

REPORT

The Equipment Plan 2023-2033

Ministry of Defence

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The Equipment Plan 2023-2033

Ministry of Defence

Report by the Comptroller and Auditor General

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Gareth Davies Comptroller and Auditor General National Audit Office

28 November 2023

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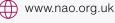
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Key facts

£305.5bn £16.9bn

the Ministry of Defence's (MoD's) estimated cost of equipment procurement and support projects in the Equipment Plan 2023-2033 (the Plan)

the MoD's central estimate of the most likely funding shortfall in the Plan

£7.6bn to £29.8bn

the MoD's estimate for the potential range of the funding shortfall, depending on whether risks or opportunities materialise

Costs have risen faster than the available budget

£65.7 billion increase in total forecast costs for the 2023 Plan, compared

with the Plan for 2022-2032 - a 27% increase

£46.3 billion increase in the budget for the 2023 Plan, compared with the

Plan for 2022-2032 - a 19% increase

Nuclear and Royal Navy costs show the greatest increase compared with 2022

£38.2 billion forecast cost increase at the Defence Nuclear Organisation,

a 62% increase

£16.4 billion forecast cost increase for the Royal Navy, a 41% increase

Economic pressures are affecting the delivery of military capabilities

£10.9 billion the MoD's estimate of the cost increase in the Plan which is

due to inflation, over the ten years from 2023-24 to 2032-33

Unknown the forecast costs if the Plan included all capabilities outlined

in the 2023 update of the Integrated Review and the

associated Defence Command Paper

Summary

- 1 The Ministry of Defence (MoD) publishes its Equipment Plan (the Plan) each year, setting out its intended investment in equipment and support projects over the next 10 years. The Plan assesses whether the intended investment is affordable within the available budget. It covers a 10-year period because of the long-term nature of large, complex defence projects.
- 2 The latest Plan, for which the supporting analysis is published alongside this report, covers the period 2023–2033. It shows that the MoD has allocated a budget of £288.6 billion, 49% of its entire forecast defence budget, to fund the Plan. This is a larger proportion than last year's 46%. This year's Plan includes more than 1,800 projects, including the future nuclear deterrent, F35-B Lightning II aircraft and new information and communication technologies. It also includes budgets to support and maintain military capabilities.
- 3 The MoD introduced the Plan in 2012, intending to assure Parliament that its spending plans were affordable. Each year since the Plan was introduced, the National Audit Office has published a report in parallel, examining the MoD's assessment of the Plan's affordability and its response to the financial challenges it faces.
- 4 Managing equipment programmes is the responsibility of:
- the four Front Line Commands: the Royal Navy (Navy), the British Army (Army), the Royal Air Force (RAF) and the UK Strategic Command;
- the Defence Nuclear Organisation (DNO); and
- the Strategic Programmes Directorate.

These organisations are known as the Top Level Budgets (TLBs) and are required to deliver their agreed defence outcomes within delegated budgets. The delivery organisations such as Defence Equipment & Support, the Submarine Delivery Agency, and Defence Digital, manage and deliver the equipment and support programmes on behalf of the TLBs. The MoD's Head Office aggregates the information provided by the TLBs to establish the departmental position on the affordability of the Plan.

- **5** The MoD manages the objectives and affordability of its capability requirements through two processes:
- In 2021, the government published an Integrated Review which set out the UK's national security and international policy, and it refreshed this in 2023. The MoD responded to both the initial and refreshed integrated reviews by publishing Defence Command Papers that set out how it would design and equip its forces for the decades ahead.
- Each year the MoD sets out how it intends to manage its funding over the next 10 years to deliver its equipment programmes, in its Equipment Plan.

The Integrated Review does not consider the affordability of the plans it sets out. The Plan reports on the extent to which aspects of the capability set out in the Integrated Review are affordable within MoD's current budget.

6 In July 2023, the MoD wrote to the Committee of Public Accounts to explain that it would not publish a full Equipment Plan report this year. The MoD explained that it needed to understand further how to mitigate the impacts of inflation, and to work through the consequences of the 2023 Defence Command Paper, published earlier in July. The Command Paper set out which of MoD's priorities in the 2021 Defence Command Paper had been vindicated, what needed to be done more quickly and what needed to be done differently. However, the MoD has undertaken the same depth of financial analysis as in previous years. It has published its affordability analysis for 2023–2033, which provides an assessment of the affordability of equipment and support projects, with supporting cost and budget data. We examine the MoD's analysis in this report. The MoD's affordability assessment is based on financial information available at the start of the 2023-24 financial year and includes the additional funding announced in the Spring Budget 2023.

Our report

- 7 This report examines:
- the MoD's assessment of the affordability of its 2023–2033 Equipment Plan (Part One); and
- cost pressures affecting MoD, and the implications of these for the Plan (Part Two).
- 8 This report does not consider the value for money of the MoD's equipment expenditure or of the specific projects mentioned, nor does it comment on the policy choices that the MoD makes to develop a Plan which meets its future needs. This report also does not consider the UK's support to Ukraine, the additional costs of which have to date been funded by HM Treasury through the Reserve. Our review examines the MoD's approach to producing the Plan. We focus on its approach to cost forecasting and the reasonableness, consistency and reliability of the assumptions underpinning its assessment of affordability. Our methodology is shown in Appendix One.

Key findings

The affordability of the 2023 Equipment Plan

- **9** The Plan is unaffordable, with the MoD estimating that forecast costs exceed the available budget by £16.9 billion (6%). Forecast total costs at 31 March 2023 were £305.5 billion, compared with the budget of £288.6 billion. This is the largest deficit in the Plan since the MoD first published it in 2012 and contrasts with the previous year's Plan, for 2022–2032, when the MoD assessed that costs were £2.6 billion less than the available budget. Forecast costs have risen by £65.7 billion (27%) compared with the previous Plan, outstripping a budget increase of £46.3 billion (19%). Costs to support the nuclear deterrent exceed budget by £7.9 billion, and the budget for conventional equipment is £9 billion less than forecast costs (paragraphs 1.6 to 1.9).
- 10 The MoD estimates that the funding gap could range between £7.6 billion and £29.8 billion, depending on whether risks or opportunities materialise. The MoD recognises that delivering complex, long-term projects is uncertain and it produces a range of outcomes using best-case and worst-case estimates for some adjustments. These include programme costs being larger or smaller than the central estimate and foreign exchange rate movements. The Plan's estimated £16.9 billion budget deficit is a central estimate, based on a range of assumptions. For example, the MoD has increased forecast costs by £22.8 billion to reflect risks it judges will probably materialise in some projects. Conversely, it has reduced the total forecast costs by £35.9 billion through various adjustments, based on cost reductions that the MoD expects the TLBs to make and on the TLBs' expectations about whether they will be able to deliver their projects as planned (paragraphs 1.15, 1.23 and 1.28):
- The Plan's forecast costs have been reduced by £18 billion due to realism adjustments where the TLBs expect that programmes will be delivered slower than planned, due to supply chain challenges and insufficient staffing at both the TLBs and the delivery organisations. These realism adjustments are concentrated in the early years of the plan (paragraphs 1.21 and 1.22).
- The MoD has reduced the Plan's forecast cost by £1.7 billion, to reflect 'planned cost reductions'. Of this, £1.2 billion are 'assumptions', which are cost reductions for which the TLBs have no specific or detailed plans. The MoD is looking to deliver £0.2 billion of these assumptions in the next two years (paragraphs 1.16 and 1.17).
- The MoD has reduced the Plan's forecast costs by £16.2 billion to reflect efficiency savings, of which £13.0 billion are already being delivered by projects and £1.8 billion have been identified but are not yet in delivery. The remaining £1.3 billion of efficiencies have very low maturity plans, £0.3 billion of which the MoD is looking to deliver in the next two years (paragraphs 1.18 and 1.19).

While the MoD includes some risks in its forecast costs, the estimated funding gap does not include all risks that the MoD has identified. For example, risk that the MoD is tracking but it judges will probably not occur, so does not include in cost forecasts, amounts to £36.7 billion (paragraph 1.29).

11 TLBs have taken different approaches to preparing their forecasts in the Plan: some include the full predicted costs for the capabilities that the government expects the MoD to provide, while others only include those they can afford. The Plan does not reflect all the cost pressures to develop new and support existing capabilities set out in the 2021 Integrated Review and Defence Command Paper, which were broadly endorsed in the 2023 refresh of these. Some TLBs, such as the RAF and the Navy, have unaffordable plans because they include full predicted costs for the capabilities government expects them to deliver, while others, such as the Army and the Strategic Programmes Directorate, have developed affordable plans by accepting greater risks that their capabilities will not meet government's objectives. Some projects are not included in costs, therefore, which means that the Plan does not disclose the full funding gap between the cost of expected capabilities and the budget available, so it underestimates the cost pressure that the MoD faces. Omitted projects include the operational extension of Warrior and Challenger 2 armoured vehicles, and the programme to deliver long-range 'land precision strike' weapons. Other project costs are included in the plan but are not fully funded. For example, the Navy has included the full predicted costs of new entries into the shipbuilding pipeline - including Multi-Role Ocean Surveillance ships, Type 32 frigates, Multi-Role Support Ships, Type 83 destroyers, and Future Air Dominance System - which are forecast to cost £5.9 billion more than the currently allocated budgets; and Commando Force is not currently funded to operate from the sea in a high-threat maritime environment, which would cost £0.7 billion (paragraphs 1.11 to 1.13 and Figure 5).

Factors contributing to the Plan's unaffordability

- 12 The largest cost increases are in nuclear and naval programmes, whose combined costs have risen by £54.6 billion. The MoD's decision to prioritise delivering the replacement nuclear deterrent on schedule has brought forward costs at the DNO, where costs have increased by £38.2 billion (62%) compared with last year's Plan, to £99.5 billion. Forecast costs for the Navy, which delivers parts of the nuclear capability, have risen by £16.4 billion (41%). The Navy has reconsidered its previous policy of only including forecast costs it can afford, resulting in it reporting a deficit of £15.3 billion in this year's Plan, compared with a surplus of £0.7 billion in 2022 (paragraphs 1.8, 1.12 and 1.13).
- 13 Inflation has contributed to the Plan's increased costs. Inflation is having an impact on costs in all areas of spending, but the MoD has not received additional funding for inflationary pressures so TLBs must manage the effects within their existing budgets. In August 2023, the MoD estimated that inflation would account for £10.9 billion of the Plan's cost increases. Current contracts provide some short-term protection from inflation, but the MoD expects that costs will catch up with inflation when contracts are index-linked or renewed. The MoD is working to improve its understanding of defence inflation and has identified around 200 industry-specific indices to support commercial officers when negotiating escalation rates in contracts (paragraphs 2.2 to 2.4).

