Peter Spencer: Only if I allow proposals to go forward with a capital investment decision which have not been properly de-risked and have not been set up properly in the first place.

Q274 Mr Davidson: General Fulton has had a remarkably easy day today. Can I ask you what you have done about sleeping bags since we last spoke in the gents' toilet along the corridor?

Lieutenant General Rob Fulton: Mr Davidson, as I think you may know, the Minister of State for the Armed Forces was in Norway at the time and has also received a report on the subject of sleeping bags and it will come through him. It is not my responsibility to equip people with sleeping bags. The people whose responsibility it is are answering the question.

Q275 Mr Davidson: Can I return to the question of time and could I particularly look at chart 18 on page 25? I am looking there at the fact that the A400M, the missile and the Type 45 destroyer, and all of this was identified earlier, are early in their life cycle and up to the limits on time. I understand what will happen now but what I seek to clarify is whether or not you think that there has been a mistake in the assessment process in terms of setting those dates: you were over-optimistic and is there not a lesson to be learned here, or has something else untoward happened?

Sir Peter Spencer: Yes to all of those questions. Yes, there was a mistake; yes, I believe to set the time differential for a complex shipbuilding project like the Type 45 with all the unknowns and uncertainties which we were aware of at the time at only six months looks very short to me. Unless I was convinced that we had done much more work on a project before we went to the Main Gate decision I would not allow that to go through. In terms of the other two, as I explained earlier, it was because we were effectively gambling on how long it would take us to place a contract and so it takes time. You cannot set an agreement in a contract against a time line.

Q276 Mr Davidson: I understand that. Presumably though those assessments must be, particularly in terms of placing a contract, made available at the time. What I do not quite understand is why, knowing what you knew then, you still made a mistake and I am wondering whether or not appropriate lessons have now been learned other

than simply making the time limits more generous to give yourselves more space, which anybody can do just by changing the target.

Sir Peter Spencer: No, that is not what I am saying. On the first two, which related to a delay before placing a contract, it does not make sense to have a Main Gate decision taken 12 months before you plan to place a contract unless you are very clear that you understand what that contracting process is going to be. The first lesson that anybody learns doing this, of course, is that if the person that you are negotiating the contract with knows your back is up against the wall on time, he has got the high ground because he can just sit and stall until your time runs out, so we do not negotiate the contracts like that. On the second one, which is do you just help yourself to great lumps of time, no, you do not. What you do is you do not come to the start line until you have de-risked it, which is precisely the point I was making about the aircraft carrier. We had not de-risked it and therefore the only way we were going to do it was by helping ourselves to a great big wedge of risk differential which would have been entirely unsatisfactory. We have got to do the assessment phase properly.

Q277 Mr Davidson: Can I just clarify in paragraph 1.25 "incremental acquisition"? Could you expand slightly on how that is applicable to major new projects?

Sir Peter Spencer: If you try and get a very complex system and describe to the last bit of detail everything that it is going to be able to do for you and say, "Until it has done that I will not accept it", is a recipe for huge problems. It is the old joke, "How do you eat an elephant?" "One bite at a time". What we need to do is make sure that we identify a level of operational capability which is militarily useful at the initial in-service stage but know that we are going to upgrade it economically through life to adapt to changing circumstances. That has the benefit of being more flexible and versatile because, as the Secretary of State, Mr Hoon, pointed out recently, one of the concerns we have got is the ability of defence as a whole to respond rapidly to a very fast-changing set of political and operational circumstances. To rigidly adhere to delivering the perfect solution to something you thought you needed 10 years before is the best way to get it wrong. You need to be able to adapt as you go along.

Q278 Mr Davidson: That is what I thought you would probably say. Surely that depends upon having a very close and trusting relationship with the suppliers?

Sir Peter Spencer: Yes.

Q279 Mr Davidson: Because the emphasis for them could be to bid low and then make their money later on, on upgrades and amendments and the process with yourselves, once they have got you over a barrel with nowhere else to turn.

Sir Peter Spencer: It rather depends on the project because you do not necessarily go to the original prime contractor to supply the incremental

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upgrades. In other words, you can add something to a warship which you went to a totally different contractor to produce for you, and you would still employ competition to do that, so long as you defined or designed the right sort of margins into the ship or aircraft or fighting vehicle from the outset.

Q280 Mr Davidson: I would accept that but there is clearly a distinction to be drawn between a warship and something that is literally bolted on, when you could clearly go out to competition elsewhere and deal with it differently, as distinct from something that is integral which is essentially an upgrade rather than an addition. Surely, in the context of upgrades, you are then a prisoner of the supplier? You indicated earlier on the difficulties you might face in letting a contract if a supplier knew you were up against a tough restriction, because then they could just hold on. When you said that, I thought that that was not the most trusting of relationships. Surely, by this iterative process you are placing yourself in a substantially weakened position?

Sir Peter Spencer: Not if we follow through in the way which I described earlier of having a better engagement with industry in the first place and going for contractual arrangements which are more mutually beneficial. I talked about benchmarking with the North Sea oil and gas sector and construction industry. The fact is that with open book accounting and with more appropriate contracting arrangements whereby you positively incentivise a supplier to get a better return on his outlay by meeting your project aims, which can include driving the price down—if you get a better profit, as happened on some of the big North Sea oil projects, you get a better return from the supplier by driving the cost down, and then you have got mutually beneficial behaviour. However, it does mean a more trusting relationship as we have established with a number of companies. You might have recognised that we have not quite got there with all companies, but we are on the case.

