

Public Accounts Committee

Oral evidence: The UK's F-35 stealth fighter capability, HC 1232

Monday 8 September 2025

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Members present: Sir Geoffrey-Clifton Brown (Chair); Mr Clive Betts; Mr Luke Charters; Rachel Gilmour; Sarah Green; Lloyd Hatton; Chris Kane; Sarah Olney; Michael Payne; Oliver Ryan.

Treasury Committee member present: Dame Meg Hillier.

Defence Committee members present: Mr Calvin Bailey; Lincoln Jopp.

Gareth Davies, Comptroller and Auditor General, NAO, Helen Holden, Director, NAO, Tom McDonald, Director, NAO, and David Fairbrother, Treasury Officer of Accounts, HM Treasury, were in attendance.

Questions 1 - 136

Witnesses

[I:](#) David Williams CB, Permanent Secretary, Ministry of Defence; Dominic Wilson, Director General Transformation, Ministry of Defence.

[II:](#) David Williams CB, Permanent Secretary, Ministry of Defence; Air Chief Marshal Sir Richard Knighton KCB ADC FREng, Chief of the Defence Staff; Air Commodore Nick Lowe DSO, Head Capability Delivery and Senior Responsible Owner, F-35 Programme.

Written evidence from witnesses:

– [Add names of witnesses and hyperlink to submissions]

Reports by the Comptroller and Auditor General

The Afghanistan Response Route (HC 1288)

The UK's F-35 capability (HC 989)

Examination of witnesses

Witnesses: David Williams and Dominic Wilson.

Q1 Chair: Welcome to the Public Accounts Committee on Monday 8 September 2025. The Afghan response route, or ARR, was launched by the Ministry of Defence following a data breach on 22 February 2022, which resulted in the disclosure of unauthorised personal information on many thousands of individuals. This data breach put the lives of many of those at risk, leading to over 7,000 becoming eligible for resettlement in the UK. The MOD estimates that the cost of resettling these people through the ARR scheme as a result of the February 2022 data breach stands at around £850 million. However, the MOD cannot say for certain exactly how much it has spent on this scheme.

Today, we will therefore be challenging the MOD on how the breach occurred, what lessons it has learned from the incidents, and its subsequent management of it. We will also be examining the number of people affected, and the past and anticipated future costs associated with the breach.

Once this first panel has concluded, we will then be moving on to the second part of the session, examining the UK's F-35 stealth fighter capability, for which we will have a separate panel. We will have a break in between the two, but remember, everybody, that microphones will still be on, so be very careful what you say.

Today, I am very pleased to be able to welcome David Williams, the Permanent Secretary. David was appointed Permanent Secretary in March 2021. Sadly, it was announced in August that David would be leaving the role in the autumn. David, whatever you are going on to, may I wish you every possible success? You have appeared many times before this Committee, for which we are very grateful.

We are also joined by Dominic Wilson, director general transformation. Dominic was appointed as DG transformation 2025. He was appointed the Senior Responsible Owner for Afghan Resettlement in May 2024. Prior to this, he was director general at the Northern Ireland Office from June 2022. A warm welcome to you, Dominic, as I believe that it is your first time in front of the Committee—no doubt a baptism by fire, but we will see. Anyway, you are very welcome.

We are also very pleased to welcome today, as guests of our hearing, Dame Meg Hillier, Chair of the Treasury Select Committee, and Calvin Bailey and Lincoln Jopp as members of the Defence Select Committee.



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Welcome, all of you.

I will start the session with the first question, and then others will pile in afterwards during the session. Permanent Secretary, can you outline exactly how the 22 February 2022 breach occurred?

David Williams: Thank you, Chair. If you would allow me to make a couple of opening points, first, I would just like to add my personal apology, as Permanent Secretary at the Ministry of Defence, to those of the defence ministerial team to all those who have been affected by this data breach. I deeply regret that the breach happened. The Department fell below the standards that I, you and the public might rightfully expect.

