



House of Commons
Committee of Public Accounts

The use of information to manage the defence logistics supply chain

Forty-third Report of Session 2010–12

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

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Committee of Public Accounts

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

Additional written evidence may be published on the internet only.

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

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Contents

Report	<i>Page</i>
Summary	3
Conclusions and recommendations	5
1 Performance to date delivering supplies to the front line	7
2 Improving future performance	11
Formal Minutes	13
Witnesses	14
List of printed written evidence	14
List of Reports from the Committee during the current Parliament	15

Summary

The Ministry of Defence (the Department) sends supplies to forces deployed overseas for military operations, such as in Afghanistan and Libya, and to personnel stationed in permanent bases or taking part in training exercises. Staff deployed on operations determine what supplies are needed by front line troops, which are then sent to them through a supply chain that stretches back to manufacturers. The Department spent at least £347 million in 2010-11 on transporting supplies overseas, but this underestimates the full cost as the cost of military supply flights is not included. Some 130,300 individual deliveries were made to Afghanistan alone in 2010.

This report assesses the Department's performance in managing the supply chain to front line troops. The Department rightly puts a strong emphasis on ensuring troops get the supplies they need. Equally, providing an efficient supply chain would release resources for the front line. We believe the Department must place greater emphasis on securing value for money and that there is room for it to find efficiencies in the supply chain without jeopardising operational effectiveness. Over decades our reports have identified persistent problems with late deliveries, unnecessary costs and missed targets. At present, the Department does not have the information to identify where savings could be made. It does not know the full costs of its current activities or the cost of alternative supply options, information it needs if it is to begin improving value for money. The failure to collect basic data about where supplies are stored has directly contributed to the Department's accounts being qualified for three consecutive years.

Successive reports by this Committee have identified significant problems with the Department's logistics information. Since 1986, the Department has repeatedly assured us that it was aware of the gaps in its information and was introducing better systems to close them. Despite these efforts, the same problems persist.

The Department is now seeking to resolve these information problems through a major initiative known as the Future Logistics Information Services project, expected to be implemented by 2014. Until then, the Department will continue to store data in systems that are at critical risk of failure. Against the background of repeated failures to get to grips with asset tracking and allied information systems for logistics, it is vital that the MOD sustains its programme in order to secure value for money. Should this not be the case, we will return to the issue.

Supplies are delayed because manufacturers miss their delivery schedules. In the six months to November 2010, over 40% of deliveries were 30 days or more overdue. We have found in our past reports on the Typhoon that lack of supplies led to cannibalisation of other aircraft. The Department has yet to demonstrate that this is the best way to employ constrained resources.

Other measures which could improve the efficiency of supply operations include putting more pressure on suppliers to deliver on time, keeping stocks at lower levels to reduce the risk of them deteriorating, and benchmarking performance against relevant comparators such as other armed forces. It is important that the Department retains key skilled staff on

the supply chain so that it can make improvements of this kind.

On the basis of a Report by the Comptroller and Auditor General we took evidence from the Ministry of Defence on its use of information to manage the supply chain.¹

1 C&AG's Report, *The use of information to manage the logistics supply chain*, HC (2010-11) 827

Conclusions and recommendations

- 1. The Department has put a low emphasis on value for money in managing its supply chain.** The Department rightly gives primary importance to ensuring that the supply chain supports the military's operational effectiveness, but we believe there is scope to make efficiency gains without jeopardising operational effectiveness. In its evidence to us, the Department was unduly dismissive about whether savings could be made across its supply operations given it has done little analysis to identify possible savings. However, we welcome Bernard Gray's clear acceptance of his personal responsibility for failures of supply chain performance and look to him to deliver improvements. As a matter of priority, the Department should implement measures to capture the full cost of its supply operations, quantify the full range of potential savings it could make, and take the actions necessary to manage the supply chain more cost-effectively.
- 2. The Department has made little progress in resolving long-standing problems with its supply chain information, despite previous assurances to this Committee.** Over the past 25 years, our reports have highlighted persistent problems with late deliveries, missed targets and inadequate cost and performance information. We welcome the Department's commitment to bringing together and upgrading many of its IT systems through the Future Logistics Information Services project, and the information provided to us since the hearing about the project's milestones and costs. However, past plans to upgrade these systems have come to nothing as the Department has focused on other priorities. To ensure progress is made this time, we will hold the Department to its promise to report back to us on progress in six and twelve months' time.
- 3. The Department does not know the full cost of its supply chain routes.** The Department sets target times for deliveries based on how urgently supplies are required. However, it does not have the cost information it needs to make informed decisions about alternative ways of running its supply operations. For example, the Department knows the cost of some of the air and surface supply routes into Afghanistan, but without more complete information it is not able to compare the relative costs of different delivery routes. The Department should collect comprehensive information on the cost of all potential supply routes and use this information to identify the most cost-effective routes for both urgent and lower priority deliveries.
- 4. Deliveries for operations in Afghanistan are often late due to delays in receiving goods from suppliers.** Failure to receive goods in time can have adverse knock-on effects. For example, we have heard of instances in other operations where delays in receiving spare parts for equipment such as Typhoon aircraft have resulted in other planes being cannibalised to ensure sufficient parts are available. The Department should set the terms of its contracts with suppliers so that manufacturers are better incentivised to deliver supplies in good time.
- 5. The Department often holds large stockpiles of supplies on operations, which results in some supplies deteriorating before they are used.** The Department

acknowledged to us that it does not collect data on the amount of stock that may be damaged in such circumstances. The Department should measure the condition of stocks in theatre and their deterioration rates to inform decisions about appropriate stock levels.

6. **While the Department does some benchmarking against the private sector, it does not benchmark its supply chain performance against other armed forces.** Benchmarking against comparator organisations can identify better ways of working. The Department should seek to benchmark the cost and performance of its supply chain against other nations which maintain armed forces of similar complexity, such as the USA and France.

1 Performance to date delivering supplies to the front line

1. The military supply chain stretches from the personnel on operations who identify their requirements through to the manufacturers that supply the goods needed to satisfy them.² The Ministry of Defence (the Department) spent at least £347 million in 2010-11 transporting supplies overseas to staff carrying out operations, on training or stationed in permanent bases. However, this figure is understated because it does not include the costs of military supply flights.³ Following the reduction of troop numbers in Iraq, Operation HERRICK in Afghanistan is the Department's largest overseas commitment.⁴ The Department has engaged in military operations in Libya since March 2011, which it estimates will cost £260 million if the operations last six months.⁵

2. In 2010, the Department sent 130,300 individual deliveries into Afghanistan using two main routes: 31% of supplies by tonnage were flown direct from the UK to Camp Bastion in Afghanistan, with the remaining 69% transported by surface routes, usually via Pakistan.⁶ Decisions about what supplies are sent and how they are sent are made by operational commanders at the front line. The Department considers these commanders are best placed to identify what supplies are needed and how urgently.⁷

3. We agree with the Department that the critical issue for the supply chain is ensuring troops are supplied with the kit they need, when they need it. However, such operational considerations should not prevent the Department from monitoring and controlling costs.⁸ While the Department collects some data on supply transport spending, it does not have the data required to calculate the full unit cost of individual deliveries – which means that it cannot compare the relative costs of different delivery routes.⁹ The Department cannot make informed choices about cost efficiency, or identify financial savings, without good information on how much its activities cost.¹⁰

4. The Department does not routinely collect basic data – for example, of the SA80 rifle deliveries the NAO examined, only 8% had a departure date recorded.¹¹ The Department accepted that its management information systems and underlying IT systems are not adequate for the task.¹²

2 C&AG's Report, para 1.6

3 C&AG's Report, para 2.1

4 C&AG's Report, para 2.2

5 Ev 19; HC Deb, 23 June 2011, col 24W5

6 C&AG's Report, para 2.5

7 Qq 19-20

8 Qq 20-23, 87-88

9 Qq 86-87

10 Q 21

11 Q117

12 Q 94

5. The failure to collect basic data about where supplies are stored, either in warehouses or in theatre, has directly contributed to the Department's financial accounts being qualified for three consecutive years.¹³ The Department told us that the main reason data is not collected properly is due to the limitations of the data systems it uses to store information.¹⁴ Some data systems, such as the Visibility in Transit Asset Logging system which tracks individual deliveries, can provide good data on the movement of supplies if used properly. However, many data systems, such as those used to track supplies in warehouses, are much older and are not fully compatible with other systems across defence – leading to problems knowing what supplies are held where. More importantly, the risk of failure of these warehouse inventory systems is extremely high and was recently rated as 'critical' by the Defence Logistics Board. If these systems fail, then the result could be shortages at the front line within as little as 30 days.¹⁵

6. For each operation the Department sets out in Operational Sustainability Statements the levels of supplies it needs to hold in theatre, and targets for how quickly supplies should get there.¹⁶ The targets for getting supplies to theatre vary with the length, complexity and risks of the individual supply chain. For example, the target for sending urgent supplies by air to Afghanistan is five days. The Department is not meeting this target, as in 2010 two thirds of such deliveries were made late.¹⁷ The Department told us that the target is very challenging and may have been set too tightly, but that in any case 50% of items arrive within a week and 90% of items arrive within a month. The Department considers this is sufficient to maintain equipment availability in theatre above 80%, which in turn is enough to meet the demands of operations.¹⁸ Bernard Gray told us that he would take personal responsibility if the supply chain failed in such a way that front line troops were harmed.¹⁹

7. One of the main reasons for late delivery of supplies is delays in receiving goods from manufacturers. In the six months to November 2010, over 40% of deliveries from suppliers were 30 days or more overdue.²⁰ Such delays directly affect supply chain reliability – half of delivery delays in 2010 were caused by the item not being available for dispatch.²¹

8. The Department told us that some of its contracts contain clauses in order to penalise late deliveries, but there is a very wide variety of contracts and many will not have clauses that incentivise suppliers to deliver on time.²² The Department suggested that fixed contracts for the regular supply of goods would have scope to incorporate penalties for poor performance. However, it believes that entering into fixed supply contracts of this kind will often not be sensible, given the unpredictable nature of military operations and

13 Qq 125-131

14 Qq 87, 94

15 Qq 72, 90, 93

16 Q 8

17 C&AG's Report, para 2.6

18 Qq 6-7, 17

19 Qq 26-27

20 C&AG's Report, para 2.8

21 Q 6

22 Q 149

the difficulty of forecasting needs in advance.²³ For example, the Mastiff armoured vehicle proved more resistant to improvised explosive devices than anticipated, which meant more vehicles were able to be repaired rather than simply replaced – a good outcome overall, but one which meant that more spares were required than initially expected.²⁴ In general, however, given that forces have been in Afghanistan for 10 years, much routine activity must be capable of being reliably predicted by now.²⁵

9. When supplies and spare parts are not available from suppliers or are not delivered to theatre in time, front line troops often obtain them by cannibalising vehicles and planes. Our previous reports have found cases where RAF Typhoons and Jaguars had been grounded because they had been raided for spare parts for other aircraft.²⁶ In March 2011 we heard that three Typhoon aircraft had been grounded, which led to some pilots being unable to train for ground attack missions.²⁷ The Department told us that in its view cannibalisation of assets was not seen as a problem because it was not occurring often in statistical terms (three aircraft out of a fleet of 107). Furthermore, the cost of holding sufficient spares of all types to deliver 100% availability of equipment at all times would not always be justified.²⁸ However, we remain concerned that the Department does not know whether it would be better value for money instead to ensure its parts supply contracts are operating effectively – rather than relying on the ability to cannibalise existing assets.²⁹

10. Risks to supply routes can arise unexpectedly: for example, the Department told us that it had increased its target for delivering supplies to Afghanistan through Pakistan from 77-87 days to 120 days due to industrial disputes and increasing security risks.³⁰ The Department conceded that falling confidence in the reliability of the surface delivery route has led them to increase the amount of deliveries sent by air.³¹ However, this is not a long-term solution. Some military supplies are simply too bulky to be transported by air, so if the surface delivery routes into Afghanistan were closed then military operations could be seriously affected.³²

11. In order to reduce costs and increase the reliability of the supply chain to Afghanistan, the Department has experimented with alternative routes for delivering supplies. For example, the Department is now shipping supplies to Riga, Latvia and then transporting them south by train, although it cannot deliver weapons and ammunition by this route at the moment.³³ It is also operating the Sail-Fly programme which involves shipping supplies

23 Qq 149-151

24 Q 147

25 Q 148

26 Q 36; Committee of Public Accounts, Thirtieth Report of Session 2010-12, *Management of the Typhoon project*, HC 860 and Twenty-Sixth Report of Session 2005-06, *Assessing and reporting military readiness*, HC 667

27 Qq 36, 49

28 Qq 41-51

29 Qq 47-48

30 Qq 57-64

31 Q 77

32 Qq 66-71

33 Qq 66-67

to Cyprus then flying them into Camp Bastion.³⁴ However, without cost data of sufficient detail, the Department is not in a position to make good decisions about the most cost-effective transport routes.³⁵

12. One way in which the Department compensates for deliveries being late is to hold extra stock in theatre. It told us that it holds several days' worth of supplies for many items as a buffer against unexpected events (such as disruption to the supply chain) or new threats.³⁶ However, the Department acknowledged that holding stock at these levels ran the risk of supplies deteriorating, especially if left out in the open. It further accepted that it would be a good idea to measure deterioration rates, in order to determine whether stocks were being held at cost-effective levels.³⁷

34 Qq 14-15, 55, 88

35 Qq 22, 88

36 Q 8

37 Qq 9-13

2 Improving future performance

13. The Department's lack of information on its supply operations and the cost of its activities is not a new problem. Previous reports by this Committee, some going back as far as 1986, have identified similar issues with tracking supplies and collecting cost data.³⁸ Our 1997 report on operations in the former Yugoslavia identified problems with keeping track of high-value equipment.³⁹ Meanwhile, our 2004 report on Operation TELIC in Iraq found equipment shortages at the front line had occurred, in no small part due to the lack of a credible consignment tracking system.⁴⁰