Q281 Mr Davidson: We did detect that actually! I am just wondering about how in future meetings we will be able to assess how successful this relationship has been. Will it be possible for us to receive material which identifies incremental changes and how each of them were dealt with, in order that you can establish that you have not been gouged unnecessarily?

Sir Peter Spencer: We are looking at what we can do to identify the metrics for measuring supplier performance. It is bound to be a highly sensitive piece of information, but for our internal use that is precisely what we shall be doing. I ought to say by way of clarification of my earlier remark about BAE on Monday that there are contracts with that company where we do have very good and open and transparent successful relationships, so it would be wrong of me to say that it is symptomatic of everything in that company.

Q282 Mr Davidson: I am aware of that. Can I come back to the question of trade-offs that you mentioned earlier between cost drivers and performance. I have always been under the impression that there is a great tendency amongst MOD people to overplay, over-engineer and all the rest of it. I am not clear how an iterative process is going to avoid that taking place and how you are going to avoid therefore cost escalation, because then there is a mutual interest between those who are doing to play with these things and those getting paid for it to upgrade everything all the time. Are you, or your office, going to be the people that hold these things down?

Sir Peter Spencer: If I could give General Rob a chance to speak, it is mostly in his interests that we do this together because he has to put together the budget that I have described earlier, and it is no help to him if people are over-engineering because it wrecks the overall programme consistency. He has a very strong vested interest in making sure that all the people working for him are driving my people in the right direction.

Lieutenant General Fulton: You will have seen from the Report that there is a very high percentage of requirements that have been met, as opposed to cost and time. We are responsible for owning that requirement, and we do so on behalf of the frontline commands, who are the ultimate end-users. What my people are pushing for is not gold-plating, but the maximum capability that they can get out of that piece of equipment. There is a very strong difference between that and gold-plating. It is the maximum amount of capability that we can get out, but, clearly, you can push that too far because you can be too demanding. That will then put at risk cost and time. There is a balancing mechanism between what my people are pushing for, which is the maximum requirement that we can deliver ultimately to the front line, the amount of money that we have got for that programme and the time within which it can be delivered. There is no sense in sticking to one at the expense of the other. You will see from the imbalance between meeting key user requirements on the one hand, a high figure, and cost and time performing rather less well, that we have got this out of balance. What might be helpful to do as part of this change that you have heard about from Sir Peter is to understand that those key user requirements have to be banded. We have to make sure that we understand what is the minimum capability that it is worth putting into the field, and then we have to have a hard target or a stretch target that shows that actually we would like it to be able to go a bit faster, fly higher, engage more targets, or whatever it may be. Once again, it is not gold-plating, just more capability. Within that band is the area within which we seek to work, and within that band, in conjunction with Peter's team, we need to make sure that we get the balance between cost, time and performance.

Q283 Mr Davidson: At what level of the organisation are these decisions taken, because presumably they are not only a major decision but they are a variety

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of small ongoing decisions, and I am not quite sure whether or not all of these go upwards or whether they are left at the level of the project head?

Sir Peter Spencer: Let me make it clear. We need to ensure at the point of approval that there is a three-dimensional space of performance, time and cost which is big enough for the IPT leader and his military customer—who is called a director of equipment capability; and they can end up anywhere in that box they so choose without referring back, because they are living within their time and cost approvals and they are working within their performance band, which would be accepted as good enough, albeit we are trying to push it higher. My judgment at the moment is that we have more two-dimensional space and not much room to manoeuvre some of these performance areas, so people are a bit boxed in. There is an unwillingness to recognise the fact that the best is the enemy of the good, and that you can get to a point where you get an exponential rise in resource required to get margins of performance. The devil is in the detail. Some of these very fine areas are amongst thousands of lines describing what the performance is, and it is making sure we guard that process properly and spot the signs of problems before they damage the programme.

Q284 Mr Bacon: Sir Peter, can I ask you to start on page 37 with the diagram about the Smart acquisition lifecycle, appendix 1. Can you say what system of metrics you have for measuring and controlling risk in the early concept stages—in other words, on the left-hand side of this chart?

Sir Peter Spencer: We start with the capability that is needed and the options for meeting that capability and seeing if there is anything available that we could buy off the shelf to do it. If there is not, we then take a look at what the performance drivers are and understand to what extent that translates in the need to have new technology. We then look at the maturity of the technology that is available to us. Some of it will be emerging from the corporate research programme in the early conceptual stage; some of it will be in the form of the applied research programme that General Fulton's team runs; and some of it will be in the form of technology demonstrators where we start to prove things. We are now using, as is reflected in this Report, a systematic way of judging the technical maturity in the form of technology risk levels.

Q285 Mr Bacon: What metrics do you use?

Sir Peter Spencer: We use what is called TRL, technology readiness levels. For example—

Q286 Mr Bacon: It is quite a complicated area. Could you send us a note explaining it in more detail?

Sir Peter Spencer: Yes.⁶

Q287 Mr Bacon: Thank you very much. As a general statement, do you think it is fair to say that you would recognise you have been under-investing at this end of the graph and that this is now changing?