Implications for the TLBs and their capabilities

- 14 None of the six TLBs has an affordable equipment plan, and their overall forecast costs, including workforce and estates as well as equipment, also exceed their budgets. All the TLBs have deficits in their individual equipment plans, ranging from £1.1 billion at the UK Strategic Command to £36.7 billion at the DNO, although the DNO deficit does not take account of centrally held funding for the new Defence Nuclear Enterprise (DNE).¹ Financial pressures have also affected costs in other areas. The MoD forecasts that during the 10 years to 2032-33, total defence spending will exceed the total defence budget by £42.5 billion, compared with a £4.3 billion shortfall last year. All six TLBs have total forecast costs over the 10-year period which exceed their total budgets (paragraphs 1.10, 2.7, 2.8 and Figure 4).
- 15 Supply chain issues have constrained delivery. The MoD faces supply chain risks and industry capacity constraints, due to skills gaps, shortages of key components and an increased demand for defence equipment in other countries in response to the war in Ukraine. These constraints have delayed the delivery of projects, which can produce short-term savings, but the MoD expects they will add cost pressure in the future, including the cost of maintaining existing equipment in service for longer when the replacement has been delayed (paragraphs 2.5 and 2.6).
- The creation of a ringfence around nuclear funding helps protect the MoD's highest defence priority but puts greater pressure on programmes not included in it. Maintaining the nuclear deterrent is the MoD's highest priority. At the Spring Budget 2023, the Chancellor of the Exchequer said there was a need for "enduring additional investment" and allocated an additional £3 billion to the nuclear enterprise across 2023-24 and 2024-25. HM Treasury has agreed that the MoD should ringfence all direct elements supporting the deterrent programme and nuclear-powered attack submarines, including the entire DNO budget, in-service submarine support elements from the Navy and related programmes in the UK Strategic Command. These form the DNE, which has a £109.8 billion budget over the 10 years to 2032-33. Some capabilities not included in the ringfence have a role in supporting the nuclear deterrent, such as the Navy's frigates and minehunters. The Navy told us that it would prioritise its supporting capabilities for funding, which would mean cost savings to address the deficit in its equipment plan would need to come from other areas. Cost savings to address the overall budget deficits in the Plan and in the total defence budget will need to come from areas of TLB spending which do not contribute to the nuclear deterrent (paragraphs 2.15 to 2.19).

¹ At 31 March 2023, following the Spring Budget 2023, the MoD had retained an additional £34.5 billion funding for the DNE as centrally managed expenditure, rather than delegating it to the TLBs included in the DNE: the DNO, the Navy and the UK Strategic Command.

The MoD's response

17 The MoD is not planning to make major decisions about cancelling programmes until after the next Spending Review. The MoD has started 'balance of investment' work on the whole defence budget, where there is a £42.5 billion ten-year deficit. However, it told us that ending programmes now would limit the choices available to decision-makers at the next Spending Review, which it expects is likely to occur in 2024. The Government may make more funding available in future through its ambition to increase defence spending to 2.5% of gross domestic product (GDP), when economic and fiscal circumstances allow. In 2022, defence spending was 2.1% of GDP. Since this ambition is uncertain, the MoD has not included it in its forecast budgets. During the 2023 budget cycle, the MoD has been focusing on living within its budget for 2023-24 and 2024-25 through a series of short-term measures. The MoD is considering using an extra £1.95 billion provided in the Spring Budget 2023 for improving resilience and readiness, to offset its funding shortfall in 2023-24 and 2024-25 (paragraphs 2.22 to 2.25).

Conclusion

The MoD acknowledges that its Equipment Plan for 2023-2033 is unaffordable, with forecast costs exceeding its current budget by £16.9 billion. This is a marked deterioration in the financial position since the previous Plan in 2022, which the MoD judged to be affordable. In part, this is because inflation, which we highlighted last year as not being fully reflected, is now showing its effect. But more importantly, the costs of delivering major priorities have increased significantly as the MoD has sought to show more clearly the gap between the available budget and the ambitions expressed in the 2023 update of the Integrated Review and the associated Defence Command Paper, the consequences of which MoD is still working through. Deficits between forecast costs and budgets have increased in the DNE because MoD has brought forward costs to deliver the nuclear deterrent to schedule, and also in non-nuclear areas including the RAF, the UK Strategic Command, the Strategic Programmes Directorate, and the Navy's conventional capabilities. Only the Army has not shown an increased deficit, although this is because the Army has only included forecast costs that it can afford, which means it is accepting greater risks that its capabilities will not meet government's objectives.

19 The MoD is using the 2023 Equipment Plan to set the baseline for its capability requirements ahead of the next government-wide Spending Review, which it expects is likely in 2024, and has chosen to defer any choices on spending priorities until then. This approach, while understandable given the ambitions expressed in the updated Integrated Review, risks poor value for money if spending continues in the meantime on programmes which are then cancelled, descoped or deferred because they are unaffordable. It also means that the Plan does not provide a reliable assessment of the affordability of MoD's equipment programme or demonstrate to Parliament how it will manage its funding to deliver equipment projects.

Recommendations

- 20 This year we recommend that the MoD should:
- a assess the effect of delaying major decisions on each TLB and ensure that both decision-makers and Parliament understand the financial and capability impacts of this delay; and
- b ensure greater consistency in the approach of each TLB to producing their equipment plans. It should provide clear guidance on whether each TLB should include the full predicted costs of the capabilities they are being asked to provide to fulfil defence commitments, regardless of the budget available. This would enable the MoD to use next year's Equipment Plan to establish the baseline for its negotiations with HM Treasury during the next Spending Review.

Part One

The affordability of the Equipment Plan 2023-2033

1.1 This Part sets out the results of our examination of the Ministry of Defence's (MoD's) approach to assessing the affordability of its 2023-2033 Equipment Plan (the Plan).

The purpose of the Equipment Plan

- 1.2 The Plan provides an estimate of the MoD's planned expenditure over the next 10 years to develop and support the equipment the Armed Forces need. These projects span the full range of the MoD's military capability requirements and reflect decisions made in the 2021 Integrated Review, the 2023 Integrated Review Refresh, and the Defence Command Papers that accompanied these, although the MoD is still working through the consequences of the 2023 refresh.² The Plan contains more than 1,800 projects, including the future nuclear deterrent, F35-B Lightning II aircraft and new information and communication technologies. It also includes budgets to support and maintain military capabilities.
- 1.3 In compiling the Plan, the MoD's aim is to produce a reliable assessment of the affordability of its equipment programme. By doing so, it seeks to demonstrate to Parliament how it will manage its funding to deliver equipment projects. It covers a 10-year period because of the long-term nature of large, complex defence projects. The latest Plan covers the period 2023–2033. The MoD's assessment of the Plan's affordability reflects the position at the end of the 2022-23 financial year. The Comptroller and Auditor General's role is to examine the MoD's assessment, including the robustness of underlying assumptions. We have produced an accompanying report each year since 2012, when the MoD introduced the report, to assist Parliament in examining the MoD's assessment and its response to the financial challenges it faces.

² HM Government, Global Britain in a competitive age: The Integrated Review of Security, Defence, Development and Foreign Policy, March 2021, Command Paper, CP 403; HM Government, Integrated Review Refresh 2023: Responding to a more contested and volatile world, March 2023, Command Paper, CP 811; Ministry of Defence, Defence in a competitive age, March 2021, Defence Command Paper, CP 411; Ministry of Defence, Defence's response to a more contested and volatile world, July 2023, Defence Command Paper, CP 901.

- **1.4** In July 2023, the MoD informed the Committee of Public Accounts that it would not publish a full report this year, because it needed to work through the consequences of the 2023 Defence Command Paper, and further understand the impact of inflation on its plans and how best to mitigate that. It has, however, undertaken the same depth of financial analysis as in previous years and published its affordability analysis for 2023–2033. This provides an assessment of the affordability of equipment and support projects, with supporting cost and budget data. The MoD's assessment is based on financial information available at the start of the 2023-24 financial year and includes additional funding announced in the Spring Budget 2023. We examine the MoD's analysis in this report.
- 1.5 The MoD delegates responsibility for managing equipment projects to the Front Line Commands (the Royal Navy (Navy), the British Army (Army), the Royal Air Force (RAF) and UK Strategic Command), the Defence Nuclear Organisation (DNO) and the Strategic Programmes Directorate (Figure 1 overleaf). These organisations are known as Top Level Budgets (TLBs) and are responsible for delivering their agreed defence outcomes within delegated budgets. The delivery organisations such as Defence Equipment & Support, the Submarine Delivery Agency and Defence Digital manage and deliver the equipment and support projects on behalf of the TLBs. The MoD's Head Office aggregates the information provided by the TLBs to establish the departmental position on the affordability of the Plan.

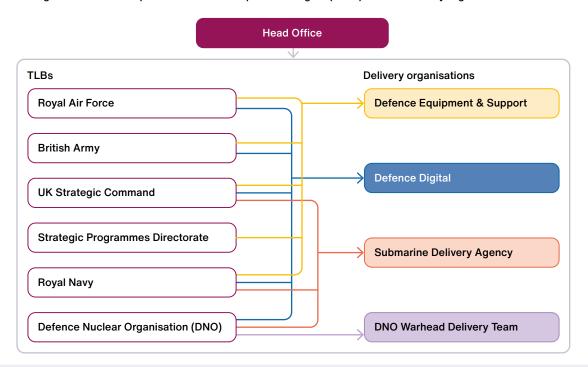
The MoD's assessment of the Plan's affordability

- **1.6** The MoD has assessed that the 2023–2033 Plan is unaffordable. The Plan's 10-year budget is £288.6 billion, which accounts for 49% of the £587.8 billion total defence budget for that period.³ However, forecast costs are £305.5 billion, £16.9 billion (6%) more than the budget (**Figure 2** on page 15). This is the largest deficit in the Equipment Plan since the MoD first published it in 2012. This year's position contrasts with last year when the MoD assessed that its budget for the Equipment Plan from 2022-23 to 2031-32 exceeded forecast costs by £2.6 billion. This year, for the first time, the MoD has provided a breakdown of forecast budgets and costs of providing and supporting its nuclear and conventional capabilities. Over the next 10 years, the MoD's forecast costs for the nuclear deterrent exceed budget by £7.9 billion and forecast costs for conventional equipment are £9 billion more than the budget.
- **1.7** During the 10 years covered by this year's Plan, the MoD forecasts that costs will exceed budget in the first seven years by £21.4 billion, followed by a £4.5 billion budget surplus in the last three years (**Figure 3** on page 16). However, this surplus is because the MoD has not yet delegated £24.7 billion funding to the six TLBs which offsets their £20.2 billion deficit for these three years. The MoD typically plans that it will use these surpluses to fund new capabilities currently at concept stage.