14. In response to these reports, the Department promised that new systems would close the information gaps, but it has not delivered on these promises. For example, in response to our report on TELIC, the Department said that one new system – Management of Materiel in Transit – would allow end-to-end control of the process for consignment management, optimise the supply chain, ensure that operational priorities dictate the movement of supplies and improve the speed and certainty of consignments.⁴¹ Yet the faults that this system was supposed to rectify have now been identified again by the NAO.⁴²

15. The Department accepts that historic underinvestment has meant its management information systems and the underlying IT systems are not up to the task. In particular, its spending on IT systems has not kept pace with the need to upgrade those systems.⁴³ The Department told us that while it accepts it can do better, it believes it is already doing things 'a hundred times better' now in Afghanistan than in 2003 in Iraq.⁴⁴

16. The Department has made investments in new data systems – for example £66 million has been spent on the Management of the Joint Deployed Inventory system which tracks equipment in theatre – and more is planned.⁴⁵ In 2010, the Department signed an £803 million, 11-year contract with Boeing for the provision of the Future Logistics Information Services project. Under this contract, Boeing is required to bring together 270 different data systems operated by 50 different contractors, which should provide a complete and coherent set of data for managers to use.⁴⁶ Separately, the Department has now approved an additional £75 million to upgrade some of the defence base inventory management systems that are now at critical risk of failure.⁴⁷

38 Qq 89, 117

39 Committee of Public Accounts, Twenty-Third Report of Session 1996-97, *Ministry of Defence: The Financial Management of Military Operations in the former Yugoslavia*, HC 242

40 Committee of Public Accounts, Thirty-Ninth Report of Session 2003-04, *Ministry of Defence: Operation TELIC - United Kingdom Military Operations in Iraq*, HC 273

41 Q 117; HM Treasury, *Treasury Minutes on the Thirty-seventh to Thirty-ninth Reports from the Committee of Public Accounts 2003-2004*, Cm 6355, November 2004, pp 14-15

42 C&AG's Report, para 3.6

43 Qq 94, 98

44 Q 117

45 Q 100

46 Q 166; C&AG's Report, para 4.4

47 Q 91

17. The implementation of the Future Logistics Information Services project, including the additional upgrade to the warehouse inventory management IT system, will not be complete until 2014. The Department told us it would take a long time to upgrade systems and data, in part because of the need to 'cleanse' the data – otherwise the poor quality information the Department currently holds would simply be transferred onto a better IT system.⁴⁸ We are very concerned that, until the systems are fully rolled out in 2014, the high risk of system failure will remain in systems that are critical to supporting front line troops.⁴⁹ To ensure that there is no further slippage in this critical area, the Department has provided us with a plan of the scheduled projects for improving data systems and has promised to report back in six and twelve months on how it is performing against its milestones.⁵⁰

18. As with other defence projects, such as the Future Rapid Effect System armoured vehicle, there is a risk that funding for this project could be reduced as the Department seeks to lower spending and balance its overall budget.⁵¹ However, the Department assured us there were currently no plans to cut back the investment that is planned for logistics IT systems.⁵² It also told us that despite the need to reduce staffing by between a quarter and a third following the Strategic Defence and Security Review settlement, it would make sure it had people in post sufficiently trained and experienced to use the systems effectively.⁵³ It is important that the Department safeguards this expertise, as there is little point in investing money in advanced IT systems if staff do not have the necessary skills and experience in supply chain management to use them effectively.⁵⁴

19. One method for improving future performance and identifying best practice is to benchmark against other relevant organisations. The Department told us that it had begun to benchmark its supply systems against those in the private sector and that it was an active member of the Cranfield University Agile Supply Chain Research Club.⁵⁵ However, there is scope to expand the range of organisations the Department compares its performance against. In particular, the Department has not carried out any benchmarking exercises with the supply chains operated by the armed forces of other nations of similar scale or complexity. For example, there is no comparative cost data available for American or French forces against which the Department's operations could be benchmarked.⁵⁶

48 Qq 92-94

49 Qq 93-94, 98

50 Q 101

51 C&AG's Report, *The cost-effective delivery of an armoured vehicle capability*, HC (2010-12) 1029

52 Qq 105-108

53 Qq 2, 120-124

54 Qq 122-123

55 Qq 142-143

56 Qq 143-146

Formal Minutes

Monday 18 July 2011

Rt Hon Margaret Hodge, in the Chair

Mr Richard Bacon

Mr Stephen Barclay

Dr. Stella Creasy

Jackie Doyle-Price

Matthew Hancock

Mrs Anne McGuire

Austin Mitchell

Nick Smith

Draft Report (*The use of information to manage the defence logistics supply chain*) proposed by the Chair, brought up and read.

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

Paragraphs 1 to 19 read and agreed to.

Conclusions and recommendations 1 to 6 read and agreed to.

Summary read and agreed to.

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

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

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

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

[Adjourned till Monday 5 September at 3.30pm]

Witnesses

Monday 13 June 2011

Page

Ursula Brennan, Permanent Under-Secretary, **Major General Ian Copeland**, Director of Joint Supply Chain, **Bernard Gray**, Chief of Defence Materiel, and **Air Vice Marshal Graham Howard**, Assistant Chief of the Defence Staff (Logistic Operations)

Ev 1

List of printed written evidence

1 Ministry of Defence

Ev 19

List of Reports from the Committee during the current Parliament

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

Session 2010–12

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

Twenty-fourth Report	Delivering the Cancer Reform Strategy	HC 667
Twenty-fifth Report	Reducing errors in the benefit system	HC 668
Twenty-sixth Report	Management of NHS hospital productivity	HC 741
Twenty-seventh Report	HM Revenue and Customs: Managing civil tax investigations	HC 765
Twenty-eighth Report	Accountability for Public Money	HC 740
Twenty-ninth Report	The BBC's management of its Digital Media Initiative	HC 808
Thirtieth Report	Management of the Typhoon project	HC 860
Thirty-first Report	HM Treasury: The Asset Protection Scheme	HC 785
Thirty-second Report	Maintaining financial stability of UK banks: update on the support schemes	HC 973
Thirty-third Report	National Health Service Landscape Review	HC 764
Thirty-fourth Report	Immigration: the Points Based System – Work Routes	HC 913
Thirty-fifth Report	The procurement of consumables by National Health Service acute and Foundation Trusts	HC 875
Thirty-seventh Report	Departmental Business Planning	HC 650
Thirty-eighth Report	The impact of the 2007-08 changes to public service pensions	HC 833
Thirty-ninth Report	Department for Transport: The InterCity East Coast Passenger Rail Franchise	HC 1035
Fortieth Report	Information and Communications Technology in government	HC 1050
Forty-first Report	Office of Rail Regulation: Regulating Network Rail's efficiency	HC 1036
Forty-second Report	Getting value for money from the education of 16- to 18 year-olds	HC 1116
Forty-third Report	The use of information to manage the Logistics supply chain	HC 1202

Oral evidence

Taken before the Committee of Public Accounts on Monday 13 June 2011

Members present

Margaret Hodge (Chair)

Mr Richard Bacon
Stephen Barclay
Chris Heaton-Harris

Joseph Johnson
Austin Mitchell
James Wharton

Amyas Morse, Comptroller and Auditor General, and **Ross Campbell**, Director, gave evidence. **Gabrielle Cohen**, Assistant Auditor General, and **Marius Gallaher**, **HM Treasury**, Alternate Treasury Officer of Accounts, were in attendance.

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL

The use of information to manage the logistics supply chain (HC 827)

Examination of Witnesses

Witnesses: **Ursula Brennan**, Permanent Under-Secretary, **Major General Ian Copeland**, Director of Joint Supply Chain, **Bernard Gray**, Chief of Defence Materiel, and **Air Vice Marshal Graham Howard**, Assistant Chief of the Defence Staff (Logistic Operations), gave evidence.

Q1 Chair: Welcome to yet another hearing. I think probably, given the way in which our hearings go, and I hope you do not take this the wrong way, but it would be really, really helpful if in answering questions you could really keep yourself to answering them as directly, honestly and succinctly as you can, then I think we can get through the business in a better way and I will not feel the urge to interrupt if I feel it is not being done in that way. That would be really helpful from all of you. Just to say how we want to proceed today; we want to look at performance in the past first, and we have divided that up into various categories: how suppliers respond and things like that. Then we will move to how you want to take this forward in the future. So we will look at the past first and then look into the future next.

I am going to start with you Mr Gray. This is a £14 billion annual budget, about a third of the annual expenditure by the MoD. Having now been in the post for getting on for six months, how much do you think you could save if you actually prioritised value for money and cost as well as continuing to improve effectiveness?

Bernard Gray: I do not think I can give a sensible answer to that question. I got asked a similar question last time and I think it is much too general a question to answer in the round.

Q2 Chair: Have you set yourself a target given that you are trying to find savings across the piece? I would stress again, this is not impacting on the effectiveness. Clearly you want to continue to improve delivery, but you are facing financial constraints. Have you got a target in mind because this is a key area, if you can save money here.

Bernard Gray: We are talking about DE&S as a whole, which as you say is knocking on for 40% of the Department's budget. It divides into three

components. There is about £1 billion spent on running the DE&S, so employing all of the people that undertake all of the activities. As part of the SDSR reductions we have to make reductions of between a quarter and a third in our manpower totals.

Q3 Chair: I think we are going to come back to that issue when we think about the future.

Bernard Gray: Sure, but inevitably you are asking me about the future aren't you, since we are moving from today forward.

The second component, which is about £6 billion a year, is in the acquisition of new equipment. There, certainly in the years between, for arguments sake, now and 2015, the large majority of what we are buying is already contracted. There may be some scope for renegotiating contracts with suppliers, but, by and large, something over 90% of what we are proposing to buy in the current financial year, for example, declining to about 60% of what we are proposing to buy in 2015, is already contracted in aircraft carriers and the like. Therefore there may be some scope there but it is limited. I think there is an interesting area in the £7 billion that is spent on support, about what can be achieved by negotiations for the cost of support for all that equipment with existing suppliers. I have some work in hand to see what we can do to drive down the cost of supporting the existing equipment, which leads to much nearer-term money than the acquisition of equipment that will not be fielded for seven, or eight, or 10 years, but that has not yet finished. Therefore, I cannot answer a proportion question like that.

Q4 Chair: That is a very helpful definition of the £14 billion. When you look at the £7 billion, how much of that is actual supply of equipment at the front line as opposed to domestic things—keeping the

 13 June 2011 Ministry of Defence

troops out there with washing-up liquid and toilet rolls?

Bernard Gray: The £7 billion is in the cost of maintenance. It is servicing all of the existing equipment: all of the ships, vehicles, tanks, aircraft and so forth.

Q5 Chair: That is very helpful. Then can we know from you, Ursula Brennan, in the new structure that you have got, who is now responsible and accountable for managing the supply chain.

Ursula Brennan: Bernard Gray, as the Chief of Defence Materiel, is responsible for the joint supply chain.

Q6 Chair: That is very helpful. Now can we start by looking at suppliers, because it seems to me that that is something which could almost have been explored a little bit more by the National Audit Office. If you look at various bits of the report, and if we just look at delays because there is not much evidence on costs, it seems to me that much of the delay is down to the supplier or MoD; it is unclear, it could be either/or. If you look at page 5, paragraph 9, over 50% of delays are because the items are not available. At figure 7, page 20, if you look at the supply chain there in the UK, there is fantastic variation between the worst and the best. If you look at page 21, paragraph 2.8, 53% of supply items were late because the item was not there; another 17% because the item was either late or because the transport did not work. You seem to have a real problem with suppliers.

Bernard Gray: I do not think that is the case particularly. We have many problems with suppliers in different contexts, but in this context I do not think it is true. The statistics that you have quoted largely relate to the supply of the Priority 1 items. Those are the items, which according to our call-off, are required to be in theatre within five days. Broadly speaking, if they are in stock they are supplied into theatre within the five-day period. If they are out of stock, so we are not holding them in stock, it takes us longer. What is not clear from this data is how much longer it takes us to fulfil the rest. But basically 50% is achieved within seven days against the five-day target, and 90% of them are supplied within a month. Broadly speaking, of the urgent items the overwhelming majority are supplied into theatre within a month.

Q7 Chair: The target you set yourself for the urgent items is not a month.

Bernard Gray: No, it is five days. As I was about to say, bearing in mind that we then have above 80% availability of equipments in theatre, which is our set standards, the question we are asking ourselves is, are we, or PJ-HQ, driving for an excessive standard in the delivery of equipment, because the supply that we achieve achieves the effect that we want to get to, which is the availability of the equipment in theatre. So, while it is perfectly true that we missed a self-imposed standard, the fact of the matter is that the vast majority of items get there within a month and within a sufficient time to keep the operational fleet going.

Q8 Chair: Two questions arise out of that. First, one of the suggestions in the report is that the way you survive is that you stockpile a lot and there is very little analysis to demonstrate whether or not your stock is too big or too little. The suggestion would be the only way of getting it to the front line in time is to have a whole lot of this stuff sitting out there, presumably gathering dust in the Afghanistan theatre. Are you managing by having too great a stock?

Bernard Gray: I do not think that the data say one way or the other whether that is the case.

Chair: The suggestion is in the report.

Ursula Brennan: Could Major General Copeland perhaps comment.

Major General Ian Copeland: I will make a comment. We have the sustainability statement which sets the levels of stock and the level of inventory that we have to hold. It is true that we hold days of supply for many, many items, which is a buffer stock against the threat that we have in theatre and the danger that we will not be able to pass stuff down the lines of communication. In particular, the surface line of communication through Pakistan has been very challenging. We are constantly looking at that inventory to make sure that it is optimised. I think I would say at the moment we are probably short on some items and over on other items. That is something that we constantly review and constantly look at to make sure that we get the optimum balance, so that the risk is mitigated within theatre.

Q9 Stephen Barclay: Could I just clarify: what is the value, over the last 12 months, of stock that has deteriorated on the shelf?

Major General Ian Copeland: I could not answer that question.

Q10 Stephen Barclay: That was an issue previously picked up by the Public Accounts Committee. I was just looking at the report into Operation TELIC and it commented about deterioration of items on the shelf, and that was one of the recommendations. It just seems if that was a previous recommendation of the PAC, it is a little surprising if no one is actually measuring. It goes to the Chair's point: if you are ordering stuff and having a stockpile—I do not know if you are, but if you are doing that—and a proportion of that is deteriorating, that would be an indicator, would it not, that you are not getting good value?

