National Audit Office

Report
by the Comptroller
and Auditor General

Ministry of Defence

The Equipment Plan 2016 to 2026

HC 914 SESSION 2016-17 27 JANUARY 2017

Key facts

£82bn	£91bn	£178bn
cost of the Ministry of Defence's (the Department's) 10-year Equipment Procurement Plan	cost of the Department's 10-year Equipment Support Plan	total size of the Department's 10-year Equipment Plan, including the contingency budget

£24.4 billion	value of new commitments to the Equipment Plan following the 2015 Strategic Defence and Security Review
£10.7 billion	amount of the headroom budget re-allocated to fund the increases in the core programme: £9.5 billion carried forward from 2015 and £1.2 billion that the Department originally intended to include as headroom in 2016
£7.3 billion	level of new efficiency savings the Department must identify to ensure the Plan remains affordable: £5.8 billion from within the Equipment Plan and £1.5 billion from the wider Defence budget
£2.5 billion	amount of required efficiency savings carried forward from previous Equipment Plans that has still not been generated
£6.4 billion	amount of new funding committed to the Equipment Plan from the Joint Security Fund
£4.8 billion	amount which project teams may be underestimating the financial risks within project budgets, according to the Department's independent Cost Assurance and Analysis Service
£5.3 billion	Department's contingency budget to mitigate potential increases in the cost of the 10-year Equipment Plan
$28.8 billion	amount of dollar spend within the Equipment Plan (based upon current planning assumptions) that is exposed to foreign currency fluctuation

Summary

Scope of the report

1 In 2012, the Ministry of Defence (the Department) adopted a new approach to generate greater stability in its procurement activity. They called this the Equipment Plan (the Plan). The Plan involves developing a budget for a 'core programme' of key equipment projects and an additional sum set aside for contingency. The Plan covers forecast spend for 10 years and is updated annually. For the period 2016 to 2026, the equipment budget is £178 billion, made up of procurement (£82 billion) and support (£91 billion) budgets, and a central contingency reserve (£5 billion). The Plan is funded from the Department's overall budget, and makes up more than 40% of its planned spend.

2 The Department publishes an annual Statement on the affordability of this 10-year plan to deliver and support the equipment that the Armed Forces require to meet their objectives.[1] At the request of the Secretary of State, we report on the robustness of the assumptions underlying the Statement. We examine the bottom-up costings of a sample of the largest projects in the Plan (nine procurement projects and seven support projects), and a top-down review of assumptions about expenditure and funding at Departmental level.

3 We have not set out to offer a definitive view on the affordability of the Plan, as it is, by its nature, based on assumptions about the future that will inevitably change. Rather, we review the assumptions that underpin the forecast costs and funding to assess whether they were reasonable and consistently applied when they were made. Neither do we evaluate the value for money of the various projects mentioned in this report.

4 We explain the background to our work in Part One. We look at changes to this year's Plan and the assumptions underpinning future funding (Part Two); and the Department's assumptions underpinning the forecast costs of the Plan (Part Three). Parts Two and Three set out the challenges to the affordability of the Plan. In Part Four we review whether the disclosures in the Department's Statement are sufficient for the reader to understand fully the sensitivities of the affordability position. Appendices One and Two contain full details of our audit procedures. Summaries of the projects in our sample are included at Appendix Three.

1 These objectives are set out in HM Government, *National Security Strategy and Strategic Defence and Security Review 2015*, Cm 9161, November 2015.

Key findings

Increased size of the Plan in 2016

5 **The cost of the 2016 to 2026 Plan has risen by 7% since the previous year to £178 billion.** This rate of increase over last year's Plan compares to an increase of only 1.2% between the 2013 to 2015 Plans. The Plan is made up of £82 billion for equipment procurement, £91 billion of support costs and a contingency of £5 billion (**Figure 1** and paragraph 2.2).

6 **The Strategic Defence and Security Review (the Review) added £24.4 billion of new commitments, the majority of which are to be funded within the existing Plan.** Significant new procurements include the Mechanised Infantry Vehicle and Poseidon Maritime Patrol Aircraft, which alone add £5.5 billion of additional spend over 10 years. The Review also announced additions to current and future capabilities, including life extension of the first production tranche of Typhoon fast jets and the acceleration of purchases of the F-35 Joint Strike Fighter aircraft (paragraphs 2.3, 2.4 and 3.4).

7 **The requirement to support new equipment entering service puts increasing pressure on the £91 billion support budget.** The Department will face an increased challenge in controlling its support cost budget following the Review as new procurement commitments will require support in future Plans, while some equipment due to be retired is now being retained with an extended life (paragraph 2.5).