I am also conscious that one of the features of this incident, with our interaction with the courts and with an unprecedented super-injunction, has meant that parliamentary scrutiny of this activity has not hitherto been where you would like it to be, or where Ministers or I would expect it to be, so I am grateful for what will be the first of a number of hearings on this topic across Committees to now shine an appropriate light of parliamentary scrutiny on events and the Government's response.

How did the incident occur? In plain, factual terms first, what happened is that, in February 2022, as part of our work to ascertain the eligibility of applicants for resettlement under the Afghan relocation assistance programme, a spreadsheet was emailed outside of the Government's systems. That email was expected to contain details of around 150 people, and the purpose of it being sent was to gather information on the bona fides of the applicants to help us in our determination of eligibility for the resettlement scheme.

Unfortunately, and unbeknown to the official who sent the email, the spreadsheet contained embedded data that was not immediately and readily visible, relating to around 18,700 applications to the scheme, all of which had been made before early January 2022. That is the basic fact of the breach.

The context is that, having established precursor schemes through the 2010s, we established the ARAP scheme at pace as it became clear in the middle of 2021 that the situation in Afghanistan was deteriorating rapidly. That scheme was built up, if you like, with a degree of operational pace, but on systems that were not really appropriate for the handling of many thousands of lines of personal data.

While we had data protection policies in place at the time of the breach, the understanding of those policies, the need to act at pace, given operational imperatives to resettle people who we felt were at risk, and the unsuitability of the systems that were being used at the time for management of that data are context, if you like, for the breach.

The Department was not aware of that breach until the summer of 2023, when an extract of that spreadsheet—nine names in total—appeared on social media. Our attention was drawn to that both by FCDO staff in



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Islamabad and by media inquiries. August 2023 was the point at which we became aware that there was a breach. I can go on with the immediate response if that is helpful, or I can pause for questions on the nature of the breach itself.

Q2 Chair: Pause for a little while, David. One of the benefits of having you here is that you were appointed in March 2021, so you are able to give a bit of context in terms of the chronology of all of this.

On 21 August, BBC News revealed that 250 Afghans seeking relocation to the UK were mistakenly copied into an email from the Ministry of Defence in September 2021, putting them at risk of reprisals. As a result of that, the Government announced significant remedial actions, including new data handling procedures and training, with a new two-pairs-of-eyes rule requiring any external email to an ARAP-eligible Afghan national to be reviewed by a second member of staff.

The Government said that the measures were taken to prevent such incidents happening again and, blow me down, five months after that breach, this unprecedentedly large one occurred. Surely, at the time of the September breach, an incident response group would have been set up, without necessarily any input from the ICO that eventually led to a £350,000 fine for that breach. Surely, the MOD itself should have set up a response incident group, and tried to discover what went wrong and make sure that it never happened again, especially in view of the then Secretary of State for Defence's announcement of what had been done.

David Williams: In the autumn of 2021, there was, in fact, more than one breach associated with the use of email addresses in the "to" field, rather than in the "blind copy" field. If you want to send an email to a group of people while keeping their contact details private, you send the email to yourself, and blind copy them, so that other recipients of the email cannot see it.

The breach was in part, as I say, a consequence of working at pace. It was a human error, and we did respond to that incident—there were a small number of incidents of a like nature around the same time—with changes both of procedure and of protocol. For example, within the team, rather than the ability of an individual to email out, we had two eyes on, requiring a second check. We also instituted technical solutions. Where we now stand is that there is an alert and warning and a system intervention if you are trying to email out of MOD systems to external addressees above a certain number.

There was a response. It was specific to the particular nature of that data breach, in terms of both systems response and policy response. The February 2022 breach, which was an email deliberately sent outside of Government systems in order to get data to support our eligibility consideration, was a different issue in terms of the invisible embedded data within that.

Q3 Chair: Permanent Secretary, you have answered in great detail what it



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was that went wrong, but you did not answer in any detail at all my question. What did you do about it after September 2021? After all, we have some of the cleverest people in the world in GCHQ in Cheltenham. Why did you not get some of those in to tell you how the system could be cracked, if it could, in future?