Major General Ian Copeland: It would be. It is a question of whether it is being left to deteriorate.

Q11 Stephen Barclay: That is what I was asking, but you are not measuring that.

Major General Ian Copeland: I am not aware that we are measuring that level of deterioration, no.

Q12 Stephen Barclay: Is there something stopping you? If I was running a warehouse, taking it in microcosm, and each year I had to throw away a proportion of that stock because it had deteriorated on the shelf, I would want to know first how much of it I had lost, and secondly, how I could mitigate against it. Given that the PAC has recommended on this

13 June 2011 Ministry of Defence

specific issue before, what is it that is stopping you being able to do that in 12 months' time?

Major General Ian Copeland: Nothing. I do not think there is anything to stop us measuring that. I think it would be a relatively straightforward thing to measure.

Q13 Stephen Barclay: Do you think it would be a good idea to measure it?

Major General Ian Copeland: Yes, I think it would be a fair idea, because to date everything that we have stored in theatre has been largely in the open. Of late, we have moved a lot of the kit that was out in the open—that was gathering dust and was probably deteriorating at a rate that was unacceptable—into warehousing. I would imagine, as a result of that move, the sort of measuring that you suggest is probably quite useful to show that the investment that we have made in warehousing is good and value for money.

Q14 Stephen Barclay: The shift of more materiel to Cyprus as a forward storage base—do you leave items there out in the open in significant quantities?

Major General Ian Copeland: There is very little that we are holding in Cyprus. It is used primarily as a staging post. We certainly have used Cyprus within the sail-fly programme. We have been sailing kit over to Cyprus using our own roll-on/roll-off ships, and then we have been flying it into Bastion using an Ilyushin IL-76. The items that we are moving in that way are really only staying there for a very short period of time.

Ursula Brennan: We did that to save money.

Major General Ian Copeland: Yes, absolutely.

Q15 Chair: In reviewing the standard, you said you were going to move away; you said you think your standard of getting supplies to theatre in five days for the very urgent—

Bernard Gray: No, I did not.

Q16 Chair: What did you say?

Bernard Gray: I said we have had something of a debate about whether that is an excessive standard.

Q17 Chair: You are reviewing the standard of whether or not supplies should go to theatre within five days. What I am interested in is what the operational imperative there on that review is. Is it your view as operational people that you can play around with that standard?

Major General Ian Copeland: The operational imperative from our perspective is to make sure the battle-winning equipment is held at about 80% availability. I think what we have to judge is whether that very challenging target of five days for urgent items is over-specified or whether we can stretch it out a little bit and still maintain 80% equipment availability.

Ursula Brennan: I think part of the point here is that the five-day target is an interim piece of an end-to-end supply chain. The thing that matters in the real world is whether the people have access to the equipment when they need it. Measuring the time it takes to

transit is part of helping us get that picture right. We need to look at what the components are that go into making a successful availability of equipment when it is needed.

Q18 Chair: It is either getting the stuff out of the manufacturer, or getting over there. What else is there?

Ursula Brennan: There is the balance between how much we store out there and how much we take—

Chair: Right, which is back to our stock point.

Ursula Brennan: And how much we take by land and how much we take by air. Our difficulty with Afghanistan is that the difference between air and land is fantastically large. The binary choice between something around five days to go by air and something around 120 days to go by land means that making a judgment about which way we go and how much we put by those two routes is something that we keep under review.

Q19 Chair: Have you any financial data whatsoever to help you inform those judgments, or is it purely about effectiveness?

Bernard Gray: The Operational Commander has to make a choice about what to call off.

Q20 Chair: Yes, but somebody has to know how much it costs.

Bernard Gray: What we prioritise is the Operational Commander making their choice about what they need in theatre. They have to make a choice essentially between a few days and four months. What we pay them to do is to make a choice—and they have Quartermasters in theatre to make those choices—to say, “What do I need by way of buffer held in theatre to achieve that end?” Their aim is the operational availability of the equipment—

Q21 Chair: With the greatest respect, I do not accept that you make a choice between the operational efficiency and the cost efficiency; the two have to be linked together. You cannot make any choice around cost efficiency if you do not know the cost.

Bernard Gray: I am not sure that—

Q22 Chair: If you have set yourself a target of 80% availability in theatre, out of that you then have to decide how much you keep in stock in your warehouses—wherever—whether or not you use air or land, and what your relationship is with your suppliers. There is a cost; there is a value for money attached to all those judgments. As I read this report, I have not a clue that you have the information to enable you to make that value-for-money judgment.

Ursula Brennan: We do have information that enables us to know what we are spending on transport by air and by land. I think the point that my colleagues are making is that the cost of transport and the cost of supply in relation to the cost of the Herrick Operation are small in comparison to the operation as a whole, and the costs of changes in the way that we fly the materiel are small. That is why, and for pretty obvious operational reasons, we prioritise having the equipment there, because “just in time” is not good

13 June 2011 Ministry of Defence

enough for operational staff; “just too late” would be completely unacceptable for our operations.

Q23 Chair: What I hear from that is that, for example, you do not really care that much about the £15 million that you could save that is in the Report—which actually could buy you 870 privates on the statistics I have got—because it looks small in relation to your overall costs.

Bernard Gray: No, we do not accept the contention that you can switch that proportion to land; nor indeed does the Report substantiate that you could. It merely illustrates that if it were to be switched, it would save that money.

Q24 Chair: Yes, if it were to be switched it would, and therefore—

Bernard Gray: But there is no evidence to suggest that it could be moved.

Q25 Chair: Therefore, to hear an argument that this sort of expenditure is small in relation to the rest of your expenditure suggests you are not focusing on it. Amyas?

Amyas Morse: Just to be clear with you, I did not regard this Report as very contentious to be quite frank.

Bernard Gray: Neither do we.

Amyas Morse: Exactly. Therefore, let me just draw out the point a little bit, if I may. What I understood you to be saying is that you think that within your operational headroom requirements for availability in theatre, you may have space not to give what I call artificial prioritisation to some or all of the shipments that have now—or you are exploring whether you can set a lower target than five days to get things into theatre in some cases, and still meet the requirements operationally.

Bernard Gray: Yes, but the problem that you have with that is the bifurcation between five days and 120 days. What you do not have is the ability to degrade down by the whole four months. You are still predominately going to have to move that stuff by air; it just does not have to be there in five days.

Amyas Morse: I am not trying to dispute that, but if you knew you had longer you might be able to put loads together more coherently; there are lots of other tunes you might be able to play. I am really trying to get to the point of whether you agree that if you had a better logistics information system, you would be able to do that rather more effectively than you can at the moment.

Bernard Gray: We certainly agree that we need a better logistics information system for a whole variety of reasons. I do not think it is in any sense contested by us that we need better logistics information for a whole variety of reasons. Whether or not it gives rise to any material change in behaviour or additional value for money I think is an unproven assertion. It may or may not.

Q26 James Wharton: On supply chain performance, what I would quite like to know is—and if we can get a clear answer that would be very much appreciated—if it fails in a way that can be demonstrated as having

harmed frontline troops, whose head is on the block? Who is the individual who is ultimately going to be responsible within that supply chain organisation?

Bernard Gray: Ultimately it is three of us, and then finally the Permanent Secretary.

Q27 Matthew Hancock: Says all of you.

Ursula Brennan: I am the Accounting Officer.

Matthew Hancock: I appreciate you are the Accounting Officer.

Ursula Brennan: I am accountable. I hold Bernard Gray accountable for the supply chain. He has working for him a Director of the Joint Support Chain, whose job it is to make sure that this system works, and who busts a gut to make sure that it does work, and who bust a gut to make sure that we set up a supply chain that worked for Libya at breakneck speed.

Bernard Gray: I am quite happy to take my responsibility in this matter.

Q28 James Wharton: And the Director reports to you, Mr Gray?

Bernard Gray: Well, both of these gentlemen.

Q29 James Wharton: Do you have the control over the supply chain that you need in order to do that job effectively?

Major General Ian Copeland: I have the control over the supply chain up to the theatre rendezvous point. At that stage the responsibility and the control really passes across to the Permanent Joint Headquarters. They vest that responsibility in the Commander of Joint Force Support Afghanistan, effectively the Logistics Commander in theatre. Like with many complex companies, it is a segmented supply chain, but we absolutely value those interfaces.

Q30 James Wharton: Do you have enough information coming into you to manage that effectively?

Major General Ian Copeland: I think so, yes.

Ursula Brennan: On the point about information, we certainly do not dispute that with better information we would be able to identify and make the supply chain run more smoothly. That is why we have been investing in it. I would not want you to think that we believe that we have got everything we need on that score. We do know that there is improvement and we are making it.

Q31 James Wharton: Since we have had mention of Libya, obviously, you set out an operational sustainability statement for Libya, I would assume. Is there anything in that that is unusual or that is putting additional costs on the MoD—any particular challenges that are driving up the cost—and what is the cost of supporting that operation, and how does it compare to supporting other operations?

Air Vice Marshal Graham Howard: As regards Libya, it is rather different to Afghanistan. We are sending most of the equipment there via surface because we can drive it there using military transport and via contractor. The predominant means for Libya is by surface movement. Then we have approximately

13 June 2011 Ministry of Defence

two to three Hercules C-130s per week to move the weapons. We tend to move the weapons that are being dropped almost literally on a just-in-time basis for that. The big difference between that and Afghanistan is that the lines of communication are safe and secure. So, in terms of Libya, yes, it is costing us because we are using weapons and equipment from our contingent reserve, but in terms of the mode of transport and the C-130s, we are using the assets that we own already.

Q32 James Wharton: What is it costing us?

Air Vice Marshal Graham Howard: I could not give you a figure off the top of my head, but we could tell you afterwards.

Q33 Stephen Barclay: You said that you were using the contingent reserve. Has the Treasury confirmed that they will be covering that, or is that still open for debate from the MoD budget?

Ursula Brennan: There is a standards relationship with the Treasury about the access to the reserve for operations, and that is applied in the standard way.

Q34 Stephen Barclay: Which means what?

Ursula Brennan: It means that costs incurred on an operation are claimed from the reserve.

Q35 Stephen Barclay: So all the aspects of the Libya costs will be covered by the Treasury.

Ursula Brennan: There is an enormous amount of detail that we discuss in detail with the Treasury about precisely what costs are charged, but it is an absolutely standard process that we are following and which is operating in the normal way.

Chair: The information that you have promised Mr Wharton, if we could have it within a week that would be very helpful.

Q36 Chris Heaton-Harris: If I could ask you, Ursula Brennan, you said the most important question for you was, “Do people have access to the equipment when they need it?” You will recall in the session that we had on Typhoons, I recounted a tale of when I was in Incirlik in September 2001 and there was a small posse of four Jaguars there patrolling the northern no-fly zone, three of which were on the ground being robbed or cannibalised for parts to keep one in the air. Although you did not have the information on the day, I asked parliamentary questions as to how many Typhoons were down on the ground, considering you have fairly extensive supply contract for the Typhoon, which we also talked about. The answer was three. That might not seem like a big number, but to me that seemed to be an awful lot of money to be sat on the ground being cannibalised for parts that should have been coming just in time. Going back to 2005, or it might have been 2006, in the 26th Report of the Public Accounts Committee, there was a part in that report saying, “The Royal Air Force does not record cannibalisation, known in the RAF as ‘robbing’, in the same way that the Army chose to focus on the number of incidents of aircraft robbing rather than the number of aircraft robbed. The number of incidents was highest for the Tornado GR4 and F3 fleets: 44 aircraft

were deployed with a total of 1,622 incidents of aircraft robbing across the fleets”.

In that same Report it said, “The cannibalisation of equipment had longer term effects, however it was frequently inefficient, introduced engineering risk and reduced the Department’s ability to subsequently generate forces or even higher scales of effort. It could also reduce the pool of equipment available for training, leading to wider detrimental impacts on both individual and collective skills etc”. On the occasion when the supply chain breaks down and goods do not arrive, surely this does severely affect the people that you are meant to be looking after on the front line. We found in our Typhoon Report that the problems of getting spare parts prevented pilots being trained for ground attack missions. Has that supply failure been fixed?

Ursula Brennan: The most recent reports that I heard about the Typhoon, in relation to its performance in Libya, was that the support arrangements were actually proving better with the Typhoon than they were with older aircraft. I do not have that information.

Air Vice Marshal Graham Howard: I think your point on robbing, cannibalisation, is always the point of last resort. You mentioned Libya and other operations. All the aircraft fleets—we have got Typhoon and Tornado GR4 on Operation Ellamy for Libya—have a priming equipment pack which is effectively a spares pack. That pack will go out with the aircraft. Given that the Typhoon is on its first operation and the Tornado GR4 is well equipped and well provisioned, it will always come from that priming equipment pack. It will only be robbed as a very, very last resort, and then the pack will be replaced. Therefore, I am not aware that robbing and cannibalisation is an issue. The Jaguar that you mentioned was at that time a very old aircraft and so I do not think you could compare Jaguar to the Typhoon or the GR4.

Q37 Chris Heaton-Harris: On 9 March this year we had three Typhoons on the ground because we were robbing parts out of them. I am pretty sure that the Typhoon’s theatre of operation, which I think is quite an important thing—it basically comes to and from UK bases, or is it based in Italy now?

Air Vice Marshal Graham Howard: They are forward based in Italy.

Ursula Brennan: For Libya.

Q38 Chris Heaton-Harris: How quickly can we get parts down to Italy for Typhoons that break—have a bird strike, whatever it might be?

Air Vice Marshal Graham Howard: If the part is available in the UK we can get it there within 24 hours.

Q39 Chair: That is not an answer; that is only if it is available. It comes back to the very original question that most of the delays appear to come from suppliers.

Air Vice Marshal Graham Howard: The question is how long does it take and there are three levels of answer. One is we may already have it there because

13 June 2011 Ministry of Defence

we have spares support packs down with the flight crews on the front line in Gioia del Colle in Italy; so they could be maintained as though they were at a UK base with the existing spares packs. If the stock item is available within the UK, it is the length of a C-130 flight to get it down there; so, within the day. Obviously if we have to go back into the supply chain there is a variable time, depending on the complexity of the part and whether or not BAE or anybody else is holding it.