Sources of funding for the Plan

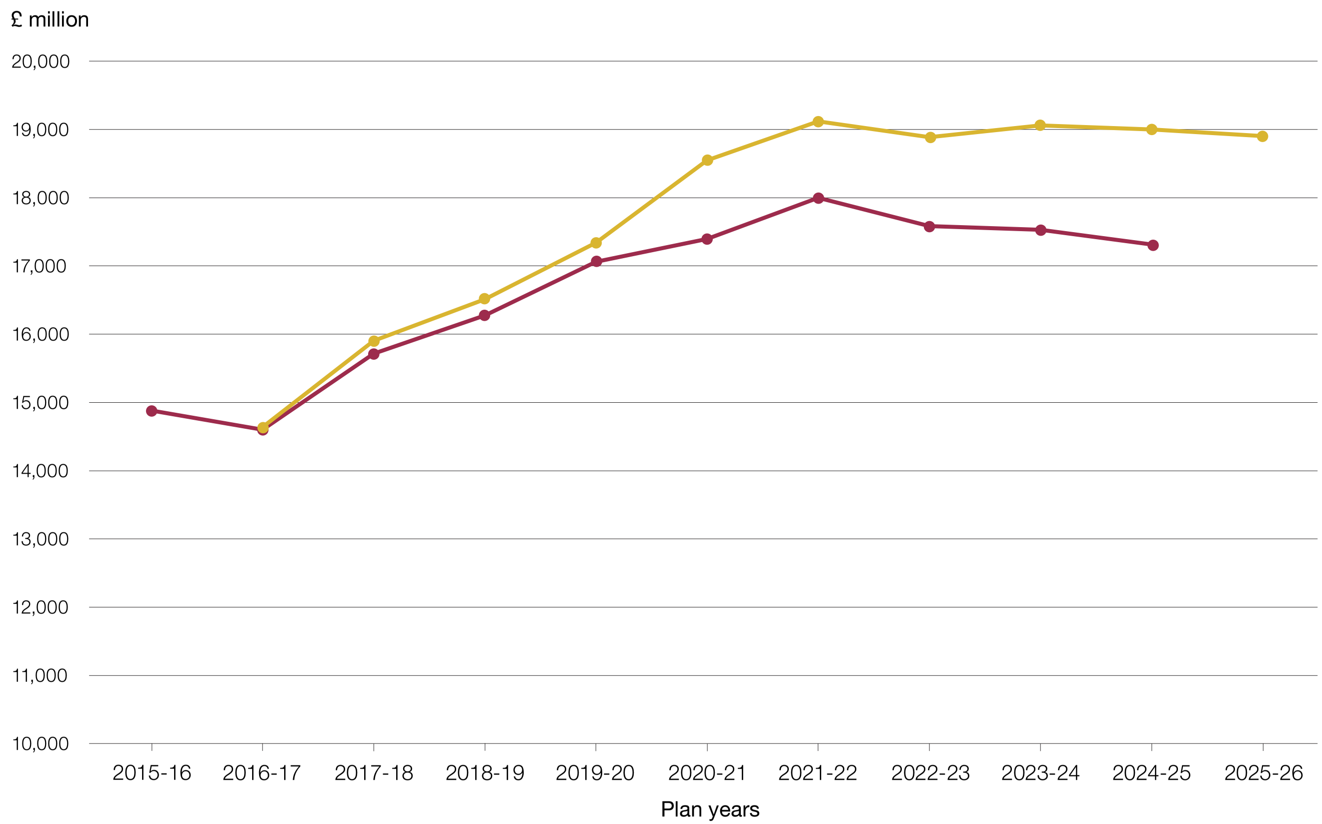
8 **The Department has allocated all headroom previously set aside in the Plan, removing its flexibility to accommodate additional capability requirements.** In previous years the Department created 'headroom' to provide scope to meet emerging priority requirements, thus increasing flexibility within the Plan. To help meet its new commitments, the Department redistributed £9.5 billion of headroom from the 2015 Plan and £1.2 billion that would otherwise have been rolled forward as headroom in the 2016 Plan. With the redistribution of all headroom, any further capability requirements during the lifetime of the Plan period will have to be met through a reprioritisation of existing commitments, or a reallocation of funding from the wider Defence budget (paragraph 2.8).

9 **The Department must generate £5.8 billion of new savings from projects within the Plan to meet its new commitments.** The Department's plans are challenging, with £3.3 billion to be generated from transformational activities within Defence Equipment and Support, £1.7 billion from the application of the Single Source Contracts Regulations and a further £0.8 billion from other sources. The Department apportioned the savings target between front-line commands but had not identified which projects would provide these savings before finalising the Plan (paragraphs 2.9 and 2.10).