David Williams: My point is that we did respond to the incidents from autumn 2021, but the nature of those incidents was different from the one that happened in February 2022. Once that breach became known to us, we ran a much more fundamental review of our data protection and information handling, both contributing to a cross-Government review as well as commissioning an independent review, and working closely with the ICO on a range of improvements that we need to make to policies, training and systems.

There was a departmental response to those events in autumn 2021. It is just that they were targeted on a narrow issue rather than the broader range of risks to data. The risk of accidental release of data was something that we were worrying about, but we did not foresee the breach that happened in February.

Q4 **Chair:** It happened on 22 February 2022. In August 2023, 18 months later, it was discovered. It had been circulated to 18,700 people. I cannot believe that somebody, somewhere along the line, did not tell MOD that this had happened.

David Williams: Just to be clear, it had not been circulated to 18,700 people. It was a spreadsheet that had details of 18,700 applications on it that had been emailed externally to a very small group—single figures—of people who were advising us on their knowledge of whether individuals had worked for the Afghan national security forces in support of UK armed forces when we were present in Afghanistan during that mission.

Q5 **Rachel Gilmour:** I am perplexed. Can you tell me why it took 18 months for the MOD to identify that a significant data breach had occurred?

David Williams: The essential issue here is that the official concerned believed that they were emailing out a very narrow subset of data, but there was a hidden or embedded spreadsheet behind the information that was provided to them. Nobody within the team or within the Department spotted that that embedded data had been emailed outside of our systems.

Q6 **Rachel Gilmour:** Was it human error, then, or were the systems not up to it?

David Williams: What I am trying to say is that it was a conscious decision to email a limited number—around 150 names—to a small, select group of people outside of the Department in order to gather evidence to support our assessment of resettlement applications. The data provided included an embedded spreadsheet, the existence of which



was not known within the Department until it became clear in August 2023, when a small selection of that data appeared on social media.

Rachel Gilmour: It is not very impressive.

- Q7 **Oliver Ryan:** Mr Williams, these responses really are not adequate. If you are going to be doing several of these Committees in various guises, the explanation needs to be a bit better. There was an explanation of the 2021 breach, which the Chair asked you about. You made some changes after that breach to say that things would be viewed twice before being sent out, but you did not really give an explanation as to why that did not happen in 2022. I accept that there is a material difference between a bcc and a different page on a spreadsheet, but the fact remains that 18,700 people's names have been sent out there into the public, and it does not feel like the Department is either sorry enough or frustrated enough about these data breaches. It feels to me, in both 2021 and 2023, like a bit of a "shrug your shoulders" scenario, and I do not think that you answered the Chair's question about the double sight of data access.

David Williams: I have been trying to set out for you the facts of what happened. As I said in my opening apology, the breach itself is clearly a serious error, and the Department has fallen short of the standards that you would expect.

The response to that data breach, in terms of the policy response and our relationship with the courts, with Parliament and with the media, is unprecedented, and I absolutely do not take that lightly. Off the back of our becoming aware of the breach in August 2023, we have undertaken a thorough and fundamental review of our data protection practices, which I would be happy to share in more detail with this Committee and with the Defence Select Committee. It has absolutely not been taken with any sense of complacency.

My point on the autumn 2021 breach is that, on that particular case, we reviewed our processes and systems to deal with the specifics of the issue. I admit that the broader look came later.

- Q8 **Oliver Ryan:** You talked about 2021. You did this review and made a change. You talked about how there was a pop-up, I assume, that tells you when you are sending things outside of the organisation and warns you about doing that. This was the bcc/cc difference in 2021. Why should we have confidence in the review done in 2023, if it was something as simple as a page on a spreadsheet with 18,700 people's names on it that was just added to a file and sent out?