Q40 Chris Heaton-Harris: Back in 2005, in a report to this Committee, the Defence Logistics Transformation Programme was the central way in which the Department was addressing the issues of reduced levels of stock and cannibalisation, and it was also going to save some money, £2 billion. The Department was confident that it could achieve the levels of savings predicted and said that it had already identified savings worth £1.5 billion. Is that true? Did it save any money?

Ursula Brennan: I cannot tell you the answer to that offhand. I know that changes that we have made in terms of doing forward servicing and forward repair in Afghanistan on equipment generally have saved us a lot of money by not having to bring it back to the UK. I do not know the answer to that specific question.

Q41 Chris Heaton-Harris: I am not convinced. Way back in 2001 the thing that got me going on this, as well as seeing these three Jaguar aircraft on the ground, was that on my way out—I was on the Armed Forces Parliamentary Scheme—I had been given by a very nice gentleman in the RAF a report which was a testimony before the Sub-Committee of National Security, Veteran Affairs and International Relations in the US, talking about cannibalisations. The guy who wrote this, and gave it orally in fact, Neil Curtin, who was the Director of Defence Capability and Management, said, “Cannibalisations require at least as much as twice the maintenance time of normal repairs because they are removing and installing parts. They make expensive assets unusable and morale drops because of it”. I think that is something that you have accepted in papers within the Department since. I know the Typhoon spare package, which has not quite operated as well as you would have liked it to have done, was meant to have stopped all that. I just do not feel that there is a sense or worry at all from you.

Bernard Gray: That is because we do not think it is an actual problem today.

Q42 Chair: It was in March. Have you solved it since then?

Bernard Gray: There were three aircraft which were US because a part had been removed. That is not the same thing as that being a major problem. You are talking about 10 years ago, when an aircraft—

Q43 Chair: How do you define a major problem then?

Bernard Gray: You asked me to answer the question. It was 10 years ago, when there was an aircraft type

which was about to be retired from service which is no longer in service. There is no evidence that says there is a material problem in relation to either GR4 or the Typhoon for cannibalisation or robbing today.

Q44 Chris Heaton-Harris: Can I point out the problem? You are talking to the value-for-money Committee and are saying that having a third of a billion quid of aircraft on the ground when you have got a spares package is not an issue.

Bernard Gray: I am saying that statistically speaking, that is going to happen sometimes.

Q45 Chris Heaton-Harris: Is that built in to supply spare aircraft?

Bernard Gray: Three aircraft out of the entire—what is the total size of the Typhoon fleet?

Air Vice Marshal Graham Howard: I could not tell you off the top of my head. We have got six in—

Ross Campbell: It will fall to 107.

Bernard Gray: Well, we bought 232.

Q46 Mr Bacon: You paid for 232, but you never got 232. You paid for 232, got 160 and then in three and a half years time you will have 107.

Bernard Gray: We are still making them.

Q47 Chair: I think there is a very simple equation here. We are talking about three out of a hundred-odd on the ground, which is what Chris talked about, which you say is a small percentage. The value-for-money question is, if your supplies contract was working properly, would that not be more cost-effective than actually having three aeroplanes on the ground out of service?

Bernard Gray: It depends on what you have got to do in order to make sure that you have 100% availability, is the answer.

Q48 Chair: But you do not know, or at least according to this Report you do not have the information to be able to even make that judgment.

Bernard Gray: It is not obviously true that provisioning to a level that allows for 100% availability of all aircraft at all times would represent value for money.

Q49 Chris Heaton-Harris: This spares shortage for the Typhoon has cost time in hours that people could train and caused all sorts of trouble for your pilot maintenance.

Air Vice Marshal Graham Howard: To answer your specific question, in terms of the operation against Libya, we are meeting the air-tasking order from NATO, so we are meeting the operational task from the assets we deploy. If we are asked to launch two aircraft for a particular mission, that is what we are doing. The fact that we have another four that are being serviced—and so long as we meet the output from NATO, which is what we are doing—then surely that is what matters.

Q50 Chris Heaton-Harris: That I understand. I just want to, from a value-for-money point of view, put the case that you have got a multi-million pound spares

13 June 2011 Ministry of Defence

package. I just find it difficult to see now why you could have a third of a billion quids' worth of kit stuck on the ground for the sake of two washers and a windscreen.

Bernard Gray: That is not the case.

Q51 Chris Heaton-Harris: If I table a whole host of Parliamentary questions asking you how many Typhoons are on the ground because of cannibalisation, day by day since March, it will go up and down between two and six.

Bernard Gray: If they are on the ground it is not because they are missing two washers. It is not the case either that you need 100% availability of those aircraft at all times to meet training needs.

Chris Heaton-Harris: Fair enough. That is a fair point and I take that.

Q52 Joseph Johnson: I would like to go back to what Major General Copeland was saying a few minutes ago about the surface line of communication through Pakistan being very challenging. Obviously, when you look at the map on page 13 it shows that we are completely dependent for our surface line of communication on Pakistan. There is no alternative: you cannot go through Iran.

Major General Ian Copeland: There is one alternative, but I will come on to that in a minute.

Q53 Joseph Johnson: As this map depicts it, there does not seem to be at present any other surface line into Afghanistan being used except that which runs through Pakistan.

Major General Ian Copeland: There is.

Q54 Joseph Johnson: There is?

Major General Ian Copeland: There is at the moment.

Q55 Joseph Johnson: What is it?

Major General Ian Copeland: At the moment we are developing the northern line of communication, which is sailing round to Riga and then moving stock by train through Russia and the "Stans" into northern Afghanistan.

Q56 Joseph Johnson: How is that working for you?

Major General Ian Copeland: It is working quite effectively. We have trialled it for almost a year now. The time that it is taking stock to get into theatre, to Bastion, is about 110 days, so it is comparable with the Pakistan option, which is 120 days, as you can see from the Report.

Q57 Joseph Johnson: Hold on a second. You are comparing 110 days land route via the Riga route, which compares on average to between 77 and 83 days—

Major General Ian Copeland: At the time the report was written it was taking between about 77 and 87 days. We have subsequently amended our algorithms to reflect the reality of the situation, which is that the surface line of communication—that is, the sea line of communication out of Karachi and then the ground line of communication through Pakistan—is taking

much nearer to 120 days, and on most occasions more than 120 days.

Q58 Joseph Johnson: Unless I have missed something in another document, is this Report out of date, then?

Ursula Brennan: It has worsened since the Report.

Major General Ian Copeland: The Report is absolutely correct—

Ross Campbell: It has gone up 50% over the last year.

Q59 Joseph Johnson: Was there anything in the material that we were given that told us that the Pakistan surface route was only achieving delivery times of 120 days? I may have missed it; I am sorry if I did.

Ross Campbell: It certainly deteriorated to that level towards the back of last year, I would say.

Q60 Joseph Johnson: So the answer is no. I just want to make sure I have not missed anything. So we are being told new information here, which is that the surface route to Pakistan now takes 120 days.

Major General Ian Copeland: On average that is what our algorithm says. Quite often it can take longer than that. We have no levers to control what happens.

Q61 Joseph Johnson: Going back to the data that we have, based on the data that were available to the NAO, we have got only 15% of shipments by the routine surface making it within the desired target time frame. Presumably, now that you are telling us that it actually takes not between 77 and 87 days, but around 120 days, presumably that 15% is probably not going to be that at all. What would you say it is going forward?

Major General Ian Copeland: You would think that it would be better, but sadly Pakistan continues to frustrate us in terms of the way in which we move equipment.

Q62 Joseph Johnson: Hold of a second. It is going to be a lot worse.

Major General Ian Copeland: It is worse, yes.

Amyas Morse: Is that because of enemy action or just—

Major General Ian Copeland: It is a combination of factors. Sometimes it is industrial dispute, sometimes it is a serious situation.

Q63 Joseph Johnson: Hold on a second, I want to clarify what you were saying. You said you would think it would be better, but in fact if the shipments are in reality taking 120 days, it might not be that 15% is getting there on time; it might be actually that 0% is getting there on time.

Major General Ian Copeland: You would think it would be better against the new target.

Q64 Joseph Johnson: What is the new target?

Major General Ian Copeland: If you put the target to 120 days, your achievement against 120 days would probably be better than against 77 days.

13 June 2011 Ministry of Defence

Q65 Joseph Johnson: That is your algorithm by which you agree the time. That is pretty good. What strategies other than this Riga route are you developing to cater for the possibility that the political situation in Pakistan deteriorates, for whatever reason, and the surface line that is currently available to us ceases to be available to us? How long can our troops be provisioned in Afghanistan in the absence of a routine surface route?

Major General Ian Copeland: That is why we have developed the northern line of communication, to give us an alternative should Pakistan continue to be challenging or even get worse.

Q66 Joseph Johnson: Is it a possible substitute?

Major General Ian Copeland: At the moment I would say no. We are limited at the moment to non-war like stores.

Q67 Joseph Johnson: So we are developing an alternative which is not an adequate substitute.

Major General Ian Copeland: The alternative would be to fly it, which is the sail-fly initiative that we developed last year as well.

Q68 Joseph Johnson: Presumably there are some items that are currently going by freight through Karachi and up into Afghanistan that are not able to be flown there.

Bernard Gray: By and large, we've been holding the right stores.

Q69 Joseph Johnson: How long would we be able to continue operating in this theatre, in the absence of a surface route through Pakistan?

Major General Ian Copeland: We would have to fly.

Q70 Joseph Johnson: Are there things which we cannot even get there by flying them there?

Bernard Gray: There are things we cannot fly.

Major General Ian Copeland: There are things that we could not fly. I would imagine very heavy bridging equipment would be almost impossible to fly.

Q71 Joseph Johnson: So the viability of the operation in the absence of a Pakistan surface route—

Major General Ian Copeland: The risk would ramp up considerably.

Air Vice Marshal Graham Howard: If we lost the surface route through Pakistan, then the operational commanders would have to seriously consider whether they could continue to prosecute the types of operation they are doing at the moment. It would cause the Joint Commander to reassess because the situation had changed. We would be able to feed ourselves, we would be able to have fuel going in, and we would be able to fly ammunition in. But without that majority of materiel that comes through the surface line—as Ian has said, we can only move non-war-like through the north—we would have to take an operational pause.

Q72 Austin Mitchell: I seem to remember a report that Sony computer systems are fairly old and incompatible. Does that preclude you doing effective

tracking on the stuff that you are sending to Afghanistan? If I get a camera through Parcel Force or DHL, I can ring up with mounting excitement and find it has got within 20 miles of Grimsby; in fact on one occasion the camera actually rang me—or somebody on its behalf—to say that it got stuck in York by mistake, but it would be with me next day, and it was. Can you do that kind of tracking? The soldier who was wanting his SA-80, a new weapon—can he find out from tracking when it is coming?

Bernard Gray: There is a difference between the management information systems around warehousing, which are old and incompatible in the way you describe, and loads when we are moving them—when they are in containers—which have RF tracking on them. We can track the containers in transit. We know what we have loaded up and we know where they are.

Major General Ian Copeland: The only qualification I would give to that is we use a system called VITAL, which is Visibility in Transit Asset Logging. At the nodes along the supply chain where we have got VITAL deployed, we have good visibility of what we are moving.

Q73 Austin Mitchell: So the Commander who has ordered it on the front will know where it is when it coming.

Major General Ian Copeland: Yes.

Q74 Austin Mitchell: I see from the table, figure 14 on page 30, there is a target percentage for Afghanistan materiel going by surface. You have never been anywhere near it, but there are strange lurches and drops in the proportion going by surface. What are these caused by? I wonder, cynically, if they are caused by the kind of panic that is engendered by the newspapers—that soldiers are not getting their bullet-proof vests or weapons, which hit us a lot last year. Each time there is a panic from the *Daily Mail*, the amount going by air increases.

Major General Ian Copeland: My assessment is the reason the surface delivery stats have gone down is because of the challenges that I have just described in Pakistan.

Q75 Austin Mitchell: The deliveries by air increased towards the election, did they not, when everybody was panic stricken about whether the troops were getting properly supplied?

Major General Ian Copeland: I would not know.

Q76 Austin Mitchell: Well, they did, it is there. It reached a low point on 10 May.

Bernard Gray: In absolute terms, the tonnage per month that goes by air is pretty stable. The reason for the variation is because there is a significant variation in the tonnage moving by road or shipping.

Q77 Austin Mitchell: The big stuff goes by road and that causes bumps—not road bumps.

Bernard Gray: There is a cyclical component here, which is dependent on whether we have large cargos moving. But the trend downwards is as a result of operational commanders becoming increasingly

13 June 2011 Ministry of Defence

nervous about the time in which they are going to receive things by the surface line of communications, then electing to send, basically, the smaller, lighter items by air.

Major General Ian Copeland: In fairness, if I could just add to that, we also had the ash cloud just before May—it was around April 2010—which would have impacted on those stats as well.

Austin Mitchell: I am not really happy with that answer.

Q78 Chair: I just want to ask a little interim question on that. Are the Americans using more air now to move their supplies around? Do we know? We are trying to look at our performance.

Bernard Gray: They have always used a lot of air.

Q79 Chair: As much as us?

Bernard Gray: More.

Q80 Chair: As a proportion of their—

Bernard Gray: Yes, both absolutely and relatively. They have a lot more money.

Q81 Austin Mitchell: I have just seen from the map that stuff goes by air direct to Afghanistan, but I gather stuff to Libya actually trundles across Europe's road system, pays tolls on French tolls, and finishes up in Italy if it is going to go by air to Libya. Why is that? Why can't it go direct?

Bernard Gray: It is direct, because the bases from which our aircraft are operating are in Italy, so they are going by road, across the European road system, to Italy because, despite the high price of French tolls, it is still cheaper than flying it in an aeroplane.

Q82 Austin Mitchell: And the delay doesn't matter.

Bernard Gray: We have a predictable usage rate, which allows us to know what we need to supply along that surface route.

Q83 Austin Mitchell: Can you give us some idea of the cost of that over six months—supplying Libya?

Bernard Gray: We have already been asked that question and we do not have the data with us.

Q84 Austin Mitchell: Can you supply it?

Bernard Gray: I am sure we can.