Figure 1

Responsibilities for preparing and managing the Ministry of Defence's (MoD's) Equipment Plan 2023–2033

The MoD has delegated roles and responsibilities to the Top Level Budgets (TLBs) and the delivery organisations



Responsibilities

Head Office

Approves project funding.

Sets and allocates budgets.

Provides accountability and oversight over the TLBs and delivery organisations.

TLBs

Provide fiscal responsibility.

Set detailed equipment and support requirements.

Manage equipment portfolios.

Hold delivery organisations to account, acting as their customer.

Delivery organisations

Deliver programmes on behalf of the TLBs, including managing commercial relations.

Consider risks across their projects.

Provide the TLBs with commercial and technical advice.

□ TLBs
 □ → Defence Equipment & Support
 □ → Submarine Delivery Agency
 □ → DNO Warhead Delivery Team

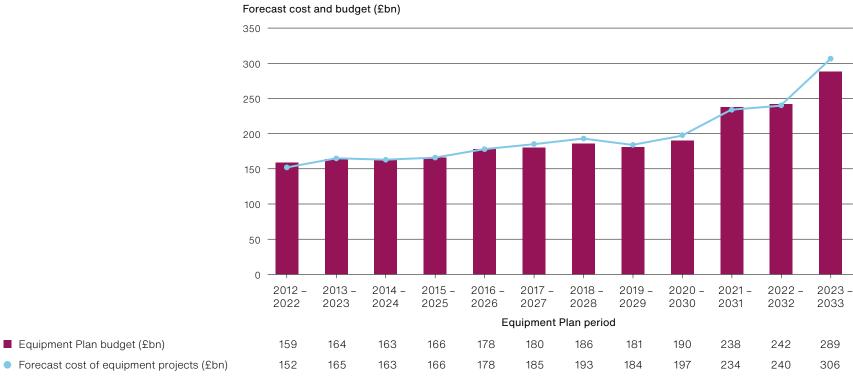
Notes

- 1 Head Office is the MoD's central financial and resource function that oversees the TLBs and delivery organisations. It does not manage equipment
- 2 The UK Strategic Command ensures that joint capabilities, such as medical services, training and education, and intelligence and information systems are developed and managed. It also manages overseas joint operations and the permanent joint operating bases.
- 3 The Strategic Programmes Directorate is responsible for the procurement, support, testing and evaluation of complex and novel weapons.
- 4 The DNO oversees all defence nuclear business, including managing a portfolio of programmes in support of the nuclear deterrent.
- 5 The delivery organisations manage and deliver the equipment and support projects on behalf of the TLBs.
- 6 The MoD also contains another TLB, the Defence Infrastructure Organisation, which does not manage equipment projects.

Source: National Audit Office analysis of Ministry of Defence data

Figure 2
The Ministry of Defence's (MoD's) Equipment Plan budget and forecast costs, 2012 to 2023

The MoD has assessed that this year's Equipment Plan is unaffordable because forecast costs exceed budget by £16.9 billion over 10 years, which is the largest deficit since it first published an Equipment Plan in 2012



Notes

- 1 The role of equipment projects is to buy, support and maintain military capabilities.
- 2 Budgets and forecasts are published annually, with each covering a 10-year period.
- 3 Figures are given in cash terms.

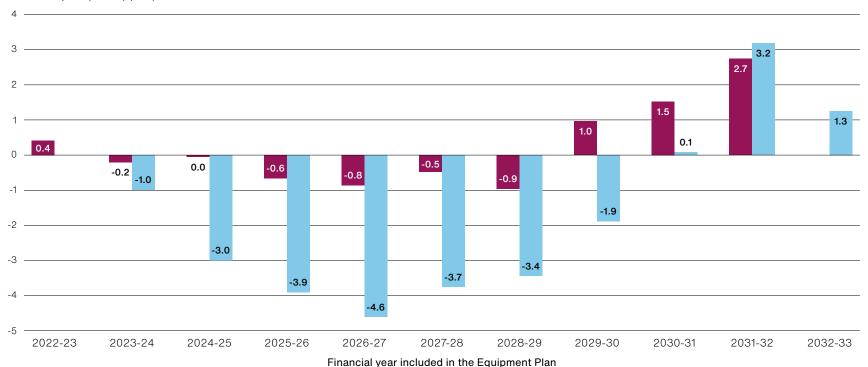
Source: National Audit Office analysis of Ministry of Defence budgetary data

Figure 3

Comparison of annual funding surpluses and deficits in the 2022–2032 and 2023–2033 Equipment Plans

The Ministry of Defence forecasts deficits in the first seven years of the Equipment Plan 2023–2033





- Equipment Plan 2022-2032
- Equipment Plan 2023-2033

Notes

- 1 Equipment Plan forecasts are published annually with each publication covering the following 10 years.
- 2 Figures are given in cash terms.

Source: National Audit Office analysis of Ministry of Defence budgetary data

- **1.8** Compared with last year's Plan, forecast costs have increased from £239.8 billion to £305.5 billion a £65.7 billion (27%) increase. The largest increases, totalling £54.6 billion, are at:
- the DNO, whose costs have increased by £38.2 billion (62%) to £99.5 billion. This is because it has prioritised delivering the replacement nuclear deterrent to schedule over immediate cost constraints. HM Treasury considers that the best way to limit nuclear costs is to deliver the programme quickly;⁴ and
- the Navy, whose costs have increased by £16.4 billion (41%). This is because of both the MoD prioritising the delivery of the nuclear deterrent 20% of the Navy's 2023-24 budget is for nuclear and because it has included the full predicted cost of non-nuclear capabilities government expects it to deliver, rather than only those it has sufficient budget for.
- **1.9** The 10-year budget has increased to £288.6 billion in this year's Plan, compared with £242.3 billion last year a £46.3 billion (19%) increase. Most of this increase is because the MoD has forecast that over 10 years it will receive additional funding of £34.5 billion for nuclear and £9.4 billion for non-nuclear budgets. The MoD has retained the additional £43.9 billion as centrally managed expenditure, rather than delegating it to the TLBs. The MoD has also set aside contingency to help fund new equipment projects or absorb any unexpected cost increases. This year the MoD has reduced the amount of contingency in the Plan to £4.1 billion, compared with £4.3 billion last year, and £5.9 billion in 2021.

The TLBs' approach to forecasting costs

- **1.10** The TLBs continually assess and manage equipment projects to try to meet defence objectives and develop the capabilities that they need, within the funding available. All TLBs are struggling to achieve this balance, and none of the six has an affordable equipment plan this year (**Figure 4** on pages 18 and 19). The 10-year equipment budgets delegated to the TLBs in this year's Plan have only increased by $\mathfrak{L}2.8$ billion (1%) compared with last year.
- 1.11 Some overprogramming by the TLBs is to be expected as the MoD expects that some projects will be delivered more slowly than planned. However, as the funding deficit of £16.9 billion demonstrates, the MoD does not have enough funding for the TLBs to develop all capabilities set out in the Plan. Furthermore, several capabilities set out in the Integrated Review and Defence Command Paper, following their refresh in 2023, are not included in the Plan (Figure 5 on page 20). The Plan, therefore, does not reflect all the cost pressures to develop new capabilities, and the MoD is uncertain how much these additional capabilities would cost.

⁴ HM Treasury told us that it recognises that delivering the nuclear programme quickly and on time is most important, and that it believes this will also increase value for money and reduce overall costs across the Defence Nuclear Enterprise.

Figure 4
Comparison of the Top Level Budgets' (TLBs') total surpluses and deficits in their 2022–2032 and 2023–2033 equipment plans

All six TLBs have deficits in their 2023-2033 equipment plans

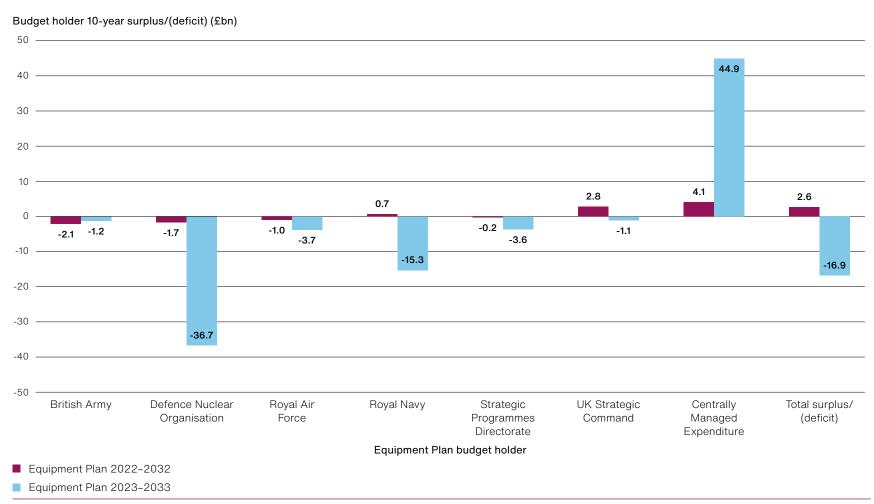


Figure 4 continued

Comparison of the Top Level Budgets' (TLBs') total surpluses and deficits in their 2022–2032 and 2023–2033 equipment plans

Notes

- 1 The Defence Nuclear Organisation oversees all defence nuclear business, including managing a portfolio of programmes in support of the nuclear deterrent.
- 2 The Strategic Programmes Directorate is responsible for the procurement, support, testing and evaluation of complex and novel weapons.
- 3 The UK Strategic Command ensures that joint capabilities, such as medical services, training and education, and intelligence and information systems are developed and managed. It also manages overseas joint operations and the permanent joint operating bases.
- 4 Centrally managed expenditure is money held centrally by the Ministry of Defence (MoD) to be provided to the TLBs as required. The MoD has forecast that over 10 years it will receive additional funding of £34.5 billion for nuclear and £9.4 billion for non-nuclear budgets, which it has not distributed to TLB budgets.
- 5 Nuclear budgets are held by the Defence Nuclear Organisation, the Royal Navy and the UK Strategic Command.
- 6 Figures are given in cash terms.