David Williams: The review in 2023 assessed our full range of data protection policies against the information commissioner's checklist for what effective management of personal data should be. It looked not only at issues within the Afghan resettlement team or in our use of IT, but at the full range of data protection policies, how accountability is cascaded through the Department, and how we think about confidential data in our



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contracting and commercial arrangements. It is a broad landscape review of the way in which the Department approaches these issues, having also contributed to the cross-Government Cabinet Office-led review, which has been shared with the Science Committee off the back of this breach, the PSNI breach, and our to/bcc breach from 2021.

Q9 Chair: On a point of chronology, when did the ICO come in and start having discussions with you about the September 2021 data breach? Was it before the data breach on 22 February 2022?

David Williams: Yes. We will have notified it at the time. Information around that breach and, indeed, three other similar breaches, which we have chosen to treat, effectively, as a single issue, were then published in our 2021-22 accounts. We were engaging the ICO in the autumn of 2021, and we engaged it afresh with our discovering the February 2022 data breach in the summer of 2023.

Q10 Mr Charters: It is these email errors that have cost our constituents billions of pounds. It is a reasonable question to ask: why did you not take learnings from across the public sector on the use of so-called PII tools, which scan attachments and see if there is any personal identifiable information in those to prevent data loss? Why did you not use them? Did you explore that? Are they in place now to prevent further email errors costing the taxpayer billions?

David Williams: As I said in my introduction, having established the ARAP route against some challenging operational imperatives, the systems that we use, a SharePoint site and Excel spreadsheets, are not the tools that you need to use for handling confidential data of this sort on this scale.

In bringing responsibility for the resettlement programmes from our permanent joint headquarters, which had run the process during Operation Pitting and the immediate months that followed that, into the MOD head office, that was part of a deliberate approach to mainstream the work and put it on a more sustainable footing.

That has included substitution of use of SharePoint and spreadsheets with specific systems that are designed for this sort of contact management, with embedded controls that allow for greater auditability and greater access controls, and allow us to protect that information much better. We are in a position where this data is now protected materially better than it was at the time.

Q11 Mr Charters: I asked quite a specific question. Our constituents are furious about the cost of this. Across how the MOD handles emails, are there defensive tools to protect the leakage of PII—yes or no?

David Williams: Yes, there are.

Q12 Mr Charters: When were those put in place?



David Williams: We had policies in place for that before the breach. Clearly, they were not being followed. We have tightened the systems protection since the breach.

- Q13 **Chris Kane:** I am not good with spreadsheets—I am more Microsoft Word than Microsoft Excel—so I am going to ask what I would call some “daft laddie” questions here. It strikes me that what I heard you say was that the individual who sent the email had no idea that there was an embedded something in the spreadsheet. Then you said that you have changed the way that you look at things to deal with that, and one of those ways is two sets of eyes before an email goes out. How would two sets of eyes find a hidden embedded spreadsheet—that would be the first question—and why would that embedded spreadsheet be there at all? What would be the purpose of embedding that much information in a spreadsheet that would be accessible to someone who would not even think to ask whether it was there?

David Williams: On the first of those questions, the two-eyes thing is specifically a procedural control around the use of the “to” field or the “bcc” field. We have system controls in place. The shift to a new system that is more appropriate for management of personal data of this sort means that we are not using embedded data in this way. Plus we have AI security tools in place that would interrogate whether there is embedded data in emails that are being sent out. There has been a broader range of response to the particular issue behind the February 2022 breach than simply the measures that we put in place in the previous autumn.

On the question of the individual, my understanding is that they had asked for data on 150 individuals. That data was drawn through a script from the underlying database and sent to them, but with the underlying database hidden. They emailed the data out, not knowing that the underlying database was there. That is the plain English answer.

Chair: This is very important, but we have a lot to cover in this hearing.

- Q14 **Mr Bailey:** The aggregation of sensitive information makes that information secret information. Is that correct?

David Williams: Yes.

- Q15 **Mr Bailey:** So the aggregation of the information in the first instance is a breach. A hundred and fifty names that are attached to the positions in which they work is the aggregation of sensitive information. Is that a breach—yes or no?

David Williams: That is not the breach that we have notified.

- Q16 **Mr Bailey:** That is a breach in and of itself, so that must have been the risk that you were managing.