Q85 Chair: Can I just get something clear on the cost issue? My understanding from the Report is, when you contract with commercial plane operators, you haven't got the cost in-house. That is from the Report somewhere.

Ursula Brennan: It is indeed. We do know how many aircraft the Royal Air Force has.

Q86 Chair: No, it is the cost of moving supplies.

Ursula Brennan: I was going to say the difficulty is that the supply is moved in aircraft that also move other things. We do not have a broken-down unit cost or flow cost in the same way as we do for charter.

Q87 Chair: We are the value-for-money committee, so there must be a way of assessing the cost or

apportioning a cost that you would know, which would then give you a sense or feeling of whether or not, in getting these supplies to the front line, we are getting both the effectiveness and value for money. There must be a way of doing that. It is not that difficult. I could do it—I am sure you could.

Ursula Brennan: The new information systems will enable us to track more of this information more effectively than we have been able to do in the past, but I think the message that we were trying to give you is that what is absolutely uppermost at all times is that question of the speed with which we get things there.

Q88 Chair: Nobody is arguing about that, but this Committee will not juxtapose speed against value for money. You need to get both. Nobody is saying, "Cut the speed," but at least know what you are spending. At the moment, you do not know what you are spending. You could save here, and money you save here could help the front line.

Ursula Brennan: We have saved money, which is the reason why we adopted the sail-fly route, which was a way of ensuring that we got things speedily by a cheaper route. What we are perpetually up against is the choices that are available to us, because of that binary choice between a very rapid and much more expensive route by air, and a very long route by land.

Q89 Austin Mitchell: But you have said, in five previous reports, that you are going to improve it and make it more efficient; it does not seem to have happened.

Ursula Brennan: Sorry?

Austin Mitchell: You have said, to five previous reports to this Committee—

Chair: We are going to come on to that.

Amyas Morse: I think that you were saying, Mr Gray, about uncertainty. So, has it got to the point now that, with a Karachi land transfer, it is not just a question of it taking longer; you have to allow for it taking longer because there is a high degree of uncertainty as to how long it will take? So, it is not just, "It might take a long time"; you just do not know when it will come through.

Bernard Gray: That is true, because there have been a number of hold-ups.

Amyas Morse: So, it is becoming non-functional as opposed to just slow.

Bernard Gray: No, it has become less reliable.

Amyas Morse: So, then it becomes very difficult—

Bernard Gray: Very recently, for example, it has improved significantly, as one or two roadblocks were removed by people who had put them in the way, but the point is that, in the course of the last year, it has drifted out from 80 days to 120 days, and is now into around 100, so it is shifting around a lot. The question that you have to decide when you are on the ground as a provisioning quartermaster is: can I live with the uncertainty of when things will arrive by the land line, or will I have to make some decisions to fly some things in because I can't rely on it?

Major General Ian Copeland: Whilst we are focused on Pakistan being problematic, Afghanistan is equally problematic. There are two aspects here: one is the

13 June 2011 Ministry of Defence

asymmetric threat, of course, which is what you would expect from an operation, but the second point is that Kandahar customs can be very challenging as well. For example, we have seen a spike in our containers in the Kandahar customs area over the last month or so and it has taken a significant amount of effort to release them, so it is a combination of Pakistan and Afghanistan.

Amyas Morse: This is an impossible question, but you said that there are goods that can only come by land. How much more than that are you now sending by land, or are you pretty close to that irreducible level? What I was trying to say is there are things that you cannot fly—too heavy or very costly and difficult to fly—so you always bring those by land. How much above that minimum level are you now, in what you would choose to send out?

Bernard Gray: By weight, we are flying about 30%, and we are sending by surface about 70%, and that is a reasonably consistent proportion. I think the change in behaviour that we are pointing to is that people are making some judgments on lighter items, which are more easily air-transportable, and therefore the number of items flown is going up relative to that, but the total tonnage remains largely unchanged.

Q90 Stephen Barclay: Could I just come back to the IT systems, because, obviously, that drives cost? The Defence Logistics Board raised the risk of failure in the base warehouse inventory and management systems to “critical” at the start of the year. Is it still critical? Could you update us, please, on that?

Major General Ian Copeland: The risk of catastrophic failure as at today is exactly the same. The difference that we have made since the beginning of the year is that we have had a PR11 enhancement measure for £75 million—

Q91 Stephen Barclay: Sorry; PR11 is—

Major General Ian Copeland: A planning round.

Bernard Gray: We have budgeted.

Major General Ian Copeland: We have added £75 million to the Future Logistics Information Services programme to address the specific risk of catastrophic failure in our base inventory and warehousing systems.

Q92 Stephen Barclay: On your work plan, by what date will that no longer be critical?

Major General Ian Copeland: 2014 is when the full system is delivered across Defence.

Ursula Brennan: That is the complete roll-out; we are rolling it out gradually.

Q93 Stephen Barclay: So, this risk that you rate as severe and could lead to shortages at the front line within 30 days, which I would have thought is the most severe issue—shortages on the front line—is going to be with us until 2014?

Major General Ian Copeland: Yes.

Ursula Brennan: I think it is just worth clarifying that, given that we are rolling the new system out, it will not remain at that same level. There must be some point at which, the new system having been rolled out, that risk starts to decline.

Q94 Stephen Barclay: Hence my question: when will it cease to be critical? The date I was given was 2014. I guess, related to that, then, Permanent Secretary, is: if you spent more, could you reduce that risk more quickly? One assumes so. Coming back to the value for money issue, the critical issue for the Department is ensuring the troops are supplied, and that is more important than the £15 million—I absolutely agree. That is our No. 1 priority. Following that logic on, if one accepts, as I certainly do, that that is the logical position, you have something that is of such criticality to the front line and, out of a budget of whatever it was we said at the start—£7 billion—we are spending £75 million. Is that the right amount?

Bernard Gray: You have to do it right, of course.

Stephen Barclay: Of course, yes.

Bernard Gray: That means developing the system but it also critically means transferring the data over from one system to another, which is a non-trivial problem. We accept completely that management information systems and their underlying IT systems here are not adequate to the task, as a result of historical underinvestment. We are now fixing that, but you have to go through a planned programme of work in order to do that, and it is not just a matter of money. It does take a significant period of time, and these are highly complex warehousing structures and complex data patterns. My concern in this is to make sure that a poor-quality database that we have at the moment is translated into a much higher-quality database, not just a new IT system hosting the old data, and that just takes time to do.

Q95 Stephen Barclay: I accept that, but we said earlier, “If it falls down, who is accountable?” If you are the person accountable—

Bernard Gray: I have told you the answer.

Q96 Stephen Barclay: Absolutely, so it is important that you are satisfied with that timetable, but for me it comes back to the issue of accountability, because this precise issue was highlighted previously. The Report in 2000 said: “The Department is in the process of developing a single Defence Stores Management Solution to replace the separate systems in use by each of the Services, to be completed by 2004.” Is that referring to any of the IT systems that are on the matter we have just been talking about? Is this a different Defence Stores Management, or is that reply to the Committee in 2000 reporting about this issue—these warehouses?

Bernard Gray: I do not know.

Major General Ian Copeland: I think it is the same systems.

Q97 Stephen Barclay: It is the same systems. In essence, what you are telling us is that the PAC picked up this issue of Defence Stores, which is both at the heart of value for money, because, if you can pick up on stores in advance, you can plan it and you do not need to air-freight it as much, which gives you better value for money—

Bernard Gray: That is not necessarily true, by the way, because it does depend on the consumption rates at the front line, which are not predictable, necessarily.

13 June 2011 Ministry of Defence

Q98 Stephen Barclay: Sure, not in all instances—I accept not in all but in some, one assumes. It is a second-order issue, anyway; I will not get sidetracked by that. The real point, as accounting officer, I guess what I am driving at is the Department said it was going to do something in 2000 and complete it by 2004. We are now told today that this is of critical importance to the front line but it is not going to be ready until 2014. What is going on?

Ursula Brennan: I think I said that the roll-out would be completed by 2014. We have recognised that investment in this area has not kept pace with the need to invest in these systems. We have a comprehensive strategy going on at the moment of upgrading and producing a single set of systems across all three Services, because one of our problems has been separate systems for each of the Services. We now have a suite of changes that we are making, and we have a short-term plan to deal with immediate security so that, for example, we are migrating on to new data centres and new databases, which are more reliable than the old ones, and we are doing that now, in the current year; and then we have this investment strategy that we were just discussing.

Q99 Chris Heaton-Harris: So what happened to all the money you have spent, which Mr Barclay is aiming at? Also, over three years from 2006–7, the Department planned to spend £8.5 million on consignment tracking and £45 million on inventory management. Did that get spent? What are the benefits of that?

Bernard Gray: We talked about consignment tracking earlier; that is the RF tagging of the containers that goes on.

Q100 Stephen Barclay: The Report does say, “NATO Stock Number given to all identical parts.” This is on page 27. “Basic information, including information on costs, is not always available,” so even that is not working. What I really wanted to go back to, Permanent Secretary, is, we have had a recommendation on an issue from this Committee. We have had a firm undertaking from the Department that it will put in place a work plan over four years to resolve it. We are now seven years beyond the completion date of that and we find ourselves still with the same issue: being told we have 30-year-old legacy IT systems that are critical. It is very difficult to draw much comfort that, by 2014, it will be resolved.

Ursula Brennan: The point I was making is that there are at least three different suites of things that we are upgrading. Investment has already been made in at least two of those, and some of them are already partially working. So, the Management of the Joint Deployed Inventory, which is about equipment that is forward-deployed—we have invested £66 million over the past three years. Joint Asset Management and Engineering Solutions—we have invested £43 million over the past three years. Components of that are already up and running. There is a third chunk, which is this base inventory and warehouse management system, which we have just approved more money for. I think what I was acknowledging is, yes, we have

spent money. It is a very important area, but we are acknowledging that more needs to be spent and that is why we have now approved more money, so it is not that we have spent no money on this.

Q101 Stephen Barclay: Would you be willing, then, linking into that, to set out in a note to the Committee what the work plan is, with clear milestones within it, with accountabilities and an undertaking to write to the Committee in six months’ and 12 months’ time to inform us whether we are on track on that work programme?

Major General Ian Copeland: Absolutely.

Q102 Stephen Barclay: Linked to that, could I just further ask: how many other IT systems relating to the supply chain are either critical—I do not know what coding one uses; amber and red in commercial terms—or of concern that they may become critical?

Air Vice Marshal Graham Howard: There is one, which is the air movement system—the booking of passengers and freight to aircraft. We are in the process of upgrading that, and Thales is providing that system. That should be introduced next year.

Q103 Stephen Barclay: Do we have a precise date that we are working to on that?

Air Vice Marshal Graham Howard: There is one but I could not tell you off the top of my head.

Q104 Stephen Barclay: Perhaps we could have a note, and how much money is being spent on that and who it is. As you know from our previous exchanges, it is often very difficult, with the SROs, to get clarity in terms of who, actually, is the individual named. I do not want to repeat the earlier conversation, but we have a specific work stream there. It would be very nice, from a committee point of view, to have clarity—what is going to be delivered, by what date, by whom—so that we can then measure that.

Q105 Chair: I just want to get an assurance from Ms Brennan: can you give the Committee the assurance that, this time round, the investment that is planned is not going to be subject to cuts as you are looking for further savings?

Ursula Brennan: I cannot give you an assurance about anything across the whole of the Ministry of Defence budget, because we will perpetually prioritise to meet the demands of our business. The fact that we, despite the constraints on our budget, chose to invest that £75 million and have just chosen to do so, is an assurance that we take this very seriously, but I cannot give you a forward-looking assurance about what we will be doing to individual budget items.

Q106 Chair: You are revisiting the budget now, as we speak, aren’t you?

Ursula Brennan: We are not revisiting the budget; we have just allocated the budget that this—

Q107 Chair: I thought you were revisiting to identify further cuts.

Ursula Brennan: We are looking at our forward commitments, but we are not reallocating the budget at the moment.

Q108 Chair: In looking at your forward commitments, are you questioning your expenditure in this area?

Ursula Brennan: No. We have just allocated the money to this for that very purpose.

Q109 Chair: That is over what period?

Ursula Brennan: The £75 million is over three years.

Q110 Mr Bacon: That takes you through to 2014.

Ursula Brennan: Yes.

Q111 Stephen Barclay: In the note, could we just have a list of the IT systems within this supply chain and some sort of scoring, so we get a sense, moving forward, as to the number that are on the critical path? The Air Vice Marshal has touched on one that is critical, but it would be helpful to get a list, and then, with that, some sort of rating attached to that.

Q112 Mr Bacon: Ms Brennan, can you just clarify: the £75 million is being spent over the next three years to 2014 and it is buying us an upgrade of some existing systems and some new systems. Is that right?
Major General Ian Copeland: It is buying us a new base inventory and a new warehousing system.

Q113 Mr Bacon: Who is in charge of it?

Major General Ian Copeland: I am in charge of a brigadier who is running the Logistics Network Enabled Capability programme, and he in turn is on contract with Boeing Defence UK. We have a partnered relationship with Boeing to deliver that system.

Q114 Mr Bacon: This brigadier covers the whole £75 million, does he?

Major General Ian Copeland: He covers the £75 million for this. He also, within his programme, which is the Future Logistics Information System programme, is covering off MJDI, JAMES and, indeed, AMO¹.

Q115 Chair: What are all those?

Ursula Brennan: These are all different inventory—

Q116 Mr Bacon: The Future Logistics programme is a bigger chunk, which we will come on to in due course. Could you remind us of the total value of that?

Major General Ian Copeland: The total value of the 11-year FLIS—the Future Logistics Information System—contract is £803 million.

Q117 Mr Bacon: I just remember having the exchange with Sir Kevin Tebbit about this about seven years ago, when it became quite obvious that asset-tracking was a big problem—and I know there is a difference between asset-tracking and consignment-tracking—and, what is more, that it had been a big

problem that had been identified in 1991 in the original Gulf War. I was just looking back to the Report from the National Audit Office on Operation TELIC, which was in December 2003, and in the back of that Report seven years ago there were a number of references to earlier Reports from this committee, in one of which—this was the 23rd Report from 1996–97; it was about the military operations in the former Yugoslavia—one of our conclusions was as follows: “We consider it unsatisfactory that, despite the assurances the Department gave us following the Gulf conflict, and despite the experience they gained in the former Yugoslavia before the IFOR operation began, keeping track of high-value and operationally important equipment has again proved to be a problem.” That was in 1997—or the 1996–97 parliamentary session, so 13–14 years ago.