Sir Peter Spencer: Yes.

Q288 Mr Bacon: On page 199, appendix 7, it is talking about whole-life costs. In paragraph 9 at the bottom right-hand corner, it states: "The year 2002–03 saw cost of ownership data being captured from stakeholders for the first time." Why was it for the first time? I will give you an example. I have just changed my car. I bought a new car in August 2001, so it was three years old, the finance was up and I had to hand the keys back or keep it or buy it off. I built a model on a spreadsheet, and it was quite a shocking experience to know how expensive it is to run a car. I wanted to analyse the true whole cost of ownership, which was common sense really, which was everything from the purchase cost itself and the capital to the maintenance and the fuel, which was a combination of the number of miles that I did and the performance of the car, and then the depreciation. I came up with a model that enabled me to figure out the whole-life cost. It is so blindingly obvious that that is what you do, I just cannot understand this sentence. Why was cost of ownership data only being captured for the first time two years ago or even a year ago?

Sir Peter Spencer: It is a particular description of how we are doing cost of ownership in terms of the totality. It is not therefore valid to infer from that that we were not making estimates of whole-life costs of ownership in the past. We were using slightly different terminology and we were certainly failing to capture all of the components. To give an example, we were certainly capturing the costs of initial acquisition and the cost of ownership in terms of forecasts or what it would cost to maintain, refurbish, and all the rest of it through life until disposal. Where data was less accurate and not systematically collected were all of the other bits of through life cost of ownership including any infrastructure that we need like jetties for nuclear submarines, and particularly in terms of manpower. Because I used to do manpower in my last job, it was a particular interest of mine because the lead-time for a capability—the longest pole in the tent—tends to be the specialist skills you need to achieve in the military. It was therefore very important that we captured all of this information so that when we made these investment decisions we did not just do it on the initial costs of acquisition but with a much longer term view in mind of what represented value for money over the whole of the lifetime. In other words, it points to where I should invest more money upfront to ensure the costs of ownership that will be incurred by the Chief of Defence Logistics are going to be lower, so long as we do a proper investment analysis and appraisal and make sure that we are

⁶ Ev 41–42

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getting the return, because spending money earlier is always a disadvantage as opposed to spending the money later.

Q289 Mr Bacon: It is a complicated question. Could you do a note setting out the various stages you think we need to go through to get to realistic estimates of whole-life ownership costs and what each stage covers, and when you get to the next further stage of the sequence and cycles, that would be extremely helpful. Perhaps you could add in to that note how you expect the variations in estimates, which obviously affect things like depreciation and carrying costs, are changed by resource accounting and budgeting?

Sir Peter Spencer: Yes, indeed.⁷

Q290 Mr Bacon: In regard to non-competitive contracts, I have here something from the Acquisition of Management System Commercial Manager's Toolkit, which is the report on the 2002 annual review of the profit formula for the non-competitive government contracts, and it says in appendix E on page 25: "The Government's consideration of the Review Board's report on the 1999 general review of the Government's profit formula has been suspended pending the outcome of the review by Government of whether the profit formula continues to offer the best mechanism for rewarding contractors undertaking work on non-competitive Government contracts. That was in September 1999. Can you say how this review has been resolved?" It says "pending the outcome". What has happened?

Sir Peter Spencer: A set of proposals was discussed, and there was a period of negotiation while we agreed some key principles. Those proposals are now being discussed across other government departments. In fact, my Commercial Director is talking to the Treasury about them this week. The proposals will soon go through to ministers, which will, we believe, produce a more appropriate way of—

Q291 Mr Bacon: What you are saying is that three and a half years after this was suspended pending the outcome of the review, there is still no conclusion. That is what you are saying.

Sir Peter Spencer: Formally there is no conclusion. There has been a great deal of movement in terms of agreeing with other Government departments and with industry the direction in which we should go, and we are now going through the formalities of getting that endorsed and then announced.

Q292 Mr Bacon: What I do not understand, whether it is Smart or whether it is conventional or whether it is non-competitive, is why it is so difficult to get some consensus with industry about what it will all cost and in particular what an acceptable level of profit for industry is. For example, when we look at PFI buildings, some of which are very complex, it is generally understood that the rate of return will be

for 14% 15%, 16% or maybe 17%. That is the parameter, and it is understood. People sit where you are sitting and say through gritted teeth, because they have to admit it is a bit higher than it was originally going to be, that it is going to be 17% or a bit less. Why is that so impossible in the defence area?

Sir Peter Spencer: It is not impossible.

Q293 Mr Bacon: In that case, why have you not got further along the line on it?

Sir Peter Spencer: Because we have been determined not to yield to proposals from industry to reward on a flat percentage basis a cost incurred in a non-competitive contract. We are much more interested in having a formula which rewards good performance, and under those circumstances we need a more selective tool than the one that is in place at the moment.

Q294 Mr Bacon: You referred earlier to the article in the *Times* today, saying that there are significant inaccuracies in that article. Can you say what the significant inaccuracies are?

Sir Peter Spencer: We are not about to sign a contract.

Q295 Mr Bacon: It mentions in the Report on page 176 "the current forecast for Main Gate approval February 2004". What is the absolutely current forecast of Main Gate approval now?