David Williams: To go back to your point, the breach is less a classification issue. It is a breach of GDPR and of personal identifiable information, where the classification comes in because of the nature of



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the service and the links between those individuals and the British armed forces during our operations in Afghanistan.

- Q17 **Mr Bailey:** Let us assume that aggregating the information of service personnel and intelligence personnel is secret at the very least. Therefore, having this information aggregated on this system is a breach in the first instance. I will posit that that is the case. We can see whether it is by pointing to relevant policy, and you can show where it is not, if it is not. That must have been the risk that you were managing. In managing that risk, you must have identified the probability and the consequence of that risk happening. The consequence of that happening is catastrophic. We do not need to discuss that. Is that reasonable?

David Williams: The risk that we were managing in a world where we were actively looking to bring Afghan nationals back to the UK was access to information of individuals who would understand the nature of their relationship with the UK armed forces versus the sharing of that data.

- Q18 **Mr Bailey:** Excuse me, but, prior to the circumstances in which the breach took place, the risk of the loss of that information is catastrophic. I can get a 5x5 out, but is it catastrophic or is it just not of interest?

David Williams: It has high consequences.

- Q19 **Mr Bailey:** So it sits in the red area in the top left-hand corner of a risk register for consequence, and the frequency is a matter of conjecture. How frequent were these breaches?

David Williams: In terms of how frequently individuals were emailing data outside of the Department for third-party verification, as it were?

- Q20 **Mr Bailey:** How frequently could you envisage this type of breach occurring? Could you point to a number of breaches of a similar but not the same type to give us an understanding of consequence? I am trying to manage this risk. I know that the consequence is catastrophic and I am trying to see whether this is in the green or the red area of a risk chart. Is it unlikely or likely?

David Williams: Clearly, we have looked, and I am not aware of other incidents in which there has been embedded data in emails that have been sent outside.

- Q21 **Mr Bailey:** How many breaches of the information assets owner's information occurred between 2021 and this incident?

David Williams: In terms of breaches that we have notified to the Information Commissioner relating to Afghan resettlement, there have been seven.

- Q22 **Chair:** Just indulge me for a second. Only seven out of 49 passed the threshold to be passed to the ICO. Is that correct?

David Williams: Seven were rated red against the ICO's risk matrix for notification to the ICO.



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Q23 **Chair:** Are any investigations ongoing with any of those?

David Williams: Five of them relate to the use of “to” versus the blind copy or “bcc” field. One relates to an incorrect link to an online portal. The seventh and last notification to the ICO is the data breach from February 2022.

Q24 **Mr Bailey:** So there have been seven—in fact, I would say frequent—and they are catastrophic, so that is red. It is the highest risk that Defence manages. Later, you are going to explain how much this whole thing has cost. You must have known that a risk of aggregation would exist. I have looked on the defence portal. On the defence marketplace, for £475 per day, I can buy data aggregation risk management, which is a tool that is available to you and your Department that would mitigate this risk. As the responsible owner, you have counterbalanced the risk as £475 a day against what? How much has the cost of this been?

Rachel Gilmour: Never mind the lives.

Mr Bailey: That is the risk that you were taking.

David Williams: There were a range of risks that we were looking to manage. As I have tried to explain, we had a range of policies in place that, in theory, would deal with these issues. We did not have the right systems support or training in place—and we have improved that since—in an operational context in which individuals were working at pace and under pressure. For me, it is a combination of human error within a broader system of management of data.

Q25 **Mr Bailey:** The human error is not the person who pressed “send”. The information asset owner must take into account organisational culture and behaviours. We would have known that, at some point, someone would be under duress and would have to send some non-sensitive information that there was a risk, as you recognised, could become, when aggregated, secret or top secret, which is a breach in itself. The organisation failed to pay £475 per day, which has resulted in the consequences that we will learn about now.

David Williams: I certainly do not want to sound complacent, but, if you are suggesting that paying £475 a day is the counterbalancing issue here, it is a rather more complex issue than that.