Source: National Audit Office analysis of Ministry of Defence budgetary data

- **1.12** TLBs have taken different approaches to preparing their forecasts in the Plan, and some include the full predicted costs of the capabilities that government expects the MoD to provide, while others do not. Some TLBs, such as the RAF and the Navy, prioritise the delivery of objectives over affordability and so include full predicted costs for the capabilities government expects them to deliver. Others, such as the Army and the Strategic Programmes Directorate, only include costs for those programmes they can afford. For example:
- the Navy has included in the Plan full predicted costs for the capabilities the MoD expects it to deliver. This has resulted in it reporting a deficit of £15.3 billion in this year's Plan, compared with a £0.7 billion surplus last year. The Navy says that this provides a more honest picture of its risks; and
- in contrast, the Army has reported a reduced deficit of £1.2 billion this year, compared with a £2.1 billion deficit last year. It continues to undertake a balance of investment exercise each year to reprioritise its equipment programme within its current budget and include only those projects it can afford. In doing so, the Army is accepting a greater risk that its capabilities will not meet government's objectives. The Army claimed it would be misleading to cost those projects that it does not include, but in July 2023 the MoD estimated that the Army could need around £12 billion more to fully provide the capabilities set out in the updated Integrated Review.

Defence capabilities and the Equipment Plan 2023–2033

Source: National Audit Office analysis of Ministry of Defence data

Several capability requirements included in the 2021 Integrated Review, 2023 Integrated Review Refresh and the associated Defence Command Papers are partly or fully excluded from this year's Equipment Plan (the Plan)

Capability	Explanation
Programmes not included in the Plan	
Land Environment Capability Assessment Register (British Army)	This register reports considerable unfunded capability gaps, most notably in: lethality; air defence; Command, Control, Communications, Computers and Intelligence (C4I) systems; logistics; chemical, biological, radiological and nuclear (CBRN), and mobility. The Army is undertaking an internal balance of investment exercise to modernise its forces within its existing funding.
Warrior armoured vehicle and Challenger 2 main battle tank (British Army)	The decision to extend Warrior (including restarting 30mm production) and Challenger 2 are still being costed; however, initial indications are that the actual cost of these extensions ma create an unfunded pressure.
Land precision strike (Strategic Programmes Directorate)	This is a requirement for a ground-launched precision guided weapon that can be used at long range (at least 80km). It is programmed for the end of the decade, but no money has been committed towards it.
SPEAR Cap 3 Electronic Warfare air-to-ground missile (Strategic Programmes Directorate)	An initial low-cost capability demonstrator is under negotiation, but the full programme has yet to be confirmed by the Royal Air Force.
Meteor air-to-air missile (Strategic Programmes Directorate)	Mid-life upgrade funding, assessed at up to $\mathfrak{L}2$ billion, is not included.
Test and evaluation contracts (Strategic Programmes Directorate)	Insufficient funding to replace two current contracts, which both currently end in 2028. Defence Equipment & Support does not have funding from the Strategic Programmes Directorate to develop and deliver the procurement for these follow-on contracts.
Part-funded programmes included in	the Plan
A400M transport aircraft additional purchases (Royal Air Force)	Some funding is held centrally. Funding is sufficient, but the funding profile does not match the spending required in later years.
F35-B combat aircraft third front-line squadron (Royal Air Force)	The investment cost of developing a third front-line squadron increases the capital budget shortfall by $\mathfrak{L}0.1$ billion between 2023-24 and 2026-27, and this option is not accompanied by funding of $\mathfrak{L}0.4$ billion needed to operate the squadron.
New entries into the shipbuilding pipeline (Royal Navy)	New entries endorsed in the 2021 Integrated Review – including Multi-Role Ocean Surveillance ships, Type 32 Frigates, Multi-Role Support Ships, Type 83 destroyers, and Future Air Dominance System – have been initiated, but costs are £5.9 billion higher than current budgets.
In-service extension of <i>RFA Argus</i> (Royal Navy)	Extension of this primary casualty receiving ship has been implemented, but the Royal Navy (Navy) did not receive additional budget to fund this.
Mine Hunting Capability (Royal Navy)	The second phase is included in the Plan, but the Navy did not receive additional budget to fund this. The Navy is also seeking additional funding to support Hunt Class mine countermeasure vessels until the new Mine Hunting Capability enters service.
Future Commando (Royal Navy)	Funding of £0.7 billion for the modernisation of the Royal Marines, which will enable Commando Force to operate from the sea in a high-threat maritime environment, has not been included.
Directed Energy Weapons (Strategic Programmes Directorate)	This is a novel capability requirement with assessment phase funding. The Ministry of Defence will review this at the end of the assessment phase. The capability might replace or supplement other equipment capabilities.

- **1.13** Some TLBs have swapped between these two approaches over the years. For example, since last year the Navy has reconsidered its previous policy of only programming what it can afford. In last year's Plan it included $\pounds 2.3$ billion for new entries into its shipbuilding pipeline, which was what it assessed it could afford. In this year's Plan, the Navy has included the full predicted costs of these new entries, which are $\pounds 5.9$ billion more than the budget available (see Figure 5). These different approaches complicate the defence-wide picture for senior decision-makers. They also make it hard for users of the Plan to compare on a like-for-like basis the in-year position of all the TLBs or, potentially, the year-on-year position of an individual TLB.
- **1.14** The rest of this Part examines the assumptions made by the MoD in reaching its affordability assessment. The MoD takes account of various risks and opportunities which may affect forecast costs.

The assumptions underpinning the MoD's affordability assessment

1.15 After forecasting project costs the MoD adjusts its forecast costs to reflect the savings it expects to make, and its assessment of its ability to deliver equipment projects as planned. The MoD reduced gross project costs by £35.9 billion to a forecast cost of £305.5 billion in this year's Plan (**Figure 6** overleaf). These adjustments have increased by £5.5 billion (18%) compared with last year. The failure to identify and deliver all these savings would create additional financial pressures, with the TLBs needing to make equivalent reductions in planned project expenditure.

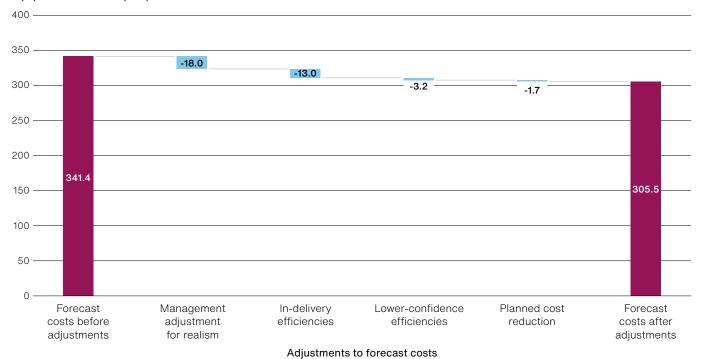
Planned cost reductions

- **1.16** The MoD has reduced the Plan's forecast cost by £1.7 billion, to reflect 'planned cost reductions'. These represent reductions in planned deliveries, such as choices between project options or reductions in project requirements, which the TLBs have not yet reflected in project cost forecasts. These planned reductions are £2 billion less than the £3.7 billion adjustment the MoD made in last year's Plan.
- **1.17** The MoD classifies planned cost reductions according to the maturity of the plans (**Figure 7** on page 23):
- £0.5 billion are 'through savings', which are cost reductions that the TLBs expect to deliver through planned activity but which they have not yet attributed to specific projects. The TLBs must have specific plans for how these will be delivered; and
- £1.2 billion are 'assumptions', which are cost reductions for which the TLBs have no specific or detailed plans. These include planned savings targets that the TLBs have agreed with the MoD that are currently aspirational. The TLBs need to find £0.2 billion of these savings assumptions in the next two years.

Adjustments that reduce forecast project costs in the Equipment Plan 2023-2033

The Ministry of Defence (MoD) has reduced gross project costs in the Equipment Plan (the Plan) by £35.9 billion through various adjustments

Equipment Plan costs (£bn)



Notes

- 1 'Management adjustment for realism' reduces cost forecasts to reflect that some projects will be delivered slower than expected and therefore not spend as much as planned during the period covered by the Plan.
- 2 'In-delivery efficiencies' are planned efficiency savings that the MoD has high confidence in implementing as the Top Level Budgets (TLBs) have delivery plans in place.
- 3 'Lower-confidence efficiencies' are other potential efficiencies that are not yet in delivery.
- 4 'Planned cost reductions' are reductions in planned deliveries, such as choices between project options or reductions in project requirements, which the TLBs have not yet reflected in project cost forecasts.

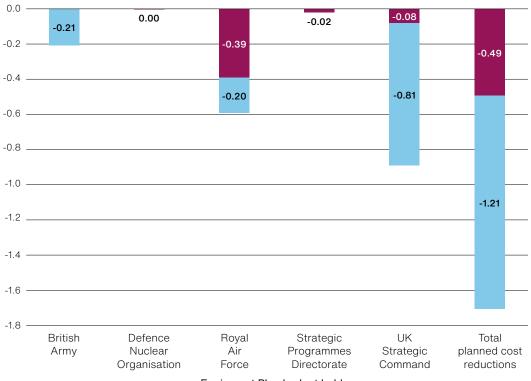
Source: National Audit Office analysis of Ministry of Defence budgetary data

Figure 7

Planned cost reductions included in the Equipment Plan 2023-2033

The Ministry of Defence must find cost reductions of $\mathfrak{L}1.2$ billion for which it has no specific or detailed plans

Reduction to forecast costs from planned cost reductions (£bn)



- Equipment Plan budget holder
- Planned cost reductions through savings
- Planned cost reductions assumptions

Notes

- 1 'Planned cost reductions through savings' are cost reductions that the Top Level Budgets (TLBs) must have specific delivery plans for, but which they have not yet attributed to specific projects.
- 2 'Planned cost reductions assumptions' are cost reductions for which the TLBs have no specific or detailed plans.
- 3 The Defence Nuclear Organisation oversees all defence nuclear business, including managing a portfolio of programmes in support of the nuclear deterrent. It has planned cost reductions of £250,000.
- 4 The Strategic Programmes Directorate is responsible for the procurement, support, testing and evaluation of complex and novel weapons.
- 5 The UK Strategic Command ensures that joint capabilities, such as medical services, training and education, and intelligence and information systems are developed and managed. It also manages overseas joint operations and the permanent joint operating bases.
- 6 The Royal Navy has no planned cost reductions included in this year's Equipment Plan.