Sir Peter Spencer: There is no absolute forecast because—

Q296 Mr Bacon: That is wrong, I take it.

Sir Peter Spencer: That was the forecast which was made at the time in good faith and which was a reasonable estimate of expectation. The progress to maturing the decision has not been as planned.

Q297 Mr Bacon: Can I check what things are clear and decided, because I have read that it is 65,000, 55,000 and 50,000. Is the tonnage decided?

Sir Peter Spencer: No.

Q298 Mr Bacon: Is the length decided?

Sir Peter Spencer: No, nothing will be decided finally.

Q299 Mr Bacon: Until you get to Main Gate.

Sir Peter Spencer: There is a spectrum. What I can tell you is that these ships will be very much bigger and very much more powerful than the current ones, and to me arguing about a few thousand tonnes or a few metres frankly misses the point. The real point is that if we were to have allowed ourselves to have been driven by a misconceived notion that it was more important than anything else to make this decision on the date, we would have made the wrong decision. What I have now made clear is that Main Gate is not an anchor milestone and is not a date. It is obviously a date to aim for because we need to get on to it sometime, but it is a point of maturity, and that point of maturity needs to be independently verifiable so that people know we have got the right

⁷ Ev 42–43

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amount of understanding of the risks and we have decent three-point estimates based on proper collateral.

Q300 Mr Bacon: It got to Initial Gate in August 2001.

Sir Peter Spencer: Yes.⁸

Q301 Mr Bacon: So it is two and a half years so far. How long does it take to get to Initial Gate, or how long did it take in this case?

Sir Peter Spencer: It depends on how you define the starting point because Initial Gate is when you form the project team; so before that it is in the conceptual stage; it is in the nursery with all the other potential baby projects, and eventually the military say, “we have now defined the capability; this is what we want to do”. That period was preceded by a certain amount of technology demonstration, particularly on the aircraft.

Q302 Chairman: I have one last question myself. If you look at figure 5 on page 8, there is a long list of cost overruns but two-thirds of the way down, you see “Airborne Stand-Off Radar”, which is ASTOR, a project that appears to have done very well.

Sir Peter Spencer: Yes.

Q303 Chairman: What have you done differently on this project?

Sir Peter Spencer: If you look at the way we have done it, we have made certain that we spent time ensuring that we understood what was available. We have gone for an existing aircraft and we have got ourselves in with a contractor who is able to deliver. All of those aircraft have been delivered and they are being fitted out. We are putting together—

Q304 Chairman: What have you done differently though on this project compared to the others?

Sir Peter Spencer: We set it up better. We analysed the risks better and understood them better. I could equally say the same about the 2087 Sonar; we did a lot of testing and trialling of the technology and we refrained from making a decision until we had a better understanding.

Q305 Mr Jenkins: Sir Peter, until now you realise that we have been talking as the taxpayers’ guardian, but also, as Members of Parliament, we have another role. As servicing officers you appreciate that when there is a delay—and some of the ranks will be reading this with great interest with regard to these programmes—sometimes those men and women have got to make do with equipment that should have been scrapped and that is past its sell-by date. Not only do they have to make extra effort; they have to work in worse conditions, and at best it is harder on them; but at

worst it could cost people’s lives. When these things are running late, it is not just a matter of someone trying to do; they have to do.

Sir Peter Spencer: That message is not lost on either of us. As I served both in the frontline and in what is now part of the DLO, and I used to work in what is now part of General Fulton’s organisation, I look at this from a variety of perspectives. That is why I feel passionate about driving the time—

Q306 Mr Jenkins: Because when they have a new whiz-bang coming in next year, it does not help them if they have to keep the old whiz-bang going this year. That is the difficulty. I am not sure that that is fed back into the system sufficiently, especially when they have the luxury of a culture that does not make them get off their backside and make sure that the thing is done on time, on cost.

Sir Peter Spencer: I think that is slightly harsh because the people on projects do have close contact with the frontline and they are aware of the consequences when it goes wrong. Although they may be civilians, they very much identify with the frontline service to which they are providing this equipment. There is a great deal of loyalty and frustration at the failures. If you are the person who is trying to drive it through, and the person from whom you inherited it several times before was either unwise enough, unwilling or unable to invest in de-risking, you are faced then with a much bigger chunk of uncertainty than you know you can cope with.

Q307 Mr Bacon: I would like to ask you some questions about the support vehicle, Sir Peter. You said that people were so convinced of the need that there was such a clear-cut case against the commercial sector that you could by-pass the normal procedures. Is not the whole purpose of procedures to test whether people’s clear-cut convictions are right or turn out to be completely misplaced, because commonsense is often quite wrong in things that are counter-intuitive and do not turn out to be correct? Is not the whole purpose of having a system like this that you use it? What happens if you do not use it?

Sir Peter Spencer: There was a recognition that if you were going for something simple, and that was an error but that was the assumption, then you did not have to go through the bureaucratic procedures that surround approval and going through an assessment phase and spending money perhaps to no good effect because you did not really need to spend money on something that was already there in the marketplace.

Q308 Mr Bacon: A truck is fairly simple, is it not?

Sir Peter Spencer: That is why we have not spent an awful lot of money in the marketplace; but we have spent time and effort making sure that the potential suppliers actually understand the operational context and that our own people understand the extent to which it is possible to get the sort of deal they had in mind. They thought

⁸ *Note by witness:* CVF received Initial Gate approval in December 1998. The first stage of Assessment concluded in summer 2001.