Q26 **Mr Bailey:** Please explain to us. That was what we were trying to understand. What was the counterbalance? Either you were not aware of this risk or you were not managing it, but it is definitely a risk that you should have known about.

David Williams: The risk of data loss was clearly something that we had identified. As part of that departmental error, I agree that that risk was not managed appropriately.

Chair: We may, if we have time, come back to some of this. We may, Permanent Secretary, want to come back with correspondence if people



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look at your replies on the transcript and decide that there are further questions. We may well want to come back on all this, but I now want to move on to Dame Meg Hillier, please.

Q27 **Dame Meg Hillier:** Thank you very much, Chair, and can I thank the Committee very much for the invitation to guest today? Mr Williams, why did you decide not to tell the Public Accounts Committee about this breach?

David Williams: This comes back to the unprecedented nature of the circumstances in which we were operating. I am not aware of Government ever having been party to a super-injunction before.

Q28 **Dame Meg Hillier:** At the beginning, it was not a super-injunction. On 14 August, you discovered the breach. At that point, you have a responsibility to inform Parliament, usually through this Committee and sometimes through the Defence Committee, about important issues.

David Williams: There was a two-week period between us becoming aware of the breach—on day one, that was of nine names—and the super-injunction being put in place by the courts. During that period, we were looking to understand the scale of the breach. We notified the ICO within the required 72 hours. We were looking to understand the scale of the issue. At that stage, we were still learning about the scope of the breach and the likely consequences that it would have had. It is fair to say that it was not at the forefront of our minds that, in that two-week period, it was appropriate to notify the PAC.

Q29 **Dame Meg Hillier:** We would understand that you would not necessarily expect a super-injunction. Just to be clear, the Report talks about how you did not originally apply for a super-injunction. You applied for an injunction.

David Williams: We applied for an injunction.

Q30 **Dame Meg Hillier:** It was the court, was it, that decided to put in a super-injunction?

David Williams: It was the court that offered a super-injunction.

Q31 **Dame Meg Hillier:** Was that something that was on your radar as a possibility through your legal advisers?

David Williams: No, not especially. What we were looking for was an injunction to allow us to understand which individuals within that data breach were at highest risk, what that risk was, and what we could do about it to mitigate the risk of that breach. One of the unusual features of this—with the benefit of hindsight, maybe we could have done things differently—is that, in September 2023, we did not expect an injunction or super-injunction to be in place for almost two years. Our initial expectation was that an injunction might be in place for a matter of weeks or, at most, a few months.



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Our experience of the court since then has really been around a rolling extension of that injunction. At the time of the data breach, our expectation was that it would have been into the public domain during the course of 2023 or during that financial year.

Dame Meg Hillier: You thought it would be into the full public domain at that point.

David Williams: Yes.

Q32 **Dame Meg Hillier:** Constitutionally, the Comptroller and Auditor General is responsible for oversight of this very important role. Why did you not think it appropriate, or did you try to inform him?

David Williams: The judgment that was made by Ministers, clearly with advice from officials, was around balancing the risk to life and supporting the injunction by limiting those in the circle of knowledge to those who had an absolute need to know. The judgment of Ministers was to read in the Speaker and his Lords equivalent. As you will be aware, under the Conservative Administration, we read in John Healey as the shadow Defence Secretary.

As for the Comptroller and Auditor General, we thought about this in the context of the laying of our accounts for 2023-24, which was the year in which we knew the breach had happened. We were accounting for all of the spend in the way that we were accounting for the public Afghan relocations and assistance policy spend, and took the judgment that we would not read the Comptroller and Auditor General in at that point.

Q33 **Chair:** Dame Meg, if you would just excuse me, I am going to bring in the Comptroller and Auditor General at this point to tell us, on the record, exactly how this matter was handled in relation to his office.

Gareth Davies: The first I knew about this was when it became publicly known in July of this year. The only attempt to raise this with my staff was at the time of auditing the 2023-24 accounts. My audit director was briefed that there was a secret matter that could not be shared, but it meant that there was a data breach that had not been included in the full list in the governance statement in the accounts. There was no briefing about the operational consequences of this, the number of people affected, or the likely cost, so it really was not anything like an adequate briefing of the auditor.