Then I read in paragraph 3.3—this is the fourth bullet on page 25: “Data is not consistently recorded at all points in the supply chain, so the Department does not know where deliveries are at all points in the supply chain. On average, 90% of the SA80 deliveries”—rifles, I presume that means—“we examined, for example, had their time and date of arrival at a UK airport recorded, but only 8% had a departure record. Furthermore, as data systems used on the front line are not linked to the Department’s consignment-tracking systems, there is no consistent receipting of goods at the end of the supply chain, which means the Department does not always know whether the goods actually arrived at the end-user.” The Report goes on to say: “The implications of this lack of data are significant—for example [...] the Department could not confirm”—this was when the NAO was looking at the resource accounts for 2009–10—“the existence and location of nearly 6,000 Bowman radios worth some £184 million.” This is some 14 years after we had noted that not being able to keep track of high-value and operationally important equipment was once again a problem. The Treasury minute in response to that, by the way—14 years ago—had said: “The Department will ensure that the lessons learned from the former Yugoslavia are applied to future systems for tracking high-value and operationally important assets.”

Just one other point I wanted to make: that was a list of systems and the full background and project histories of the various attempts to develop tracking systems by the MOD—this was in a note from our Report, the 39th Report, published in September 2004 on TELIC. There were seven systems listed here. One of them was MMIT—Management of Materiel in Transit—and it is described as follows: “It is developing an end-to-end control process for consignment management. This will optimise the supply chain, ensuring that operational priorities dictate the movement of materiel, and will improve the speed and certainty of consignments while removing cost both in terms of movement assets need and lost stock in transit.” But here we have, in this Report, “As data systems used on the front line are not linked to the Department’s consignment-tracking systems, there is no consistent receipting of goods at the end of the supply chain.” You have made these promises that you are now going to improve things by

¹ See Supplementary memorandum for further detail

13 June 2011 Ministry of Defence

2014, but a sceptic might say, “You have been making these promises for 15 or 20 years. Why should we believe you?” What is any different now from what has been going on in this record over the last 10 to 15 years or so? What is different?

Air Vice Marshal Graham Howard: Can I answer from an operational point of view? I served in Yugoslavia and I was in the headquarters at the start of the Iraq War, and everything you said is correct. The equipment was not particularly good and we did not know where it was. If you are to go out to Afghanistan now—and I have done two six-month tours in Afghanistan—the equipment is superb, we know where it is, and things are a hundred times better than they were in 2003. Can we do better? Yes, and we have a programme, which has just been explained, with the different systems to bring them in, but the key is bringing them in and linking them up. There is also a piece where we need to educate our people to use them properly, because you can put all the IT and all the systems in that you like, but if the chap does not push it through the gun, because he is tired or because he is on guard or what have you, mistakes will be made. We have a plan—we have a forward plan—but things are very, very good in terms of Afghanistan.

Q118 Mr Bacon: You mean if he receives a consignment but he is busy trying to defend himself from the enemy, he is not going to spend a lot of time pumping into a computer that he has received a consignment. That is what you are saying.

Air Vice Marshal Graham Howard: It might be second on his list of things to do, yes.

Q119 Mr Bacon: I have a lot of sympathy with Mr Gray’s point that, if you are going to design a system, it is better to do it at the right speed and get it right than rush it. We have plenty of evidence about rushed IT projects trying to meet artificial deadlines going horribly wrong, but surely the emphasis must be on a design system that makes it really easy to do it quickly, using barcodes and so on. That is, presumably, where you are heading, is it?

Bernard Gray: That is right, but it is a bit like patient compliance with taking drugs: you can have the best regimes in the world but people still have to do it. That is a training and timing and process challenge, which is always going to be a statistical game, because there are always some people—

Q120 Chair: Actually, on that particular issue, again, part of your cuts is reducing your personnel. As I understand it, you have a recruitment freeze on—am I right about that? There is a recruitment freeze.

Bernard Gray: Give or take, yes.

Q121 Chair: So, if you are losing people with the appropriate skills in this area—I do not know if you have lost any—are you replacing them?

Bernard Gray: What we are talking about here in this issue is relatively routine tasks. We are talking about people appropriately logging items into stores and logging items out of stores. Absolutely, we can use the technology with barcode readers and so forth to

make that job easier than it used to be, but you still have to actually get people to pick up the barcode reader and scan the item, rather than just handing it over the shelf.

Q122 Chair: That is good news. In answer to my question, if you are losing people, because they are moving on, for whatever reason, out of this particular function, given the importance of people as well as technology, are you replacing them to do what you say is a relatively easy task?

Chris Heaton-Harris: Surely, it should involve less people, shouldn’t it, this new technological stuff?

Chair: They are not there yet.

Bernard Gray: It is a standard task we will need to make sure we do, and the point we are making is that there is a people component as well as an IT component, and that we have to hook all of those things up and we recognise that.

Q123 Chair: That does not answer the question.

Bernard Gray: Yes, it does. We have to go through and appropriately provision all of the systems, and we have to appropriately make sure all of the people are appropriately trained and able to do the job in order to hook up to actually get data at the end of it.

Amyas Morse: Sorry for intervening, Mr Gray, but just to make sure I have this straight, I think the Chair is asking whether the savings you are trying to achieve have any significant factor in the efficiency of being able to operate these systems? I think the answer you were probably giving is “probably not”—is that right?

Bernard Gray: What we have to do is appropriately prioritise the tasks to make sure that we do the highest-priority tasks. This is clearly a high-priority task, because there is no point in investing in the systems if we do not put the people against it. Those people have to be trained and motivated and managed to do the task.

Ursula Brennan: In terms of targeting our manpower reductions, this is an operational activity, and the thing that we have been seeking to do throughout is to protect operational areas in our cost reduction.

Q124 Chair: So you are replacing people. I accept you are going to get more efficient and you may be able to do it with fewer people but, on the whole, this is an area where, if people move on or leave, you are replacing them.

Bernard Gray: Yes. There is a difference between a total headcount freeze and not having people in particular jobs.

Chair: I accept that.

Q125 Stephen Barclay: Could I just come back to the Air Vice Marshal? A moment ago—I think I heard you correctly—you said, “We now know where the equipment is.” That was your phrase. On page 27 of the Report, it highlights the fact that NATO Stock Numbers are not being used and it talks about the Mastiffs, “but none had information attached”. Are NATO Stock Numbers now being used in all instances?

Air Vice Marshal Graham Howard: Yes. It is not just Mastiff; it is the other Cougar protected mobility

13 June 2011 Ministry of Defence

vehicles. The new vehicles that we are deploying to Afghanistan, which are saving lives, are urgent operational requirements, so they will come from industry and there is an imperative to get them out to Afghanistan to protect lives.

Q126 Stephen Barclay: With respect, sir, that was not my question.

Air Vice Marshal Graham Howard: I am going to answer the question.

Q127 Stephen Barclay: If I go back to 2009, in reference to Bowman, which Mr Bacon was talking about, the Comptroller and Auditor General, in his Report of 15 July 2009, refers to: "The Department should ensure that no further equipment is issued without NATO Stock Numbers." This was in terms of the Bowman going missing, so it was applied there in Bowman and we find, two years later, it is still a problem in the March 2011 Report. Is it now addressed?

Air Vice Marshal Graham Howard: With the protected mobility vehicles, vehicles did go out to Afghanistan without having all the NATO Stock Numbers attached to them. That was happening last year, because it was saving lives, and there was an order that, as soon as practically possible, the NATO Stock Numbers were to be applied. There is now a three-star looking at that. He looks at that by vehicle fleet to make sure that that discipline is being adhered to.

Q128 Stephen Barclay: Can I rephrase it: by what date—is it now or is it a date in the future—will the Department be fully compliant with the Comptroller and Auditor General's statement in July 2009 that "the Department should ensure that no further equipment is issued without NATO Stock Numbers"?

Ursula Brennan: Could I just be clear that, in relation to UORs, we will probably continue to choose to supply equipment without those Stock Numbers where we believe that that is the right thing to do. We have very consciously decided that there was a choice with that UOR equipment to say, "Shall we wait until we have the vehicles and the manufacturers, having tooled up to produce the spares packs, and then we will put the whole lot out into theatre, or shall we get the vehicles out there and then the manufacturers will generate the supplies in arrears?" We have consciously decided to get the vehicles out first, so I do not think I can give you that guarantee because, in relation to those things, I am sure that there will be many occasions when we will choose to say, "We want to get that equipment out there to save lives rather than wait until we have the NATO Stock Numbers?"

Q129 Stephen Barclay: Perhaps you could give us a note that sets out which equipment you will comply with the C&AG's Recommendation 4 and which equipment you will not, and the reason why. I appreciate there may be very good reasons for which, as a department, you have taken that view, but, from an accountability point of view, if a recommendation has been put there and it is not going to be followed

by the Department, it is useful to understand that. Linking into that, given that the Department's accounts have not been fully approved for the last three years, when the annual accounts come out in September, can we take comfort that, this year, the accounts will be fully approved by the C&AG?

Ursula Brennan: I cannot give a guarantee what the C&AG will do. I know that there is a whole raft of areas on which we have been working since those C&AG reports, but I am afraid I cannot tell you what he will—

Q130 Chair: Actually, what you can say is that one of the reasons your accounts were qualified was the lack of visibility of assets, according to the Report. Have you dealt with that?

Bernard Gray: That is the £75 million investment programme, so no—

Chair: So, you will not have dealt with it until 2014?

Q131 Stephen Barclay: In contrast to what the Permanent Secretary is saying—sorry, Mr Gray—if I am understanding you, you are saying they will be qualified until 2014.

Bernard Gray: No. There are two very different statements here. The accounts have previously been qualified in relation to stock. We are telling you and have told you already that the stock issue is being resolved over the next three years. The point the Permanent Secretary made is that it is for the C&AG to decide whether or not to qualify the accounts, not us.

Stephen Barclay: Of course.

Ursula Brennan: In other words, we are taking action to address the problem identified by the C&AG. When he concludes whether or not to qualify our accounts, he looks at the progress that we have made and the size of the problem that remains.

Q132 Mr Bacon: Mr Barclay's point was that you understand the size of the hurdle you have to cross. There are financial managers—at least there are one or two inside your organisation—

Ursula Brennan: Indeed.

Mr Bacon:—who talk to the NAO regularly. Of course, as a technical matter, it is the C&AG's independent decision whether to qualify them or not, but you are or ought to be capable—and I think this was Mr Barclay's point—of identifying the things you would need to do that would be likely to satisfy him, aren't you?

Ursula Brennan: Yes, and we are taking action on those.

Mr Bacon: Good.

Ursula Brennan: All I am saying is I do not know whether the action we have taken will be regarded by the C&AG as satisfactory.

Q133 Chair: Actually, you do know, because, between you you have given us the information that probably it will not be, on this particular issue, until 2014.

Ursula Brennan: Not necessarily.

13 June 2011 Ministry of Defence

Q134 Mr Bacon: Can I just ask about MMIT, which I referred to earlier—the Management of Materiel in Transit? Is that now fully developed and extant?

Major General Ian Copeland: It is fully deployed. I cannot comment on whether it is fully developed, but it is certainly deployed.

Q135 Mr Bacon: Seven years ago, in September 2004, the note from the MOD said it was “developing an end-to-end control process for consignment management”. What has happened to it?

Bernard Gray: It is in operation.

Q136 Mr Bacon: It is in operation?

Bernard Gray: Yes.

Q137 Mr Bacon: And it is working?

Bernard Gray: That is the asset-tracking, container-tracking system that we described earlier on. It tells you when it is going through various gate points with RF tags. It is in use between here and Afghanistan today.

Q138 Mr Bacon: But it is not linked to the stuff on the front line—or is it?

Bernard Gray: Part of the problem that we have is the integration of various different systems, but, in relation to the materiel-tracking system, that is implemented. What we do not have is end-to-end data integration between all of the various systems, including between the materiel-tracking system and the in-theatre storage system.

Q139 Mr Bacon: It might have been deliberately misleading—I do not know—but when it said it was “developing an end-to-end control process for consignment management”, I rather naively assumed that that is what it meant.

Bernard Gray: I have no idea what they meant.

Chair: That is one of our problems: the accounting officer changes every time you look at an issue.

Q140 Mr Bacon: Ms Brennan, can you help us? Here we have a note, seven years old, saying an end-to-end control process for consignment management is being developed. Now, seven years later, we find that the “data systems used on the front line are not linked to the Department’s consignment tracking systems”.

Ursula Brennan: I cannot tell you the answer to that. One thing I do know is that we have a large number of systems, and technically, within the private sector and within commercial systems, these inventory systems are improving all of the time. It may be that what was described as end-to-end then is not as sophisticated as what you would describe as end-to-end now, but I am afraid I do not know the answer to that.

Q141 Mr Bacon: Do you talk to the private sector? There are obvious differences between what they do and what you do, whether it is getting the green jumper—

Ursula Brennan: Absolutely.

Q142 Mr Bacon:—on the M6 and the pink trousers on the M3 on the right lorry, and they are not being bombed at the time that they are doing it. I understand that there are significant differences, but there are huge similarities with what is done in the private sector. Somebody mentioned UPS or DHL earlier, and we are not just talking about retail; we are talking about all kinds of consignments being sent all around the world. In the private sector, the only acceptable level is pretty much 100% and, if customers found that their consignments were lost, they would rapidly start losing faith in those carriers and would not use them any more. What do you do to talk to and copy the best practice of those providers, while taking account of the extra robustness that you need?

Ursula Brennan: I would make two points in response to that. One is that the chart on page 20 shows, for supply chain within the UK, with have a wider range than there is for the private sector, but, our median performance is up there with the private sector. The second thing is that we do, indeed, seek to benchmark ourselves. We are an active member of the Cranfield University Agile Supply Chain Research Club. One of the things we seek to do is to benchmark our systems against the private sector, and I think my colleagues have mentioned that one of the things that we are also doing is partnering with the private sector to improve our systems. So, we absolutely do not say, “Afghanistan is different; therefore, we have nothing to learn.” What we seek to do is to learn from the private sector but to recognise that sometimes there are choices available to them that simply are not available to us.