Source: National Audit Office analysis of Ministry of Defence budgetary data

Efficiency savings

1.18 The MoD has reduced the Plan's costs by £16.2 billion for efficiency savings, which it defines as cost reductions that will not lead to a reduction in outputs or capabilities. It has reduced the Plan's forecast costs by £13.0 billion to reflect planned efficiency savings that are currently in delivery (**Figure 8**). The level of in-delivery efficiency savings has increased by £2.9 billion compared with last year. The MoD has high confidence in implementing these efficiencies as the TLBs have plans in place. The MoD therefore deducts these from project cost forecasts rather than recording them as adjustments.

Figure 8

Top Level Budgets' efficiency savings in the Ministry of Defence's (MoD's) Equipment Plan 2023–2033

The MoD has reduced costs by £13.0 billion for in-delivery efficiencies and by £3.2 billion for lower-confidence efficiencies, comprising further efficiency delivery and non-pipeline efficiencies

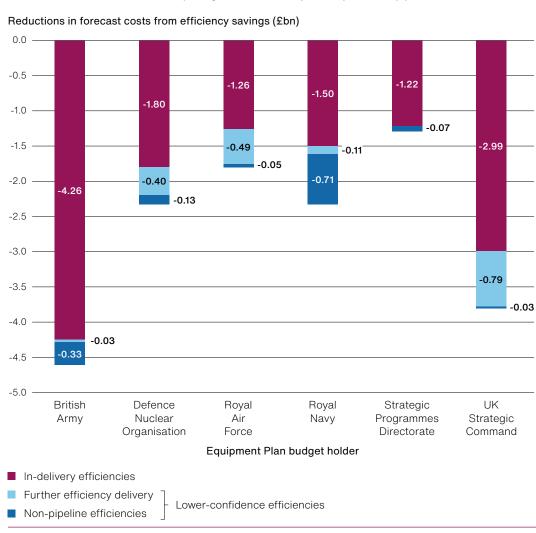


Figure 8 continued

Top Level Budgets' efficiency savings in the Ministry of Defence's (MoD's) Equipment Plan 2023–2033

Notes

- 1 'In-delivery efficiencies' totalling £13.0 billion are those that the MoD has high confidence in implementing and for which it has plans in place.
- 2 'Lower-confidence efficiencies' totalling £3.2 billion are other potential efficiencies that are not yet in delivery. They consist of:
 - 'further efficiency delivery', which are efficiencies that are in the pipeline, but which are not yet in delivery; and
 - 'non-pipeline efficiencies', which are committed cost reductions that have very low maturity efficiency initiatives or targets.
- 3 The Defence Nuclear Organisation oversees all defence nuclear business, including managing a portfolio of programmes in support of the nuclear deterrent.
- 4 The Strategic Programmes Directorate is responsible for the procurement, support, testing and evaluation of complex and novel weapons.
- 5 The UK Strategic Command ensures that joint capabilities, such as medical services, training and education, and intelligence and information systems are developed and managed. It also manages overseas joint operations and the permanent joint operating bases.
- 6 Numbers for lower-confidence efficiencies do not sum because of rounding.

Source: National Audit Office analysis of Ministry of Defence budgetary data

- **1.19** The MoD has also identified other potential efficiencies but has not deducted these from project cost forecasts as it has lower confidence of the TLBs achieving these savings. Total lower-confidence efficiencies are at a similar level to last year £3.2 billion in this year's Plan compared with £3.4 billion in last year's. This year, however, the MoD has further categorised these efficiencies to improve its understanding of the likelihood of the TLBs achieving them:
- 'Further efficiency delivery' are efficiencies that the TLBs have identified, but which are not yet in delivery. These total £1.8 billion (58%) of lower-confidence efficiencies.
- 'Non-pipeline efficiencies' are very low maturity efficiency initiatives or efficiency targets for which the TLBs have not developed initiatives to deliver them. These total £1.3 billion (42%) of lower-confidence efficiencies. The Navy is responsible for delivering £0.7 billion of these, but it told us it is struggling to find new efficiencies.

To meet the expectations set out in the Plan, the TLBs must find $\mathfrak{L}0.6$ billion of lower-confidence efficiencies in the next two years, including $\mathfrak{L}0.3$ billion of non-pipeline efficiencies (**Figure 9** overleaf).

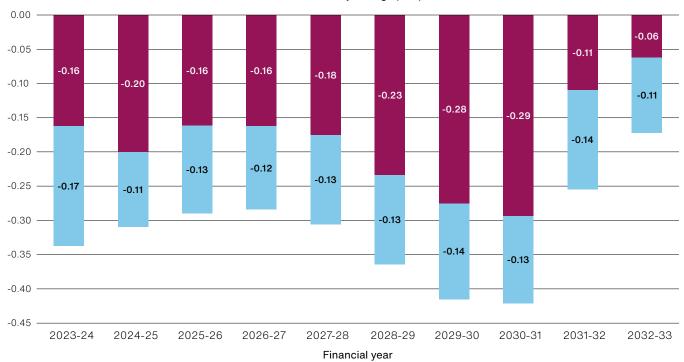
⁶ The Navy has reduced its expectations about the value of lower-confidence efficiencies and savings it can deliver compared with last year. The value of lower-confidence efficiencies included by the Navy in this year's Plan is £0.8 billion over 10 years, compared with £1.3 billion in last year's Plan. Similarly, this year the Navy has included no lower-confidence cost reductions, compared with £0.6 billion in last year's Plan.

Figure 9

Profile of lower-confidence efficiency savings in the Ministry of Defence's (MoD's) Equipment Plan 2023-2033

The MoD has reduced forecast costs by £0.6 billion in 2023-24 and 2024-25 for efficiencies it has lower confidence of achieving

Annual reductions to forecast costs from lower-confidence efficiency savings (£bn)



- Further efficiency delivery
- Non-pipeline efficiencies

Note

- 'Lower-confidence efficiencies' are other potential efficiencies that are not yet in delivery. They consist of:
 - 'further efficiency delivery', which are efficiencies that are in the pipeline, but which are not yet in delivery; and
 - · 'non-pipeline efficiencies', which are committed cost reductions that have very low maturity efficiency initiatives or targets.

Source: National Audit Office analysis of Ministry of Defence budgetary data

1.20 In addition to the in-delivery and lower-confidence efficiencies on equipment projects, the MoD is seeking to achieve broader efficiencies from its Transformation Programme. This programme set a £4 billion target for measures to improve the MoD's operating efficiency. In September 2022, the MoD delegated its Transformation savings target to the TLBs and reduced the operating cost budgets of the six TLBs included in the Plan by £3.7 billion over the eight years 2023-24 to 2030-31.7

The MoD had previously reduced the 2022-23 budgets for the six TLBs included in the Plan by $\mathfrak{L}0.1$ billion in December 2021. The MoD has also delegated £0.2 billion Transformation Programme savings to its Head Office, DE&S and the Defence Infrastructure Organisation for the nine years 2022-23 to 2030-31.

Management adjustment for realism

- **1.21** The TLBs make assumptions about their ability to deliver equipment projects, taking account of factors such as suppliers' capacity to deliver. They reduce cost forecasts to reflect that some projects will be delivered slower than expected and therefore not spend as much as planned during the period covered by the Plan. This is called 'management adjustment for realism'. The adjustment has increased by 36% from £13.2 billion in the 2022 Plan to £18.0 billion in in this year's Plan.8 We expected the realism adjustment to have increased because forecast costs have risen by 27%, and the TLBs have reported difficulties with delivering programmes because of supply chain challenges and insufficient staffing at both the TLBs and the delivery organisations.
- **1.22** Deductions for realism are highest as a percentage of costs in the early years of the Plan, indicating that the TLBs have higher levels of overprogramming in these years (**Figure 10** overleaf). This pattern is the same as in last year's Plan, and it reflects the increased risks in delivering a larger number of programmes, resulting from investment decisions in the Integrated Review. All the TLBs have made larger adjustments for realism compared with last year.

The MoD's assessment of the affordability range

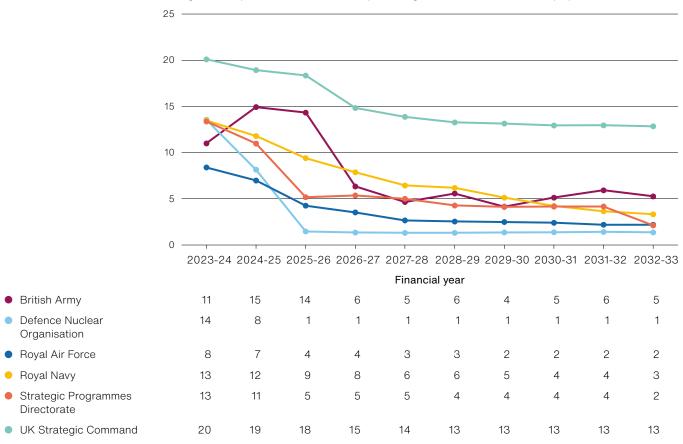
- **1.23** The MoD's central estimate of the Plan's affordability a deficit of £16.9 billion is based on several assumptions, including full delivery of efficiency targets. The MoD recognises, however, that delivering complex, long-term projects is uncertain and produces a range of outcomes using best-case and worst-case estimates for some adjustments. These include programme costs being larger or smaller than the central estimate and foreign exchange rate movements (**Figure 11** on page 29). The MoD estimates that in its worst-case scenario if all identified risks materialise costs would increase by £12.9 billion, which would make the Plan unaffordable by £29.8 billion. In the best-case scenario, costs would decrease by £9.3 billion, reducing the Plan's deficit to £7.6 billion.
- **1.24** Each year the MoD's Cost Assurance and Analysis Service (CAAS) provides independent assurance on cost forecasts for a sample of less mature and higher-risk projects. This means that CAAS's sample differs from year-to-year, and it is not representative of the full Plan. This year the CAAS sample covers around 49% of the Plan's costs, and its central estimate is that these projects could cost £1.3 billion more than the costs included in the Plan. CAAS found that in its worst-case scenario costs could be £14.5 billion higher than project team estimates, but CAAS believes that this level of cost increase is very unlikely.