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they were going to get a PFI which was going to be not only best value for money but affordable; and it failed to satisfy a number of key tests which would make it a legitimate proposition to be a PFI.

Q309 Mr Bacon: To finish the previous question, it is correct, is it not, that the support vehicle is not particularly technologically innovative? It is a truck, a lorry.

Sir Peter Spencer: It is the contractual arrangements which are the interesting bit.

Q310 Mr Bacon: I thought the interesting bit is that the Department spent three years in a concept phase (paragraph 3.39) working out the lorry market was mature. Why does it take three years to work that out?

Sir Peter Spencer: I cannot answer that.

Q311 Mr Bacon: The only other question I have about the support vehicles is that you said it was not a financial resource but extra time and intellectual effort; and you said earlier to Mr Cruddas that the whole point of resource accounting budgets is to make you recognise that time was money. Surely it was money as well as time, was it not?

Sir Peter Spencer: It is money in the sense that we had it in place for longer, but in the context of—the point I was trying to make was that by delaying taking the decision we were not at that point consuming financial resources but consuming time resources.

Q312 Mr Bacon: I read in the *Birmingham Post*—and of course it is a newspaper so I am not certain it was true—that it was a £1.4 billion contract for 8,000-8,500 trucks. Is that more or less the benchmark?

Sir Peter Spencer: It is about the benchmark.

Q313 Mr Bacon: That works out at about 175,000 per track—which is about the same cost as a Bentley.

Sir Peter Spencer: We are not buying these. This includes a period of contractor logistic support, which is a cost of ownership over time.

Q314 Mr Bacon: The maintenance. That £1.4 billion reflects the whole-life cost.

Sir Peter Spencer: The length of the contract.

Q315 Mr Steinberg: Last Monday, Mr Turner said in relation to paying for contracts that nothing had been decided upon on the new aircraft carrier. Have you decided how you are going to pay for it and which method of payment you will use, because he seemed quite adamant he was not going to get involved in a contract that was not—was cost plus profit—

Sir Peter Spencer: The point was also made he is the preferred prime contractor. We will do business on our terms, not on his—or preferably on terms that we have agreed together.

Q316 Mr Steinberg: So what happens if he then refuses his company to build it? There is nobody else, is there?

Sir Peter Spencer: As you appreciate, there are other options.

Q317 Mr Steinberg: What are they?

Sir Peter Spencer: One of the conditions of the sale of the shipyards to GEC and now BAE Systems is that they are available if necessary to be used under fair and reasonable terms by other contractors. We would enforce the agreement *in extremis*. I would not expect it to come to that.

Q318 Mr Field: I apologise for being late. You made a most interesting statement on PFI. You said you did a study and rejected it. Can we look at that study, because we have been concerned about other PFIs and the assumptions that have been built into them, which almost prove that they are going to be a success.

Sir Peter Spencer: I will take a look and see what is there and see to what extent it is available, but we can certainly give you a summary of the key points which caused it not to be acceptable.⁹

Mr Field: A summary is what we would really like.

Mr Bacon: I am interested in the way the public sector comparisons are done.

Sir Peter Spencer: It was not that; the principal question was the mobility requirements and the operational notices of readiness meant that there was virtually no possibility of these vehicles being able to be used to generate third-party income, nor was there scope for the company to bear risk demand, so we would have kept this thing on our balance sheet, even if we had gone through a PFI. That made it unaffordable and not very attractive.

Q319 Mr Field: If we could look at it, we could come back to you for further questions.

Chairman: Thank you very much. That concludes our hearing. We are very grateful to you, gentlemen, for appearing twice this week, which is an innovation but a useful innovation because it allows us to go through these matters in greater depth. It seems to me, in summing up, that there will always be more projects that we can afford, but the difficulty in the past is that the project managers have therefore had to become advocates of their particular projects, and have perhaps been over-optimistic about their projects. Mr Turner referred to it in graphic terms with regard to the Nimrod project on Monday. We will have to see how Smart progresses and how we can ensure that the Ministry of Defence has more watertight procedures at an earlier stage. Thank you very much.

⁹ Ev 43-44

Supplementary memorandum submitted by Ministry of Defence

Question 184 (Chairman): Breakdown of MPR 2003 Cost Overrun

<i>Projects</i>	<i>Interest On Capital</i>	<i>Additional Capability</i>	<i>Payments to Industry</i>
Astute	224	100	679
Brimstone	64	—	62
Nimrod	225	10	303
Typhoon	649	97	291
Totals	1,162	207	1,335
Percentage of £2.7 billion	43%	8%	49%

Notes

On Typhoon the additional capability reflects a £117 million increase to retrofit Tranche 1 aircraft to the Tranche 2 standard, offset by a £21 million saving by the deletion of the requirement for ALARM.

On Nimrod the additional capability reflects the cost of Capability Enhancement/Adaptable Aircraft Assessment Phase.

On Astute the additional capability relates to the Technology Insertion of additional capabilities originally planned for Astute 2nd buy.