Figure 1

The ten-year forecast cost profiles of the Plan over time

The 2016 funding increase will apply in the second half of the 10-year period



	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
2015 Equipment Plan	14,880	14,600	15,714	16,277	17,059	17,397	17,997	17,582	17,532	17,314	
2016 Equipment Plan		14,639	15,901	16,511	17,340	18,550	19,120	18,888	19,059	19,000	18,904

Source: Ministry of Defence

10 **Further savings of £1.5 billion to fund new commitments are to be met from within the wider Defence budget, which is already under increasing cost pressure.** At a time when an increasing proportion of the Defence budget is taken up by the Plan, generating savings from the wider Defence budget will be challenging. The source of the bulk of these savings is understood, for example through five years of military and civilian pay restraint, but further work is needed to refine the detail. This is against a background of wider funding pressures, such as those affecting the Defence estate (paragraphs 2.12 and 2.13).

11 **Since finalising the Plan, the Department has put in place a Delivery Board to oversee efforts to deliver efficiencies from across the Department.** During 2016-17 Commands and other budget holders have identified the sources of these savings. If savings are not achieved it will fall to Commands to propose to Head Office how they plan to reprioritise commitments or transfer funds from other parts of their budget to fund projects. The Department's internal audit function found that the Department had set up a strong governance framework to track savings, but recommended a number of improvements to the framework to ensure that savings are deliverable and measured accurately (paragraphs 2.14 to 2.16)

12 **The affordability of the Plan also depends on the realisation of £7.1 billion of brought forward savings already assumed in the Plan.** The Department's progress against these plans varies significantly. The Department estimates that it has achieved only £4.6 billion of this target to date, and it faces a challenge in generating the remainder of the £2.5 billion, the majority of which has to come from within the Complex Weapons area (paragraphs 2.17 and 2.18).

13 **Additional external funding supports only £6.4 billion of the new commitments.** This funding will come from the newly created Joint Security Fund for the Armed Forces and Security and Intelligence Agencies, the sole source of new funding associated with the Review (paragraph 2.19).

Confidence in the costings of the Plan

14 **New commitments in the Review have considerably increased cost uncertainty in the Plan, with the number of immature cost estimates increasing.** The stability of the costs in the Plan in recent years has reflected the relative maturity of the project portfolio. Review-related projects such as the Mechanised Infantry Vehicle have immature cost estimates, which reflect their early stage of development and will be revised going forward. Of the £24.4 billion of additional commitments in this year's Plan, £3.9 billion (15%) has yet to go through detailed costing at project level (paragraphs 3.3 and 3.4).

15 **Cost estimates for the Type 26 Global Combat Ship, the largest non-nuclear procurement project in the Plan, could not reflect fully decisions made in the Review.** The Review made significant changes, including the introduction of a new class of frigate to replace part of the Type 26 requirement. The Department's re-costing and rescheduling of the Type 26 project, together with the development of the new frigate design, mean that a full costing of all the elements of the new requirement will not be available until the 2018 Plan (paragraph 3.5).

16 **Cost growth in the existing nuclear programme continues, with the potential to destabilise the Plan.** The scale of spend and life cycle of the programme makes costs particularly uncertain. The forecast 10-year costs of the Dreadnought and Astute nuclear submarine programmes increased by £836 million in 2015-16. The Department's Cost Assurance and Analysis Service (CAAS) estimates that costs of these programmes are still understated by £1.3 billion over the 10 years of the Plan. Elsewhere in the Nuclear Enterprise, forecast costs of the Atomic Weapons Establishment management contract fell by £0.7 billion following contract re-negotiations. Given its complexity and inherent cost uncertainty, the Department is enhancing its management of the programme through the introduction of a new Director General Nuclear post and a separate submarine delivery body (paragraphs 3.6 to 3.8 and Appendix Three).

17 **The Department's current costing practice can lead to significant understatement in the likely cost of some projects at an early stage of development, at a time when the Review has resulted in a higher proportion of large, early-stage projects in the Plan.** Analysis by CAAS has shown that the costs of a project can increase significantly as it moves from its design stage into manufacture and point of service entry. The analysis implies that the current costing policy is likely to understate the costs of early-stage projects currently included in the Plan (paragraphs 3.10 to 3.14).