Figure 10

Management adjustment for realism as a percentage of Top Level Budgets' (TLBs') annual forecast cost in the Equipment Plan 2023–2033

Management adjustment for realism is highest in the Equipment Plan's (the Plan's) early years, indicating that the TLBs have higher levels of overprogramming in these years





Notes

- 1 The management adjustment for realism reflects the fact that some projects will be delivered slower than expected, and therefore not spend as much as planned during the period covered by the Plan. It is based on the TLBs' assumptions about their ability to deliver equipment projects, taking account of factors such as suppliers' capacity to deliver.
- 2 The Defence Nuclear Organisation oversees all defence nuclear business, including managing a portfolio of programmes in support of the nuclear deterrent.
- 3 The Strategic Programmes Directorate is responsible for the procurement, support, testing and evaluation of complex and novel weapons.
- 4 The UK Strategic Command ensures that joint capabilities, such as medical services, training and education, and intelligence and information systems are developed and managed. It also manages overseas joint operations and the permanent joint operating bases.

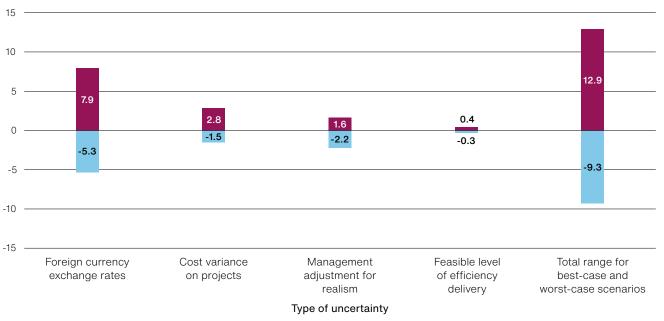
Source: National Audit Office analysis of Ministry of Defence budgetary data

Figure 11

The Ministry of Defence's (MoD's) assessment of the range of the deficit for the Equipment Plan 2023–2033

The MoD assesses that in the worst-case scenario the Equipment Plan's (the Plan's) estimated £16.9 billion deficit would increase by £12.9 billion and in the best-case scenario it would decrease by £9.3 billion

Range for best-case and worst-case scenarios estimated by the MoD (£bn)



- Worst-case cost increase (£bn)
- Best-case cost decrease (£bn)

Notes

- 1 The best-case and worst-case scenarios show the maximum changes that the MoD has calculated to its central estimate of the Plan's affordability (a £16.9 billion deficit).
- 2 The MoD estimated a worst-case scenario if all identified risks materialise of costs increasing by £12.9 billion, which would make the Plan unaffordable by £29.8 billion. In the best-case scenario, costs would decrease by £9.3 billion, reducing the Plan's deficit to £7.6 billion.
- 3 'Foreign currency exchange rates' calculates the impact of a 20% increase and decrease in foreign exchange rates for US dollar and euro.
- 4 'Cost variance on projects' is the difference between the Cost Assurance and Analysis Service's (CAAS's) central estimate of project costs and project delivery teams' forecasts. Each year CAAS independently assesses a sample of equipment project costs and compares its estimate of the realistic outturn with the delivery team's forecast. This year, CAAS's assessment of the likely worst-case cost increase is that the Dreadnought programme will cost £2.8 billion more than the delivery team's forecast, and that underspends that CAAS has estimated for non-Dreadnought projects do not occur. The best-case cost decrease is that CAAS's estimate for net underspends on non-Dreadnought projects of £1.5 billion occur, and that Dreadnought's cost is in line with the delivery team's forecast.
- 5 'Management adjustment for realism' reflects the fact that some projects will be delivered slower than expected, and therefore not spend as much as planned during the period covered by the Plan. It is based on the Top level Budgets' (TLBs') assumptions about their ability to deliver equipment projects, taking account of factors such as suppliers' capacity to deliver. For the best-case and worst-case scenarios, MoD calculates a 25% increase and decrease in the TLBs' estimate of realism.
- 6 'Feasible level of efficiency delivery' calculates a 50% increase and decrease in the value of less mature efficiency savings and savings commitments.
- 7 Numbers for the worst-case scenario do not sum because of rounding.

Source: National Audit Office analysis of Ministry of Defence budgetary data

- 1.25 In the 10 years to 2032-33, CAAS estimates that the costs of the Dreadnought programme to construct new nuclear-armed submarines will be £2.8 billion more than the costs included in the Plan. Factors influencing the CAAS estimate for Dreadnought include it taking a more conservative view of the programme's opportunities, economic pressures, and resourcing challenges. Due to the Dreadnought programme's scale and complexity, CAAS examines its costs each year. Last year, CAAS estimated that the remaining cost to completion - which is more than 10 years - could be £1.2 billion more than the project team's estimate. This year the variance is £4.0 billion, a £2.8 billion increase.
- 1.26 For the remainder of its sample, covering 50 projects, the total CAAS cost estimate is £1.5 billion less than the total based on project teams' estimates. This is because there are four projects where CAAS expects costs to be lower than project teams' estimates by £0.5 billion or more:
- Ship Submersible Nuclear Replacement of nuclear-powered submarines: £2.0 billion less. CAAS forecasts that delays will drive around £2.0 billion cost beyond the 10-year forecast. This makes the earlier years more affordable without highlighting the cost increases in later years.
- In-Service Submarines: £1.0 billion less. CAAS forecasts that support for in-service submarines will be curtailed to match the allocated budget.
- Atomic Weapons Establishment site costs: £0.7 billion less. The CAAS forecast was based on prior year actual costs and reasonable cost increases because it received limited supporting evidence for the project team's estimate.
- Apache Helicopter long-term training and support service: £0.5 billion less. CAAS forecasts that actual flying hours will be significantly less than planned.

Reflecting the risk of increases in cost forecasts

- 1.27 The cost estimates in the Plan are inherently uncertain because of the considerable challenges in forecasting the costs of complex, long-term programmes. The economic and geopolitical uncertainty following the COVID-19 pandemic and Russian invasion of Ukraine has increased uncertainty. The MoD reflects this uncertainty by recording and monitoring two levels of risk:
- Risk inside cost (RIC), which is risk that the MoD judges will probably occur and so includes it in its forecast costs.
- Risk outside cost (ROC), which is risk that the MoD is tracking but it judges will probably not occur.

Combined RIC and ROC in this year's Plan has increased by £21.3 billion (56%) to £59.5 billion compared with last year, and all the TLBs are reporting more risk than last year.

1.29 ROC has increased from £25.0 billion in last year's Plan to £36.7 billion this year, a 47% increase. The largest increase is at the DNO, where ROC has increased by 50% from £14.3 billion to £21.5 billion. For the nine common years included in both last year's and this year's Plans (2023-24 to 2031-32), ROC has increased by £10.8 billion (47%) from £23.2 billion to £34.0 billion.

Part Two

Cost pressures affecting the Ministry of Defence

- 2.1 In this Part we examine the cost pressures affecting the Ministry of Defence (MoD) and the implications of these for the Equipment Plan (the Plan). It covers:
- external cost pressures affecting the Plan;
- internal cost pressures;
- the impact of the creation of the Defence Nuclear Enterprise (DNE), which ringfences funding for the nuclear deterrent;
- responses to a more volatile international situation; and
- the MoD's response to cost pressures.

External cost pressures affecting the Plan

Inflation

2.2 Inflation is having an impact on costs in all areas of defence spending, but the MoD has not received additional funding to address it so the Top Level Budgets (TLBs) must deal with inflation within existing budgets. In August 2023, the MoD estimated that inflation would account for £10.9 billion of the Plan's cost increases. The MoD's method for estimating inflation remains work in progress – for example, the Defence Nuclear Organisation (DNO) told us that inflation may have been underestimated in the 2023 budget round, and that inflation is proving more sustained than expected. Furthermore, some existing contracts are compounding the impact of rising costs by prescribing higher than inflation increases: for example, payments in the Royal Air Force's (RAF's) Voyager contract increase each year by the Retail Price Index plus 1.5%.9

Future Strategic Tanker Aircraft (Voyager) is a Public Finance Initiative contract to provide air-to-air refuelling and air transport services, which began in March 2008 and is due to end in March 2035.

- 2.3 Some existing defence contracts agreed before the recent period of high inflation have provided short-term protection from cost increases. This is because the MoD sought to pass on inflation risk to its contractors. For example, the MoD has previously negotiated firm-price contracts, in which suppliers bear all inflation increases for a set period, after which index-linked price increases are applied. It has also protected itself from volatile movements in the fuel, foreign exchange, and utilities markets by buying these in advance. There remains longer-term risk, however. For example, when contracts are renewed, contractors may seek to include several years' worth of inflation, not just the rate at the time of renegotiation. In addition, index-linked contracts will eventually catch up with the inflationary peak, while forward purchasing protection will expire, at which point higher prices will feed through into the MoD's costs.
- **2.4** The MoD is reviewing how it balances inflation risk between itself and its suppliers. To minimise future contract prices, the MoD has decided to take on more of the inflation risk itself. For example, firm-price contracts have become more expensive in the past two years, so the MoD has decided to use index-linked contracts wherever possible. Since 2022, the MoD has worked to improve its understanding of defence inflation. The MoD does not face a single rate of inflation, as its costs fall into a variety of sectors with different inflation rates. It has now identified around 200 industry-specific indices to support commercial officers when negotiating escalation rates in future MoD contracts.

Supply chain

- **2.5** The MoD is also facing supply chain risks and industry capacity constraints, mainly due to skills gaps, shortages of key components and an increased demand for defence equipment in other countries in response to the war in Ukraine. For example:
- the British Army (Army) told us that the lead time for delivery of semiconductors has increased from one to three weeks to more than 50 weeks;
- the Royal Navy (Navy) said that skilled workforce availability, such as a shortage of welders, has affected the major shipbuilding programmes; and
- the UK Strategic Command noted the delays caused by increased competition for digital skills.

These constraints have delayed the delivery of projects. This might result in savings in the short term, but the MoD expects they will add future cost pressure, including the cost of maintaining existing equipment in service for longer when the replacement has been delayed. For example, the Navy told us that the cost of re-fitting a Type 23 frigate has increased from $\mathfrak{L}23$ million to $\mathfrak{L}100$ million because their age means that the required work is now much more extensive and takes almost twice as long to complete.

2.6 The MoD is looking for ways to encourage suppliers to invest in their capacity. For example, the MoD expects that Defence Equipment & Support's (DE&S's) July 2023 order with BAE Systems for 155mm artillery shells will increase the UK's stockpile and deliver an eight-fold increase in production capacity. However, supplier confidence to invest in its capacity relies on the MoD maintaining the demand it has promised. The failure to provide budgets that match ambition, such as with the £5.9 billion funding shortfall in the shipbuilding pipeline, risks undermining such confidence.