Question 203 (Jon Trickett): Operation of Harrier GR9 from the Future Aircraft Carrier (CVF)

Maintenance of the Harrier GR9a, alongside other aircraft types, will be possible within the current CVF design. CVF has been required to operate the widest possible range of UK and allied aircraft (specifically including GR9) from the outset. The aircraft deck, lifts and hangar are all significantly larger than in the current Invincible Class CVS. The CVF will be compatible with modularised support containers already used by JFH Harriers and RN and JHC helicopters. This will allow embarkation of support equipment and spares enabling broadly the same degree of maintainability as that currently available in the CVS.

Question 215 (Jon Trickett and Chairman): Senior Responsible Owner for Carrier Strike

The new post of SRO for Carrier Strike is modelled on the best practice developed by the Office of Government Commerce. Rear Admiral Nigel Guild has been appointed to this position and is the individual personally responsible for ensuring the overall Carrier Strike programme meets its objectives and delivers the projected benefits. The principal components of the Carrier Strike Capability are the future strike aircraft (Joint Combat Aircraft), the aircraft carriers, and the Maritime Airborne Surveillance and Control (MASC) aircraft which will operate from the carriers.

RESPONSIBILITIES

The principal responsibility of the SRO is to ensure that the Carrier Strike programme, across all lines of development, is both comprehensive and coherent and leads to in-service capability as detailed below:

- Equipment—that requirements and procurement are properly structured and particularly that the JCA and MASC projects are being effectively integrated with the CVF.
- Sustainability—that logistics to support the equipment are cost-effective and deliverable in the operational environment.
- People—the recruiting and employment of the right personnel to deliver operational capability.
- Training—that individual and collective training ensures that the force operates at maximum effectiveness.
- Concepts and Doctrine—that the concepts and doctrine will underpin the full exploitation of the capability, in particular with respect to network enabled capability and US transformation.
- Structures—that the single-service force structures contribute to the realisation of the optimum capability.

The SRO Carrier Strike role finishes once the major element of change driven by the programme has been implemented. This is likely to be around the time of Full Operating Capability. The role is not required for the in-service life of the carriers and the aircraft.

AUTHORITY

The SRO Carrier Strike has the direct authority of the Defence Management Board.

MANAGEMENT ARRANGEMENTS

The SRO Carrier Strike will exercise his authority principally by influence and persuasion, as he will not own the funds for the programme, these being held by a number of budget-holders across the Department, including equipment, sustainability, training, manpower, and infrastructure. Where it is necessary to have management agreements in place with budget-holders these will be set up. The SRO and his very small team will not be doing the work of individual areas, but will ensure overall coherence as described in the responsibilities above.

TENURE

The issue of short tenure has been recognised in the setting up of this post. As a general principle, it is intended that SROs for large and complex programmes will be post for a significant period of time (3–4 years).

Question 219 (Mr Steinberg): Metrics for Smart Acquisition Stocktake

The impact of the reforms will be in the improvement year on year of results against the DPA's Key Targets (KT), which are:

- KT 1 Predicted % achievement of Key User Requirements;
- KT 2 Average in-year variation of forecast In Service Date compared with approval not to exceed;
- KT 3 Average in-year variation of forecast cost not to exceed;
- KT 4 Customer & Partner survey satisfaction rating;
- KT 5 Achievement of planned efficiency measures;
- KT 6 % variance between planned and actual in-year asset deliveries.

We will also use a suite of internal measures to assess our success in implementing the key enablers to improving corporate performance. These include:

- Through Life Management Maturity score at Main Gate;
- Risk Management Maturity score at Main Gate;
- Survey results of progress towards more open relationships with Industry;
- % of projects following Incremental Acquisition strategies;
- Time taken for approval of Business Case submissions;
- % of project cost spent in Assessment phase;
- Rate of consumption of risk differential at Agency and project level.

Question 233 (Mr Steinberg): Landing Ship Dock Auxiliary

Following competitive tender, Swan Hunter was awarded a contract¹ in December 2000 for the design and build of two LSD(A)s. In the Defence Procurement Debate on 26 October 2000 Swan Hunter's success in the competition was announced by S of S, who stated that the requirement had been increased from two to four ships, and that the additional two ships would be built by BAES at Govan. This was subject to satisfactory negotiations. A parallel build strategy would provide all four ships to a quicker timeframe than a serial build at Swan Hunter and enable the military capability to be delivered in service earlier and would redress the existing shortfall in strategic sealift capability identified in the SDR. Secretary of State commented that this offered "a real lifeline to the BAE yard at Govan, one that will help to sustain the shipbuilding skills base on the Clyde until the type 45 programme comes on stream". (*Hansard*, 26 October 2000, Columns 414 to 415). It was important at the time of contract negotiations to provide continuity of steelwork in order to retain key tradesmen in the shipyard after the build of the Royal Fleet Auxiliary tanker known as AO 02 had completed. Without this contract in place there was every prospect that the Govan

¹ Not printed—restricted commercial in confidence.

shipyard would close with the loss of key shipbuilding skills to the Clyde region which would have been detrimental to the Type 45, and later, the CVF programmes. This is the reason that the Swan Hunter build programme and the BAE build programmes were this close together.