18 **Changes in foreign exchange rates, such as those that happened after the EU referendum, can pose a significant risk to the Plan's affordability in the future.** As at 10 January 2017, the pound was 21.4% below the exchange rate with the US dollar and 4.2% below the exchange rate for the euro used in the Department's planning assumptions. Approximately £18.6 billion of the Plan is denominated in US dollars and £2.6 billion in euros over 10 years. This illustrates the significant risk to affordability currently faced by the Department (paragraphs 3.17 to 3.19).

19 **Although the Department's contingency has risen slightly in both absolute and percentage terms, it has little room for manoeuvre if costs grow. The reallocation of 'headroom' into the core Plan this year means that cost growth must be constrained within the 3% contingency provision in the Plan.** The CAAS estimate of the variance between the 50th percentile estimates and the most likely project outturn for this year's Plan as a whole is £4.8 billion, within the Department's £5.3 billion contingency provision. Due to timing restrictions CAAS was not able to carry out specific cost estimates of the additional commitments to the Plan arising from the Review during 2015-16 (paragraphs 3.20 to 3.22).

20 **The Department's Statement provides sufficient information on the components of the Plan, but lacks detail on sources of efficiency savings and the sensitivity of the Plan to changes in project cost assumptions.** The Affordability Statement provides detail on the value of procurement, support and contingency; however, there is insufficient detail to understand the Department's progress in identifying the source of the savings required to fund the commitments from the Review. There is no detail on future variability of the Plan resulting in fundamental changes to assumptions such as foreign exchange fluctuations (paragraphs 4.3 to 4.5).

Conclusion

21 The affordability of the Plan is now at greater risk than at any time since reporting was introduced in 2012 and the Department faces the risk that in future it may have to return to a situation where affordability of the portfolio is maintained by delaying or reducing the scope of projects. The cost of the new commitments included in the Review considerably exceeds the net increase in funding for the Plan. The Department has agreed to fund these new commitments partly through demanding efficiency targets, from both within the existing Plan and from the wider Defence budget. All existing headroom has had also to be allocated to meet the new commitments arising from the Review, with the result that this money is not now available to fund newly emerging requirements during the period covered by the Plan.

22 Moreover, the risk of cost growth is still evident in the Plan, both in existing projects and also because a greater proportion of large projects are at an early stage of development (largely due to a number of new high-value commitments introduced by the Review). This risk is further increased as the Department's current costing policy has historically underestimated the cost of projects in their early stage of development. The Department also faces a significant potential threat to affordability as a result of exchange rate movements against the pound.

Recommendations

a **The Department should identify the current projects most at risk from cost growth, and using the Cost Assurance and Analysis Service, assess how these projects could be costed more realistically in the Plan.** Projects in the early stages will have more immature costings than those that are more advanced, and are particularly prone to optimism bias. The Department should have a clear view of where and when the main cost pressures might occur in future years and a plan for how they might be accommodated. Such analysis should consider whether more flexibility should be introduced in the application of the current costing policy for estimating the cost of immature projects, to reflect the increased level of uncertainty.

b **The Department should ensure that any commitments or savings targets arising from the 2016 Review that are not reflected in project-level costings are programmed at project level in the 2017 Plan, and identify which projects will generate the efficiency savings required to fund new commitments.** When the Department finalised the 2016 Equipment Plan it was still working through the financial implications of the commitments entered into in the Review. This work is ongoing at the time of publication. It is vital that the Department concludes this exercise promptly to increase confidence in the affordability of the Plan.

c **The Department should assess the impact of future exchange rate fluctuations on the affordability of the Equipment Plan.** A significant proportion of spend within the Plan is in US dollars and euros. Project teams should re-model future costs based on updated forecast exchange rate values. The Department should better understand the total affordability of the Plan under a range of different exchange rate scenarios, which should also be used to inform future policy on forward purchase of currencies.

d **The Department should ensure that it has in place suitable mechanisms for prioritising spend and removing or deferring projects from the Plan should affordability be compromised to the extent that Commands are unable to accommodate cost growth within their budgets, and central contingency is insufficient.** The Commands, who now have day-to-day responsibility for managing the equipment budget, will face new challenges in delivering the post-Review portfolio. It is important that the Department has in place a robust central process for reprioritising commitments in the Plan that balances operational need with the requirement to protect value for money, and that decisions are supported by suitable business cases that address both requirements.

e **The Department should improve the transparency of its Affordability Statement on the Plan by providing greater insight into the range of potential outturn costs across the portfolio.** Uncertainties within projects mean that many teams provide a range of potential costs, in line with the Department's guidance. However, this range is not reflected at portfolio level. We have made this recommendation for several years and it is more relevant now than ever.