Q143 Chair: But actually, the interesting thing on this is you might learn something—or you might not—from the Americans and the French. When I asked the NAO, they said there is absolutely no comparative data available or costings information available between our way of doing this and the Americans and the French—just to take two countries. That, to me, is the much more relevant comparator, and I do not know why you cannot get it, or why we cannot get it.

Major General Ian Copeland: I think that would be a very fair comparator—I do agree—and I think, certainly, it would be proportional, of course. The American operation is significantly greater. I cannot comment on how easy or difficult it would be to put together.

Q144 Chair: Have you tried?

Major General Ian Copeland: I have not tried personally, but I can see how it might be useful to benchmark ourselves against the Americans.

Q145 Chair: Will you try?

Bernard Gray: I am happy to do so. I will take a reasonable bet with you that they are more expensive than us.

Q146 Chair: And the French? If you are going to try to look at efficiency, look at people who are doing the same thing.

Bernard Gray: We will look, and it is interesting. I suspect that the military supply in both countries will be materially more expensive than civilian, for a variety of good and bad reasons, but one of the things I can tell you about in support and logistics arrangements, from a recent visit to the United States, is that they are looking at us as a benchmark of how to do it more efficiently, because they, fundamentally, having not been financially challenged in this area, are not terribly efficient in that, and they want to come and learn from us. So, we will take that benchmarking data into account, and I suspect that we have more to teach than to learn about this, and that is not necessarily out of great virtue, but needs must when the devil has driven us, I suspect. Nevertheless, I think the more fruitful route is the partnering that we are doing in data development, the use of civilian logistics transportation wherever possible—and we do use significant amounts up to the edge of theatre, and certainly for all of our training activity—and we are seeking to maximise the amount of our activity that does not need to be in the military domain being done inside a civilian domain. So, on a variety of fronts, we are pushing to make this more effective than it has been in the past.

Q147 Chair: Can I just ask, going back to what I said on the suppliers: if a supplier does not deliver on time, is there a penalty? Does your contract include penalties?

Ursula Brennan: Bernard Gray may want to comment on contract penalties and so on, but it is just worth trying to get a bit of context around some of these things. If you take an example of the Mastiff vehicle, the Mastiff is a new vehicle for us, using it in Afghanistan. It has proved more survivable than we thought it would. We thought that what would happen is a proportion of them would simply be written off when they hit IEDs. In practice, what is happening is it is surviving, but its axle goes. We did not expect that; the manufacturer did not expect that. As a result, the number of axles to be manufactured has to be whizzed up faster than we expected. Sometimes when we say there is a problem with a supplier, it is those kinds of issues, and the volume of new equipment that we have in theatre means that, until you have been using it for a while, it really is difficult to know, when it goes wrong, which bit of it is going to go wrong, and the manufacturer will not necessarily be ready with the supplies until we have had some experience of how these things are used.

Q148 Chair: I accept that. I would only observe that that is true of some instances, but the other side of the coin is that we have been in theatre in Afghanistan for 10 years.

Bernard Gray: Yes, but many of the vehicles we are deploying have only been there for one or two years.

Ursula Brennan: 1,400 new vehicles since October 2008.

Q149 Chair: Can you answer the question about penalties? I accept there may be cases where you did not know you wanted axles and they have to gear up

to providing axles, but are there generally penalty clauses in your contracts?

Bernard Gray: It depends on what type of contract, for what.

Chair: Of course.

Bernard Gray: So, it is a very general question. In relation to new equipment, for non-performance there generally will be penalty clauses, which is a whole separate subject we could debate on a different day, I suspect. In relation to this, we have a very wide variety of contracts, some of which we will go out and buy some things because we do not have a contract for regular supply of some, for argument's sake, small arms or component parts. In relation to a lot of the equipment that we are using, it would not make sense for us or for industry to be in a fixed relationship about this, because it has not been possible to tie down the consumption rates or the repair rates. It is not just IEDs, but these are new vehicles and we do not yet know what the performance of them in ordinary usage is, and the turnover of spares. The price that industry would charge us for a fixed supply of those things would make it uneconomic.

Q150 Chair: I am not suggesting fixed supply.

Bernard Gray: Therefore, we order from them when we think we need things, so they are not in a situation of being non-compliant. We are going out to them in a dynamic situation and asking them to supply us with a wide variety of things, because it is not possible to nail that down in advance, so it is not as though we have this advance contract that they are then failing to perform on. What we have is quite a moving situation, which they are then supplying against and, therefore, in such circumstances, penalties are not relevant.

Q151 Chair: I accept maybe we are talking in too great generalities. There will be circumstances in which you know you will regularly require repair items, where you could have a fixed contract with, I would suggest, possibly a just-in-time clause and a penalty clause.

Bernard Gray: We do. If you take, for example, the Tornado jet, we do have a fixed repair schedule with the manufacturers that says, "Here is a set of support arrangements around that." If you go into an operational theatre—so, when we started using the Tornado, for example, in Libya—what that requires is people to go above and beyond a fairly static, standard training and non-theatre support package to be able to turn out, in this case, over a weekend in order to armour the aircraft for immediate use. So, there are quite different patterns between the peacetime training environment, when we absolutely do what you suggest to the maximum extent possible—and that is one of the areas where other countries are trying to learn from us in contracting for availability and where there are penalty charges—and a dynamic situation like operations, where it is much more difficult for either side to predict and, therefore, one, in a sense, cannot insure against that by taking some kind of fixed structured contract.

13 June 2011 Ministry of Defence

Q152 Austin Mitchell: The Report says you tend to overstock supplies at the front to avoid late deliveries. Have you any idea of the extra costs of doing that?

Bernard Gray: I do not know that I would describe it as being overstocked.

Ursula Brennan: I do not think that we would agree that you can argue that we overstock in theatre. We actually take a judgment, and the logistics team in the UK and the logistics team in theatre are perpetually in touch with each other about what is the sensible balance of stocks to have at any time. I think Major General Copeland said that there are some things where we probably have too many and some where we have too few, and we are perpetually working on that, but when your choice is—I am sorry to be a cracked record—you have either five days or something like 120 days, you are going to err on the side of having things in theatre. However good your information is, that is always going to be the case.

Q153 Austin Mitchell: In some areas, you might, from that balancing role, be overstocked. What happens to those kinds of supplies when there is a pullout? What happened in Iraq? Is it all left behind, as the Americans tend to do? Does it go to the Iraqi army? Do we take it all home with us?

Bernard Gray: We will have to work up plans to withdraw that to the UK.

Major General Ian Copeland: Yes. As with Iraq, we are already developing plans to withdraw kit from Afghanistan, so we will limit exactly what we need to bring back at the moment when we come out, at whatever time that is. So, the reverse supply chain is critical to us. This is quite an important point because, as we move aircraft in and we offload those aircraft, we also fill them up on the way back. That is our reverse supply chain. From a value-for-money perspective, that is a very important point.

Q154 Austin Mitchell: Coming back to figure 14 on page 30, which is about the proportion going by surface, which has been steadily shrinking, the target is 80% should go by surface, yet in July 2010 it goes as low as 10%, and in October 2010 it is about 25%. The Report estimates that you could save £15 million a year by sending more by surface than by air. All you need to do is send 10% of the supplies by surface rather than by air and that would save you £15 million. Why can't you do that?

Bernard Gray: It does not say that that could be done; it says, "If you did that, it would save £15 million."

Q155 Austin Mitchell: Can it be done?

Bernard Gray: We do not know that. The simple answer is that we pay people on the ground—quartermasters—to make professional judgments about what stocks they need when. They are under the command all the way up through into theatre logistics commanders, so that, if you had some people who, for argument's sake, were overstocking because they never wanted to run out of anything, you would have data comparisons made between one quartermaster and another about their performance, which would be locally managed. What we are fundamentally managing from is a demand-led system from the front,

where people are making professional judgments about what they need when, against a situation where they have a bifurcated route, which is, broadly speaking, five days or 120 days. The package here, which is, by weight, 70% by surface and 30% by air, which has remained remarkably stable over the whole period—

Austin Mitchell: I will put it another way: why is it so much below the target going by surface?

Chair: Because they are reviewing their target.

Stephen Barclay: Can I just ask a basic question: what percent—I am sorry. I thought you had finished, Austin.

Q156 Austin Mitchell: If the target is 80%, why are you not anywhere near that?

Major General Ian Copeland: By tonnage, our view is that we are not far off that. Our view is that, in tonnage, 31% of what we are moving is by air, and 69% is going by surface. So, in terms of the target, our view is, by tonnage, we are not far off our target.

Q157 Chair: It depends on the use and abuse of statistics. It depends which way you choose to measure it.

Bernard Gray: What drives cost in airfreight is weight.

Amyas Morse: Can I just test something? I listened admiringly to the argument about bifurcation and, because of the bifurcation it is almost one or the other, and therefore having both; unless better information would cause you to make a decision between one and the other, it almost does not matter. I just want to test that with you a little bit more, because you have different options for air-routing now: you have sail/fly, you have direct flight, so actually you have a lot of options—

Bernard Gray: Not a lot of options.

Amyas Morse: You have options—let's live with that—just now and you may develop more. If you find the land option gets more and more difficult, you will no doubt develop more. Now, if I go back to the question of the assumptions that the experts on the ground are making about the buffer stocks that they require and so forth, aren't all those assumptions they are making driven by what they know about the supply chain, what they know about how long it will take for them to get things, and the quality of information they are furnished with? In other words, is it true that the whole regime for how much stock you need to carry at the front line reflects a confidence in the efficiency and the timeliness of the supply chain behind and the information that supports that?

Major General Ian Copeland: I think that is fair, but it is a judgment call based on historical usage, good military judgment, military expertise, the nature of the theatre—the nature of the Afghanistan theatre will be subtly different to the nature of the Iraq theatre and, therefore, the two sustainability statements will be subtly different.

Amyas Morse: I accept that, and all I was trying to get to—and this is not some dramatically difficult point—I am only just trying to say: however, it is true that, if you had very good information end-to-end, connected up, it might be that, within margins of

13 June 2011 Ministry of Defence

safety, your buffer stocks could be carried at a lower level than they are now, if you had very good information. It might be that you could refine the model over time and develop a model that was safe but closer to margins.

Bernard Gray: It might be, but another way of looking at this is we are going to spend £400 million improving our IT systems, and you think that the potential margin on the basis of a semi-arbitrary 10 percentage point might be £15 million a year.

Amyas Morse: I am not trying to say that.

Bernard Gray: You could equally well make the argument that it was not worth investing in the IT systems and that you might as well carry the excess stock.

Amyas Morse: I am not trying to make an argument at all. I am just trying to explore what you think about it.

Bernard Gray: I think it is worth investing in the system. I do not know that it would lead to a materially different result.

Ursula Brennan: I think it is the unpredictability. Even if we knew how rapidly we consumed stocks on a much, much more detailed basis, if you were the operational commander faced with the unpredictability of how swiftly you would get the stuff, you will still be asking yourself, even if you have a reasonable confidence about how rapidly you consume it, whether it is safe to wait for the land route.

Amyas Morse: I absolutely take that. The more unpredictable you think it is, the larger the stock you want.

Q158 Mr Bacon: Mr Gray, you mentioned £400 million then. The Boeing contract over 10 years for FLIS is—

Bernard Gray: £341 million or whatever. The point is it is 20 times the size of the apparent annual saving that is being postulated².

Q159 Mr Bacon: What does the £340 million cover and what does it not cover?

Bernard Gray: That covers the four information systems that we have. Let me just look up the details. It is £75 million on the stock control system for the basing and stock; the JAMES system is £83 million; the MJDI system is £183 million³.

Q160 Mr Bacon: Just for the sake of my ignorance, what, of that, is comprised within the £800 million—all of it?

Bernard Gray: They are over different periods.

Major General Ian Copeland: The Future Logistics Information System is based over 11 years. It is an 11-year contract.

Q161 Mr Bacon: 11 years—I read 10 years.

Q162 Chair: Are they writing the system or running the system there?

Major General Ian Copeland: The Future Logistics—

Q163 Chair: The Boeing thing—the Boeing contract. What is that?

Major General Ian Copeland: The Boeing contract is a partnered arrangement with the logistic—

Q164 Chair: They are running it.

Major General Ian Copeland: In a partnered sense, yes, they are running it.

Q165 Chair: Yes, but they are not creating a new system—they are not writing a new system for you.

Major General Ian Copeland: No. As far as possible, we will take—

Chair: They are different contracts.

Q166 Mr Bacon: Can I just be clear: the £803 million over 11 years contract, is that a separate sum of money from the £340 million that Mr Gray was just talking about?

Major General Ian Copeland: It incorporates all of that. CDM has been talking about the money that has been expended over a three-year period, for example, for MJDI. It incorporates the whole-life cost of JAMES, which is £83 million, and it incorporates the whole-life cost of MJDI, which is £183 million⁴.

Q167 Mr Bacon: This £803 million, in total, which incorporates all of those other things you were just talking about, is that all contractually committed?

Major General Ian Copeland: Yes, it is. We are on contract—

Q168 Mr Bacon: You are obliged to pay those amounts.

Major General Ian Copeland: It is contractually committed, yes. Also, what I have not listed there, it also includes the base inventory management system for the RAF, which is in the £803 million but is not part of the £75 million. The £75 million was an additional amount to address the base inventory system problems that we had in the Army and the Navy systems.

Q169 Chair: Are the Efficiency and Reform Group overseeing any of these new IT projects, or are you doing it all yourselves? What is their role?

Ursula Brennan: The Efficiency and Reform Group is engaged with us on our efficiency programme generically—

Q170 Chair: But not on the IT. They came to see us. They talked specifically about overseeing—much closer—

Q171 Stephen Barclay: They suggested 50 projects, none of which were—

Ursula Brennan: I suspect these are below their horizon.

Q172 Mr Bacon: Are these projects subject to gateway reviews?