After protracted negotiations, MOD awarded a Maximum Price contract to BAE Systems, in November 2001, for LSD(A) 03 and 04. During contract negotiations BAE would not accept risks associated with building a third party design that at this time was still immature. As a result it was only possible to agree a Maximum Price contract arrangement which included a contingency against identified risks. The risk contingency was subject to a shareline agreement to incentivise mitigation, the shareline was a 50/50 arrangement.² In parallel with the award of the BAES contract, Swan Hunter's design and build contract was amended to include the supply of major equipment to BAES and the provision of Lead Yard Services.³

Although there is a disparity between the individual cost of each contract, this is attributable to differences in the shipyard cultures, attitudes to risk, overheads, and build methodologies. BAES have higher overheads and as a result their construction costs are higher than at Swan Hunter.

Swan Hunter, the lead shipyard, has recently announced significant slippage to its build programme for the LSD(A)s. The Company has acknowledged that it underestimated the learning process and work involved in producing production drawings and physically building a ship in an efficient manner. This has led to extensive rework on LSD(A) 01 delaying final outfitting of the vessel. This problem has been compounded by difficulties in managing its key sub-contractors. As a result of these delays BAES will incur delay and dislocation costs that are recoverable from the MOD through the BAES build contract.⁴

Question 286 (Mr Bacon): Risk Metrics

The guidance we provide to our project teams indicates that in the early stages of a project, ie during Concept, it is expected that broad risk assessments and high level analyses will be conducted, and comparative analyses made of competing concepts. The techniques we would expect to be deployed include the use of schematic programme logic diagrams to analyse timescales, brainstorming and paperwork research to identify risks, event trees and influence diagrams to analyse those risks, and risk scoring to enable the comparison of the concepts being studied.

This risk analysis would be undertaken concurrently with the formulation of the User Requirement Document and will shed a very useful view on whether the Requirement is likely to be practical, affordable and cost effective. At this early stage the analysis is likely to put greater emphasis on the different approaches potentially available to meet the emerging requirement. It should take account of differing mode options and their attendant operational and support costs. During this stage the risks are primarily scientific and technical. Feasibility risk needs to be adequately demonstrated through both requirement validation and technical approach. One of the tools we use to provide this reassurance is the application of Technology Readiness Levels:

- (i) Technology Readiness Levels (TRL) provide a structured means of measuring and communicating the maturity of technologies. The technique complements other means of programme risk assessment. By assessing the risk involved in achieving each TRL it is possible to determine, and hence manage, the risk within individual technology programmes. The basic concept is illustrated in the attached figure.
- (ii) TRLs were initially proposed by NASA in 1995, and following sporadic use within the US Science and Technology Community, were adopted by the US DOD in June 2001 and are now mandated for all major US acquisition programmes. Based on the NASA model, the DPA published UK guidance on TRLs in July 2001 on the Acquisition Management System (AMS).
- (iii) The use of TRLs within acquisition has since been recommended by McKinsey and endorsed by the Investment Approvals Board (IAB) as a means of improving technology management and providing visibility of technology risk, which with other measures could lead to reductions in programme delay and cost overruns. They are used extensively in MOD research programmes, and their use is now mandated for all equipment projects. They are also becoming widely adopted by industry and appear in industry bids for defence equipment and in their project plans.
- (iv) The TRLs framework is designed to be used in relation to individual technologies and, therefore, below the level of a complete system. For example, within a combat aircraft TRLs could be determined for the propulsion system, radar etc. Project teams will identify the novel and critical technologies that could form part of a solution when determining the most appropriate level at which to apply TRLs.

² Not printed—restricted commercial in confidence.


³ Not printed—restricted commercial in confidence.

⁴ Not printed—restricted commercial in confidence.

- (v) Irrespective of the level of application, careful consideration of total system integration risks (technical risk) will continue to be necessary since the TRL measurement does not take into account integration at higher levels and broader technical issues. It is therefore important that project teams ensure that any use of TRLs is complemented by a project integration strategy based upon a robust system engineering and risk management approach.
- (vi) Work is progressing to develop higher level measures of system maturity. This is based on the TRLs process and termed System Readiness Levels (SRLs).

The Technology Readiness Level Framework

1	Basic principles of technology observed & reported
2	Technology Concept and/or Application Formulated
3	Analytical and Laboratory Studies to validate analytical predictions
4	Component and/or basic sub-system technology valid in lab environment
5	Component and/or basic sub-system technology valid in relevant environment
6	System/sub-system technology model or prototype demo in relevant environment
7	System technology prototype demo in an operational environment
8	System technology qualified through test & demonstration
9	System technology 'qualified' through successful mission operations



During the Assessment stage full formal risk identification and analysis will be performed, across a wider range of risk categories than just scientific and technical. Comprehensive timescale and cost risk analyses, based on the three-point estimating methodology which we apply across all acquisition, will be carried out on networks and cost breakdowns, testing confidence in the schedule and budget. Risk analysis is more likely to draw on data provided by Industry at this stage, through their responses to Requests for Information, or through direct engagement on Assessment studies. A degree of parametric data derived from analogous or recent historical information may also be called upon. The scientific risks of practicality should have largely disappeared by this stage, and technical and engineering risks will have become uppermost.

Question 289 (Mr Bacon): Cost of Ownership

One of the key concepts of Smart Acquisition was that IPTs should produce Through Life Management Plans, which should be continually updated as the project moves through the CADMID cycle. These plans should be costed on a through life basis (ie in terms of Whole Life Costs).