Internal cost pressures

Increasing cost pressure across overall TLB budgets

- 2.7 The financial pressure facing the TLBs is evident in their budgets for infrastructure and operating costs as well as for equipment. All six TLBs have total forecast costs which exceed their total budgets - ranging from a deficit of £3.0 billion at the UK Strategic Command to £38.9 billion at the DNO (Figure 12), although the DNO deficit does not take account of centrally held funding for the new DNE. Five of the six TLBs have larger deficits than last year - the exception is the Army - and the TLBs' total 10-year forecast deficit has increased from £9.7 billion last year to £76.0 billion this year. 10 Pressures include inflation in all areas of spending, not just in their equipment plans, and pay awards that are significantly higher than planning assumptions. The MoD increased the TLBs' 10-year budgets by £6.5 billion (1%) in total during the 2023 budget round.
- 2.8 The MoD's overall financial position has worsened since last year. The MoD forecasts that during the 10 years to 2032-33 total defence spending will exceed the total defence budget by £42.5 billion, compared with £4.3 billion last year (Figure 13 on page 36).

Effectiveness in delivering programmes

- 2.9 In addition to external economic pressures such as inflation, the effectiveness of the TLBs and the delivery agencies in delivering programmes is a key driver of the Plan's costs. Effective programme management, including skilled contract negotiation and management, can control project schedules, reduce uncertainty and prevent or limit cost increases.
- 2.10 The MoD's large and complex portfolio makes programme delivery skills crucial. The MoD has 52 programmes in the Government Major Projects Portfolio (GMPP), with a total whole-life cost of £255.4 billion. This is the largest portfolio and the highest whole-life cost by department, accounting for more than one-fifth of the GMPP by number, and almost one-third of GMPP's forecast whole-life costs.

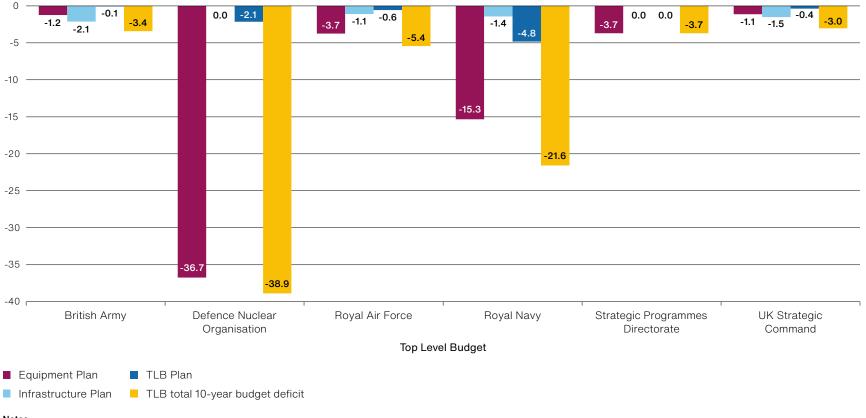
¹⁰ The size of the increase in the forecast deficit is partly because as at 31 March 2023 the MoD had retained an additional £43.9 billion funding following the Spring Budget 2023 as centrally managed expenditure (£34.5 billion for nuclear budgets, and £9.4 billion for conventional budgets), rather than delegating it to the TLBs (see paragraph 1.9 above).

Figure 12

Variance between total forecast costs and budgets for the Top Level Budget (TLB) holders, 2023-24 to 2032-33

All six TLBs have total forecast costs that exceed their total budget for equipment, infrastructure and running the TLB

10-year deficit by plan (£bn)



Notes

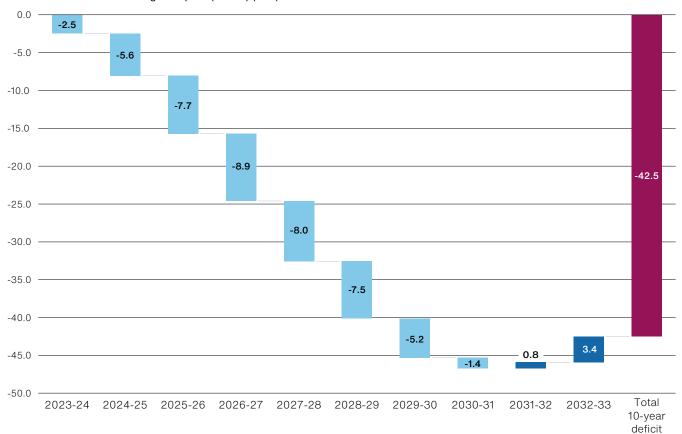
- The Infrastructure Plan covers maintenance of the defence estate, and the TLB Plan covers operating costs including workforce, training and other costs.
- 2 The Defence Nuclear Organisation oversees all defence nuclear business, including managing a portfolio of programmes in support of the nuclear deterrent.
- The Strategic Programmes Directorate is responsible for the procurement, support, testing and evaluation of complex and novel weapons.
- 4 The UK Strategic Command ensures that joint capabilities, such as medical services, training and education, and intelligence and information systems are developed and managed. It also manages overseas joint operations and the permanent joint operating bases.
- 5 Numbers for the Defence Nuclear Organisation and the Royal Navy do not sum because of rounding.

Source: National Audit Office analysis of Ministry of Defence budgetary data

Forecast shortfall in the overall defence budget, 2023-24 to 2032-33

Forecast costs exceed the annual defence budget in the eight years to 2030-31, resulting in a £42.5 billion deficit in the period covered by the Equipment Plan 2023-2033

Forecast annual defence budget surplus/(deficit) (£bn)



Financial year

- Total
- Annual budget surplus
- Annual budget deficit

Notes

- 1 The defence budget consists of the Equipment Plan, the Infrastructure Plan and the Top Level Budget Plan, which covers operating costs including workforce, training and other costs.
- 2 Numbers do not sum because of rounding.

Source: National Audit Office analysis of Ministry of Defence budgetary data

- **2.11** The Plan includes most 46 of the 52 of the MoD's GMPP programmes. For many of these, delivery is subject to significant uncertainty. The Infrastructure and Projects Authority has rated:
- five equipment programmes as red, meaning that successful delivery appears to be unachievable. These are: the Future Combat Air System; core production capability for nuclear submarine reactors; MODNet Evolve, which will sustain the MoD's information and communications technology infrastructure when the current contract ends; Brimstone 3 air-to-surface weapon; and Spearcap 3 air-to-air weapon;
- 35 equipment programmes as amber, which means delivery appears feasible, but there exist significant issues requiring management attention; 12 and
- two equipment programmes as green, which means successful delivery on time, budget and quality appears highly likely. These are Martlet anti-surface guided weapons for use by helicopters against ships, and Fleet Solid Support ships which will provide munitions, supplies and provisions to the Navy.¹³
- **2.12** The MoD has made progress in training and appointing senior responsible owners (SROs) to oversee programmes. However, these SROs need teams to support them funding for which is constrained in some TLBs. For example, the RAF told us that it was scaled to deliver 14 programmes but is running 34. It has agreed a 63-post increase for its programme delivery team, but because this must be funded from existing budgets, coupled with a civil service recruitment freeze, the posts have been put on hold.
- **2.13** Even when funding is available, some TLBs have reported difficulty recruiting and retaining suitably qualified and experienced staff:
- The Army told us that despite providing funding for delivery teams, it has been challenging to recruit staff with the right qualifications and experience.
- The DNO has earmarked £0.8 billion over 10 years to improve skills but expects it will take four to five years to establish a pipeline of skilled staff.

Analysis of MoD reports on 30 major equipment programmes shows that in March 2023, recruitment and retention problems resulted in SROs rating the availability of skills and capabilities as amber for 24 programmes and red for four programmes.

¹¹ The full definition is: "Successful delivery of the project appears to be unachievable. There are major issues with project definition, schedule, budget, quality and/or benefits delivery, which at this stage do not appear to be manageable or resolvable. The project may need re-scoping and/or its overall viability reassessed."

¹² The full definition is: "Successful delivery appears feasible but significant issues already exist, requiring management attention. These appear resolvable at this stage and, if addressed promptly, should not present a cost/schedule overrun."

¹³ The GMPP does not disclose the rating of four equipment programmes for security reasons.

2.14 Several TLBs mentioned that deliverability had been affected by staff constraints at DE&S. In March 2023, DE&S identified 20 roles where it did not have the number of skilled staff it needed and which had a significant or high impact on delivery: these included commercial staff, project managers, data scientists, business analysts and engineers. DE&S identified that causes of this included insufficient new recruits, more staff leaving than expected and uncompetitive pay. The DE&S annual report and accounts for 2022-23 noted that it had faced challenges recruiting permanent staff in the Bristol area, where it is based, requiring it to increase its use of temporary staff instead, which has increased its costs.14 DE&S is developing a new operating model which it intends will improve efficiency and enable staff to work smarter, faster and more collaboratively. It aims to put the new model in place by March 2025.

The Defence Nuclear Enterprise

- 2.15 Maintaining the nuclear deterrent remains the MoD's highest defence priority. At the Spring Budget 2023, the Chancellor of the Exchequer said there was a need for "enduring additional investment" and allocated an additional £3 billion to the nuclear enterprise across 2023-24 and 2024-25. The additional funding will support areas such as the construction of industrial infrastructure and enhancing support to in-service submarines. 15 HM Treasury has recognised that beyond 2025 there are significant uncertainties in long-term nuclear costings and funding. HM Treasury is increasing funding for the deterrent by £2 billion each year, and it will consider nuclear funding during the next Spending Review.
- 2.16 Following the Spring Budget 2023, HM Treasury required the MoD to set out the DNE budget separately from other defence spending. The DNE includes all direct elements supporting the deterrent programme and nuclear-powered attack submarines. It consists of the whole DNO budget, in-service submarine support elements from the Navy, including bases, and related programmes in the UK Strategic Command. HM Treasury acknowledges that the DNE's boundary may need to change over time and that the MoD will be able to negotiate to bring further programmes and activities within it.
- 2.17 Funding for the DNE is ringfenced and totals £109.8 billion over the 10 years from 2023-24 to 2032-33. This is the minimum budget that HM Treasury expects the MoD to spend on DNE activities, and any budget surpluses cannot be transferred to non-DNE activities. However, MoD currently forecasts that costs for these 10 years will be £117.8 billion, £7.9 billion more than the indicative budget.

¹⁴ The number of existing temporary staff earning £245 or more per day on 31 March 2023 was 995, compared with 829 on 31 March 2022. During 2022-23 the DE&S engaged 1,316 temporary staff earning £245 or more per day, compared with 1,150 new engagements during 2021-22.