Ursula Brennan: They will be subject to the review and appraisal regime that is appropriate for projects of

² See Supplementary memorandum for further detail

³ See Supplementary memorandum for further detail

⁴ See Supplementary memorandum for further detail

13 June 2011 Ministry of Defence

these particular sizes. Gateway sometimes has a rather specific terminology. We have our own gated regime to which these will be subject, yes.

Q173 Mr Bacon: It has worked so well, hasn't it, over the years?

Ursula Brennan: In MOD terms, these are smaller compared with some of our very big projects.

Q174 Mr Bacon: Very quickly, Major General Copeland, could you send us a neat chart with all the various projects and the numbers attached to them, and where you currently expect those monies to be spent going forward for the whole of that £803 million contract, as well as any of the other amounts that are outside, for inventory, for consignment, for asset-tracking—the whole lot?

Major General Ian Copeland: Yes. I cannot do that off the top of my head—

Mr Bacon: No, but if you could send us a chart explaining it all in Noddy-simple terms, that would be very helpful.

Chair: Two very quick final questions.

Q175 Stephen Barclay: A much more basic question, but could you just confirm what percentage of pallets and accessories are currently lost each year?

Air Vice Marshal Graham Howard: Are you talking aircraft pallets and NATO pallets?

Stephen Barclay: Yes.

Air Vice Marshal Graham Howard: Again, not off the top of my head. We do not lose aircraft pallets.

They are recycled through the system because they are of finite use.

Mr Bacon: You meant pallets with things on them, didn't you?

Q176 Stephen Barclay: Yes. I am referring to tracking. Again, it is a previous Report. The RAF undertook to use a commercially used pallet and accessories tracking system, but there is no evidence that has been introduced. During Operation Granby, 228 aircraft pallets went missing, worth some considerable value. The Department gave a commitment to have a loss of between 1% and 4% annually. I was just wondering where we had got to on it.

Air Vice Marshal Graham Howard: CDM did say that we use the RFID tagging to tag the loads that are on the pallets, so the load on the pallet will be tagged.

Q177 Stephen Barclay: So, the answer is zero now.

Air Vice Marshal Graham Howard: I would not say it is zero. Again, off the top of my head, I am not going to guess—

Q178 Stephen Barclay: Perhaps you could just clarify in a note.

Air Vice Marshal Graham Howard: But that discipline is in place.

Chair: Thank you very much indeed. I thought that was a much better session, so thank you very much indeed.

Written evidence from the Ministry of Defence

Logistics Information Hearing—Supplementary Notes

Q9. Stock Deterioration in Op HERRICK

There are multiple causal factors for the degradation of stock on Op HERRICK, either by 'life expiry' or by environmentally induced physical degradation. High ambient temperatures and harsh operating conditions, particularly in forward locations, has resulted in some degradation of stock in the past. Until late 2010, some Theatre Force level stocks held in Camp Bastion were kept in sub-optimal storage facilities. Storage of supplies in Theatre has been addressed as part of the HERRICK Campaign Support Plan (HCSP), established as a recommendation of the HERRICK Campaign Support Review in June 2009 initiated by the Defence Logistic Board in January 2009.

Since 2010, the Bastion Supply Solution has improved the storage of General Stores, Equipment Support materiel and aviation stores with the provision of purpose built storage facilities in Camp Bastion. These facilities have enabled the move of stock that was previously stored in ~1,000 ISO containers. The Force Primary Depot build commenced in October 2010 and this will eventually hold all Theatre Force General Service stocks, less some commercial stocks such as bottled water and rations (held under commercial arrangements in Afghanistan). Further improvements in temperature controlled storage within the Force Primary Depot are planned in 2011 which will further improve the lifespan of specified stocks. Additionally, the establishment of Logistic Support Teams with each Theatre Force battle-group in 2010 has enabled logistic specialists to deploy forward to improve logistic arrangements in forward locations. Management of stock has improved, enabling the backload of surplus stock to Camp Bastion and better rotation of stock subject to degradation including ammunition and rations.

The level of deterioration of stock in theatre has improved by these measures. Within the next 12 months the Department will take further action to establish a system to derive reliable cost data across all the materiel accounts to enable more accurate tracking of materiel written off.

Q32. *What is the cost of the Supply Chain for UK operations over Libya, Op ELLAMY, and the overall cost of Op ELLAMY?*

Op ELLAMY Supply Chain Costs.¹

Total (to date 13 Mar—13 Jun): £3.3M.

The current estimate of the total net additional costs of military operations for six months in support of Operation ELLAMY—the United Kingdom's contribution to coalition operations in support of United Nations Security Council Resolution 1973—is in the region of £120 million. This excludes costs associated with capital munitions expended.

Based upon current consumption rates we estimate the cost of replenishing munitions may be up to £140million.

The Treasury has agreed to meet these costs from the Reserve.

Q's 104, 111, 174. *Which IT systems are currently at Critical and what actions are the department taking to reduce the severity. How much money we are investing in these systems, who are the SRO's accountable for the projects by individual name and project, and what is going to be delivered by what date (key milestone points)?*

The major Logistics Information Systems projects to replace key systems are all being delivered within the Joint Support Chain, with Major General Ian Copeland, Director Joint Support Chain, as the senior officer responsible.

The key systems to be replaced are the base inventory and warehousing systems, which are at risk of catastrophic failure due to the age and obsolescence of these systems and the associated infrastructure on which they are hosted. These systems are:

- SCCS, WTMS (Air)
- CRISP, WITS (Maritime).
- Stores System 3, BODMS, AMANDA (Land).

The projects to introduce new Logistics Information capabilities are:

- Management of the Joint Defence Inventory (MJDI)—£183 million investment (2008–18).
- Joint Asset Management and Engineering Solution (JAMES)—£83 million investment (2008–15).
- Air Movements Operations (AMO)—£65 million investment (2008–18).²
- Base Inventory and Warehouse Management Service (BIMS), to replace the key systems listed above:
 - BIMS A. Costs for BIMS-A are embedded within the Delivery Partnership contract with Boeing Defence UK. This £803 million Delivery Partner contract has been funded through the brigading of existing funding, with the efficiencies achieved from this exercise funding the new BIMS-A capability.
 - BIMS-B. Additional funding of £75 million has been agreed in the 2011 department budget for the remaining critical systems to be replaced via the Delivery Partnership arrangements.

The major milestones of these projects and further details are summarised at the Annex.

Q128. *The committee requested to know when will we be in a position not to release stock without a Nato stock number. PUS's statement was that operational requirements would mean that the possibility of un-numbered equipment being sent to operations would always remain. Therefore what criteria determined when stock/assets were issued without Nato stock numbers.*

Current policy is that all items entering the Supply Chain must be codified when an item is contracted, or the first time an item is demanded, prior to deployment. In agreement with Chief Joint Operations, no new item is to deploy to theatre un-codified without express authority. The codification of existing equipment already in theatre which had not been previously codified is currently being addressed. However, it is acknowledged that not all equipment components will be codified when fielded in theatre due to two main factors:

- The urgency to field new battle-winning capability into theatre quickly, within budget, will limit the level of support solution and reduce the level of codification possible on that equipment.

¹ These costs are the cost of military air transport, civilian air charter and surface freight costs.

² MJDI, JAMES and AMO were initiated prior to the Boeing Defence UK Delivery Partnership and are currently funded and separately contracted with Lockheed-Martin, HP(ES) and THALES.

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- The level of parts to be codified will be based upon the anticipated repair and support arrangements for that equipment. The failure of some individual components will not have been predicted, especially for new UOR vehicles, which will necessitate new spares to be subsequently codified.

In addition, the Theatre Temporary NATO Stock Number process enables previously un-codified materiel to be managed once in Theatre. Recent DE&S activities have focussed on reducing the number of un-codified equipments being deployed. These improvements have seen increasing numbers of UOR equipment items (such as Protected Mobility Vehicles) being suitably codified prior to deployment. In the past 12 months over 18,000 UOR equipment items have been codified.

Q178. *How many consignments³ went missing on operations in FY 2010–11?*

The question related to the amount and cost of materiel lost in transit, referring to the number of pallets lost during Operation Granby in 1991. The relevant metric used for current operations is the number of consignments, measured by the number of ISO containers transported and held in theatre, which indicate the amount and cost of materiel that has gone missing in the period quoted. In FY 2010–11, for Op HERRICK, the number of containers in the supply chain that were lost was 41, with a total value of materiel lost of £358k. The total value of these losses is therefore 0.7% of the total amount of materiel transported, and 1.4% of containers transported. These were due to a combination of theft, enemy action and damage in transit.

Q145. *A comparison is to be made of the department's logistics arrangements with international partners.*

This work has been initiated by ACDS Log Ops, Air Vice-Marshal Graham Howard, and an update to this action will be reported in two months' time.

³ The question related to the amount of materiel lost in transit. It is considered that the number of consignments, measured by the number of ISO containers transported and held in theatre, provide the more relevant and significant measure to indicate the amount of materiel that has gone missing in the period quoted.

LOGISTICS INFORMATION SYSTEMS—MAJOR CHANGE PROJECTS

Serial (a)	Project (b)	Description (c)	Project Milestones (d)	Costs (e)
1	Management of the Joint Deployed Inventory (MJDI).	<p>MJDI is the new system is being implemented in light of the operational shortcomings in the management of deployed assets and will contribute to improved material accounting in the deployed area across the three Services. MJDI is currently being rolled out incrementally, with the first variants already in service and delivering operational benefit, and will be fully rolled across Defence by March 2014.</p> <p>MJDI is already in use on Op ELLAMY and is currently being rolled out to Op HERRICK. MJDI remains on track to deliver Initial Operating Capability in Oct 11.</p>	<p>— Jul 11—Increment 1. — Oct 11—Initial Operating Capability. — Feb 12—Increment 3. — Mar 12—Full Operating Capability. — Apr 12—Increment 4. — Mar 14—Increment 5.</p>	<p>— £183 M total through life. (FY 08–09 to 17–18). — £101M invested between FY 08–09 to 10–11 to develop new capability.</p>
2	Joint Asset Management Engineering Solution (JAMES).	<p>JAMES is the Engineering and Asset Management application designed to provide equipment asset managers, engineers and commanders with the information needed to increase equipment availability and optimise asset usage and maintenance.</p> <p>It is a tool for the three front line services, DE&S and Defence contractors involved in the through life engineering and support of land-based equipment. The first increment of JAMES is already in service. The second and final major increment of JAMES was introduced into service in Dec 10 and is being rolled out over the next two years. JAMES is on target to achieve its Full Operating Capability on 31 Mar 14.</p>	<p>— Mar 10—JAMES(1) Full Operating Capability (achieved). — Dec 10—JAMES(2) Service Commencement Date (achieved). — Mar 14—JAMES(2) Full Operating Capability.</p>	<p>— £83M total through life (FY 07–08 to 14–15). — £65M invested between FY 08–09 to 10–11 to develop new capability.</p>
3	Air Movements Operations (AMO).	<p>AMO will provide a passenger and freight management, capability to ensure the sustainable, safe and efficient operation of the Air Transport Fleet and MoD full air charter aircraft. It will deliver comprehensive air movements information enabling Commanders to make better informed and timely decisions based on an enhanced shared view of the logistic situation.</p>	<p>— Jul 13—AMO Initial Operating Capability. — Dec 13—Full Operating Capability.</p>	<p>— £65M total through life (FY 07–08 to 17–18) — £33M invested between FY 07–08 to 10–11.</p>

Serial (a)	Project (b)	Description (c)	Project Milestones (d)	Costs (e)
4	Base Inventory and Warehouse Information Management Service (BIMS).	<p>The Base Inventory & Warehouse Management Service (BIMS) is the major IS-enabled transformation programme to produce a single modern inventory management & warehouse information service for the base areas. It addresses the catastrophic risk, identified by the NAO, and will also be a significant contribution to achieving coherent materiel accounts. This project will be delivered incrementally:</p> <ul style="list-style-type: none"> — SCCS, WTMS (Air)—BIMS-A systems and will de-risk the subsequent phases of the BIMS project — CRISP, WITS (Maritime)—BIMS-B. — Stores System 3, BODMS, AMANDA (Land)—BIMS-B. 	<ul style="list-style-type: none"> — Mar 13—BIMS-A—first increment of the BIMS project replacing the Air base inventory systems at Full Operating Capability. — 2014 tbc—BIMS-B. (Detail for BIMS-B milestones are subject to more detailed planning and formal project approval in autumn 2011). 	<ul style="list-style-type: none"> — BIMS-A Costs £43M (FY 11–12 to 12–13).¹ — BIMS-B—(up to £75M) (FY 11–15).
5	Logistic Network Enabled Capability (Log NEC) Delivery Partner: Boeing Defence UK (BDUK).	<p>The Log NEC Delivery Partnership with BDUK is the major business change programme involving the rationalisation of the previously complex, cumbersome and inefficient information service provision arrangements into one which provides a continuity of service and can deliver the necessary transformation to support the increasing pace of wider Defence Logistics Transformation.</p> <p>BDUK's two new purpose-built data centres will provide a robust Business Continuity capability that mitigates the risk associated with the ageing data centres where the critical systems listed above (serial 4(b)) are currently located.</p> <p>BDUK is already contracted to deliver the first increment of the BIMS project (BIMS-A) which will see the replacement of the Air domain base inventory systems.</p>	<ul style="list-style-type: none"> — Nov 10—Contract Award (achieved). — Mar 11—Initial take-on of legacy service provision arrangements (achieved). — Apr 11 Establishment of first new Data Centre (achieved). — Mar 13—Full Operating Capability—BIMS-A—first increment of the BIMS project replacing the Air base inventory systems. 	<ul style="list-style-type: none"> — Total: £803M.² — £43M³—new capability costs (BIMS-A). — £760M through life (FY10–11–21–22) sustainment funding for delivery of logistics information.

¹ BIMS-A is funded within the £803 million BDUK Delivery Partnership arrangements.

² The new capabilities delivered by MJDI, JAMES and AMO were established prior to the BDUK Delivery Partnership arrangements and are therefore currently funded and contracted separately with separate suppliers (Lockheed-Martin, HP(ES) and THALES UK respectively).

³ An indicative figure—the £803 million Delivery Partner contract has been funded through the brigading of existing funding, with the efficiencies achieved from this exercise funding the new BIMS-A capability.