In 1999 IPTs were provided with an outline framework for the development of Through Life Management Plans and guidance on appropriate content. By 2002 it became evident that it was necessary to provide revised guidance to obtain a consistent process for capturing Whole Life Costs and to ensure that all costs were captured and not just those of logistic support and disposal.

A process called Cost Of Ownership (COO) was therefore developed to fulfil this requirement, and tools and training have been provided across the Department. The COO process captures all equipment related costs from all the stakeholder organisations incurring those costs. This covers all Lines of Development i.e. equipment, sustainability, infrastructure, manpower, training and doctrine. COO information is presented in a Resource Accounting format similar to that used in the Short Term Plan.

STAGES AND CONTENT

The stages of development in obtaining estimates of Whole Life Cost have been as follows:

- 1998—Strategic Defence Review
- 1999–2000—Initial feasibility and scoping work
- 2001—Pilot project work, with a mixture of DPA and DLO, large and small projects.

- 2002—Implementation phase with IPTs managing MPR2002 projects and in-service “footprints” (ie those projects which will be taken out of service when the new projects are introduced), and with Front Line Commands
- 2002–03—Full departmental wide implementation, including all IPTs, Front Line Commands and Training Commands, resulting in first publication within the MPR2003 Whole Life Costing Annex.

WAY AHEAD

Since the data capture for MPR2003, which was conducted in March–May 2003, the next stage of development has been the exploitation of the COO data through amendments to the Equipment Planning, Short Term Planning and Investment Approvals Board processes being put in place.

In the initial stages the quality of the COO data was very variable, but has been improving, and will continue to do so as these techniques become fully embedded within the department’s core financial and planning processes. The COO data which is now available is already of better quality in some areas than that previously used for long-term planning, which has historically relied on flat-lining of the costs in the last year of the Short Term Plan.

It is intended that data will be used continuously by project teams and their stakeholders, and collected and reviewed annually for use in strategic departmental planning, with assessment being made of its quality to identify areas for improvement. As mentioned in the report, one of the main issues affecting data quality at present is a low-level commitment to supporting Through Life Management, from some stakeholders outside the DPA and DLO. This issue is currently being addressed through the newly formed pan-MOD Through Life Management Programme Board.

COO DATA AND RAB

COO data is presented using Resource Accounting and Budgeting (RAB) techniques and fully includes the impact of holding assets (through the Cost of Capital charge and the periods over which assets are depreciated). It also covers the contributions required from all Top Level Budget Holders across the department.

Variations in the procurement programme are reflected within the COO data. For example, when the DPA is providing assets to a Front Line Command, the DPA is liable to Cost of Capital charges while assets are under construction—prior to delivery. Whereas when the asset is delivered, the Front Line Command start to incur Cost of Capital charges and begins to depreciate the asset over its useful life. Thus, the cost changes which result are fully captured in the COO data.

The COO data is primarily intended for use as a longer-term planning tool for use within individual projects, Capability Areas, and strategically for Defence. As a result the key information is the profile of costs from the current point in time until disposal, together with underpinning assumptions in the Through Life Management Plans and Through Life Capability Area Plans.

The use of RAB means that it is only possible to estimate the through-life resource consumption for new projects as historic data is not available on this basis. However, this will not greatly impact on our ability to utilise data since COO is most importantly a longer term planning tool. The department has been capturing COO data from 2003 onwards, and as further historical COO data becomes available this will be fed back into the estimating process to further improve the robustness of future estimates.

Question 318 (Mr Field and Mr Bacon): Support Vehicle

The Support Vehicle project was formed from two previous vehicle projects (the Future Cargo Vehicle (FCV) and Future Wheeled Recovery Vehicle (FWRV)) for which PFI was considered as a potential acquisition strategy. Prior to Initial Gate it was concluded that a conventional procurement strategy offered better value. Minister(DP) approved the conclusion that the PFI approach should be abandoned following a recommendation by CDP.

A considerable amount of work, over a three-year period, was carried out both by the Department and by industry in putting together outline proposals for PFI solutions to each of the programmes. However, having thoroughly considered all possible ways of proceeding with PFI, it was concluded that a conventional approach would offer better value for money for these programmes. The principle reasons causing this decision were that there were difficulties in defining an output based specification, the limited opportunity for risk transfer, minimal potential for third party revenue and there would be little scope for either operating or technical innovation due, in part, to the demanding mobility requirement. Analysis of the way in which the fleets would be used revealed that many of the vehicles would be located in small groups at widely dispersed units. Also, many vehicles with specialised roles would be permanently fitted out while others, to meet readiness times, would be kept loaded. These facts lessened the ability to manage the vehicles on a “whole fleet” basis in a manner that would be more cost-effective than a more conventional approach. Replacing military drivers with civilians would not result in any manpower savings since the military

personnel only drive as one of their duties; this also weakened the case for the use of Sponsored Reserves. In each project, an Investment Appraisal showed that a PFI solution would not offer better value for money than buying vehicles and using military personnel. Ministers approved the change to the acquisition approach in March 2001. The lack of success in identifying a PFI solution for these programmes does not mean that PFI is not being considered further in the Combat Support area. The Heavy Equipment Transporter (HET), a PFI programme has been introduced into service and is now deployed to Iraq on Op TELIC.

18 March 2004