 $^{^{\}cdot}$ £1 billion in 2023-24 and £2 billion in 2024-25.

- 2.18 HM Treasury has also used the DNE settlement to:
- introduce various flexibilities intended to enable the MoD to exploit opportunities and mitigate risk. These include: raising to £1 billion the MoD's spending delegation for the whole-life costs of DNE programmes; allowing the MoD freedom to move funds within the DNE ringfence between the two remaining years of the Spending Review period (2023-24 and 2024-25); and exempting DNE from some constraints that apply elsewhere in the civil service on pay and number of posts, provided this can be funded from within the nuclear ringfence; ¹⁶ and
- set out the arrangements for the MoD to use the ringfenced £10 billion contingency for the Dreadnought programme. HM Treasury has clarified that this money is intended to allow the MoD to respond to unforeseen events and to take advantage of opportunities to accelerate or de-risk the programme. The MoD must discuss access to the contingency on a case-by-case basis with HM Treasury.
- **2.19** The creation of the DNE ringfence limits where the MoD can cut costs to address the shortfall in the overall defence budget to areas of TLB spending outside the ringfence. However, some capabilities that have a role in supporting the operation of the deterrent are not ringfenced. These include Navy frigates and minehunters, which provide the deterrent with access to the sea, and the RAF's Poseidon maritime patrol aircraft. The Navy told us that it would prioritise funding for those supporting capabilities. That would further restrict those areas in which the Navy can make cost savings. HM Treasury recognises that it will be difficult for the MoD to fund fully the DNE's future requirements through the reprioritisation of conventional capabilities. The Plan shows that the current budget for conventional equipment is £9 billion less than forecast costs.

Responses to a more volatile international situation

- **2.20** In response to international developments including the war in Ukraine, the government published a 'refresh' of its 2021 Integrated Review in March 2023, and the MoD published a refreshed Defence Command Paper in July 2023. These reassessed the MoD's capability priorities, assumptions on stockpiles and levels of resilience. The 2023 Defence Command Paper concluded that much of the capability requirements identified in 2021 remained unchanged but set out where the MoD must move more quickly or do things differently. The MoD has not yet fully worked through these implications, but emerging issues and financial consequences include:
- the re-emergence of resilience and agility in sustaining capabilities and weapon stockpiles as a priority for the MoD. It has earmarked more than £5 billion additional funding for this over the next 10 years (**Figure 14**). However, the lead time for replenishing stock and establishing war holdings presents challenges for the TLBs. In the past decade, principles such as 'lean' stockpiles and 'just in time' delivery of spares and equipment have provided the MoD with efficiencies that have assisted it in improving the Plan's affordability. The MoD is considering how it can manage the right balance between resilience and efficiency;
- the TLBs are considering lessons learned from the war in Ukraine and the
 impact on their future capability requirements. This is likely to identify new
 capabilities that are either not currently included in the Plan, or whose priority
 is likely to increase. Emerging priorities include: integrated air-missile defence,
 providing layered defence against aircraft, cruise missiles and ballistic missiles;
 deep-fire surface-to-surface weapons, to allow the Army to strike deep into an
 enemy's rear areas; unmanned aerial systems to operate drones; and electronic
 warfare; and
- that strategic international partnerships are essential. The MoD is working to establish what it must do on its own, and what it can do with NATO partners and other allies.
- **2.21** By 31 March 2023, the UK had committed £2.3 billion in military spending to Ukraine to provide equipment, munitions, training and support. This included more than 10,000 anti-tank weapons, 200,000 rounds of artillery ammunition and 300 armoured and protected vehicles. Support for Ukraine has affected some MoD activities, however. Although the spending on equipment for Ukraine is in addition to the MoD's own requirements, 'grants in kind' of assets have reduced weapons stockpiles and brought forward the retirement of AS90 self-propelled artillery, necessitating the £0.2 billion purchase of 14 Archer artillery systems as replacements. Furthermore, support for the Ukrainian Air Force has put strain on the RAF's pilot training.

¹⁷ Additional costs of operations and assets granted in kind to Ukraine have been met in 2022-23 and 2023-24 by HM Treasury through the Reserve. In June 2022 the government announced £1 billion of military support to Ukraine in addition to the previously committed £1.3 billion of funding for military aid. In September 2022 the then Prime Minister announced that in 2023 the UK would match or exceed the amount of support to Ukraine it had provided in 2022.

Figure 14

Additional money for the Ministry of Defence (MoD) to build stockpiles and resilience, November 2022 to July 2023

Over the next 10 years the MoD intends to invest more than £5 billion in bolstering its munitions stockpiles and resilience

Event	Description	Amount of Funding
		(£bn)
Autumn Statement, November 2022	HM Treasury to provide the MoD up to £560 million over the next two years from the Reserve to increase stockpiles.	0.56
Spring Budget, April 2023	HM Treasury to provide the MoD with £0.985 billion in 2023-24 and £0.965 billion in 2024-25 to improve resilience and readiness, for example replenishing and bolstering munitions stockpiles and improving munitions infrastructure.	1.95
Defence Command Paper, July 2023	The MoD announced it would invest an additional £2.5 billion in its munitions and stockpiles through the coming decade, on top of the increased investment committed in the Autumn Statement and Spring Budget.	2.50
Total		5.01

Source: National Audit Office analysis of published Ministry of Defence and HM Treasury papers

The MoD's response to cost pressures

- **2.22** The MoD's focus during the 2023 budget cycle has been primarily to live within its budget for 2023-24 and 2024-25. However, the MoD faces constraints on what it can do: for example, 58% of the TLBs' Equipment Plan budget for the next two years is committed. Short-term measures that the MoD has considered include restricting civil service recruitment and forecasting that historical rates of underspend because of delays to programmes will continue to occur.
- **2.23** The Spring Budget 2023 provided the MoD with £4.95 billion additional funding for 2023-24 and 2024-25; £3.0 billion of this was ringfenced for investment in the nuclear enterprise (see paragraph 2.15). The remaining £1.95 billion was not ringfenced and HM Treasury said it should be used to improve resilience and readiness. The MoD has full flexibility in how it uses this money and is considering using it to help offset its funding shortfall in 2023-24 and 2024-25.

- 2.24 The MoD has also launched an Increasing Defence Outputs initiative, which aims to enhance readiness by increasing the productivity and output of existing equipment. The initiative defines readiness as a combination of the availability, capability and sustainability of existing equipment. It is examining how to optimise readiness by adjusting processes, priorities and culture, rather than through simpler methods, such as increasing the amount of equipment. The RAF, the Army and the Navy are all engaged with this initiative. However, it is at an early stage so has had limited impact to date.
- 2.25 The MoD has started 'balance of investment' work for the 10-year defence budget to address the £42.5 billion deficit. However, the MoD is not planning to make major decisions about cancelling programmes until after the next Spending Review, which it expects is likely to occur in 2024. The Spring Budget 2023 restated the government's aspiration over the longer term to invest 2.5% of gross domestic product (GDP) in defence, as the fiscal and economic circumstances allow: in 2022, defence spending was 2.1% of GDP. Because the timing and size of this increase is uncertain, the MoD has not included it in its forecast budgets. Furthermore, the MoD does not want to limit the options available for consideration at the Spending Review. In our judgement, however, the MoD's approach undermines the Plan's purpose, which is to balance spending priorities with budgeting parameters. It also carries the risk that the MoD will fund equipment programmes for two more years which it might then decide to cancel.

Appendix One

Our audit approach

Our scope

- 1 The Ministry of Defence (MoD) introduced the Equipment Plan (the Plan) in 2012, intending to assure Parliament that its spending plans were affordable. Each year since the Plan was introduced, the National Audit Office has published a report in parallel, examining the MoD's assessment of the Plan's affordability and its response to the financial challenges it faces. In our study, we:
- reviewed the MoD's 10-year forecast of the defence budget, and the assumptions underpinning it;
- reviewed the basis for the MoD's apportionment of the overall budget between the Equipment Plan and other areas of spending. This included consideration of assumptions underpinning other areas of spending;
- evaluated how the MoD treated shortfalls between its anticipated budget and its spending plans (including how this has changed from previous years);
- drew on the National Audit Office's best-practice toolkits on managing portfolios and accountability; and
- held discussions with MoD officials, including representatives of relevant Top Level Budgets (TLBs).
- **2** We reached our conclusions based on our analysis of evidence collected during fieldwork between April and October 2023. We also drew on findings from our previous Equipment Plan reports.

Our evidence base

Document review

- **3** To examine whether forecast costs within the Plan are realistic we:
- evaluated the detailed forecast cost data which feeds into the Plan, performing sense checks and tests of data integrity, and reviewed any significant movements;
- analysed detailed project cost forecasts to identify what types of projects are in the Plan and their cost profiles, which we compared with data from previous Plans;
- reviewed several project business cases submitted in 2022-23 and identified issues that might affect their delivery, including cost increases, supply chain issues and delays; and
- reviewed the report prepared by the MoD's Cost Assurance and Analysis Service (CAAS), which provides an independent estimate of the cost of Equipment Plan projects (this year covering 52 projects, accounting for 49% of the Plan's value).
- **4** To assess the MoD's assumptions about its ability to reduce costs, we reviewed:
- the MoD's process for setting the TLBs' cost reduction targets;
- plans to deliver 'in-delivery efficiencies' and 'further efficiencies';
- plans to deliver 'planned cost reductions', and how this varies between the TLBs;
- the MoD's and the TLBs' assessment of management adjustment for realism, and how this varied between the TLBs; and
- the MoD's own assessment of the assurance arrangements it has in place to validate savings from transformation initiatives.
- **5** To assess the Plan's underlying processes, we:
- reviewed management information the MoD produced to monitor its 2022-23 spending, and the minutes of the MoD committees which discussed it; and
- evaluated data on the MoD's staff capability and skills.

- **6** To assess the relationship between the Plan and military capability requirements, we reviewed:
- projects' reports sent to various MoD assurance processes;
- assessments of projects by MoD committees;
- the MoD's latest Defence Capability Assessment Register; and
- the TLBs' assessments to the MoD of the impact of their budgets on military capability.

Interviews

- 7 To understand the budget-setting process, and spending plans, we interviewed:
- MoD officials and representatives of the TLBs responsible for the information in the Plan. We discussed issues across the full breadth of our report, focusing closely on the budget-setting process and resulting spending plans, as well as consideration of pressures such as inflation and supply chain risks on the Plan; and
- MoD officials about the relationship between the Plan and assessments of military capability.

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