It is only now that we are able to go back and look at whether, crucially, there was adequate provision in the accounts for the full costs of the extra route. We are still doing the work with the Department to get to the bottom of that, so it is too early to give the Committee the conclusion of that work. It just illustrates that it is important that we knew about it, because it could affect the provision in the accounts, and could affect the audit opinion. It is a really important piece of information.

Q34 **Chair:** Permanent Secretary, the audit manager was sort of briefed but



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was told not to tell her boss—the man who was going to have to sign off the accounts. That is, surely, a very unsatisfactory way of dealing with matters, is it not?

David Williams: I cannot comment on that particular challenge. If, in our engagement with the audit director, she had suggested that we needed to read the Comptroller and Auditor General in, I would have looked at that. To be fair, the information that we shared with her was, as Mr Davies has set out, only part of—

Q35 **Chair:** But she was told specifically not to tell the Comptroller and Auditor General, as I understand it, Gareth.

Gareth Davies: She was told that she could not tell anybody at the NAO about the detail that she had been briefed with.

David Williams: This goes to the particular challenge and the unique circumstances of this incident being subject to a super-injunction. Our ability to tell people that there was an injunction covering a set of issues and to ask whether they wanted to be read in was not available here, because our only choice was to read you in, and what you can then do with that information once you have been read in was constrained, although not for Members of Parliament, given parliamentary privilege. I would not underestimate the particular challenges of thinking these issues through in the context of a super-injunction.

Q36 **Dame Meg Hillier:** We appreciate that it was an unusual situation, but, as you know, there is a well-worn route to brief the Chair of the Public Accounts Committee in confidence, if there is a reason why you cannot brief the Committee in confidence or in public. As you and I know, we have been round that circle a few times—sometimes because it is about to appear in the newspapers the next day, and sometimes for other reasons. Did you not give any consideration to reading in particularly the Comptroller and Auditor General, who has that important constitutional position, or, indeed, the Chair of the PAC?

David Williams: We had conversations with Ministers about reading in Chairs of a small number of Select Committees, but, in the end, the ministerial decision was not to.

Q37 **Dame Meg Hillier:** So the decision was taken at that ministerial level. The Osmotherly rules say that Parliament should be informed, and you may be aware that the Public Accounts Committee had an issue about the Rwanda scheme, where we were requesting information. The Treasury Officer of Accounts very helpfully wrote round to colleagues, reminding them of their responsibilities to report important information.

Let us put aside for a moment the immediate breach and the super-injunction. While that is important, you have explained some of that. When it came out in July, that was the first that the Comptroller and Auditor General knew about it. At that point, of course, there was no Chair of the Public Accounts Committee; it was post the election. Because



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of all of this, you were caught in a space where Parliament was not really able to be informed or to scrutinise in a proper way. Would you now do something differently if this happened again?

David Williams: With the benefit of hindsight, if we had expected the injunction to be in place for two years, there would have been an opportunity to take a different decision.

Q38 **Dame Meg Hillier:** Would you have applied to the court for it to be removed? You did eventually, because that is what happened.

David Williams: The principal point of the super-injunction was to protect the lives of those whose details appeared in the data that had been breached, as it were. That risk to life weighed heavily with the courts, with Ministers and, indeed, with officials. That was the balancing between transparency and managing that risk.

There is also a question, which we have discussed in the context of other issues, about the extent to which, while bringing in only the Chair of a Select Committee may help with transparency, it is not necessarily an ideal substitute for scrutiny.

Q39 **Dame Meg Hillier:** Of all the people in this room, I absolutely get and understand that, and it is not something that I ever chose to have, but there were many times when I was called in to Government Departments to be told something very sensitive, usually well before it appeared in the accounts. Although during this time there was no Chair of the Public Accounts Committee, and no Public Accounts Committee, there was at all times, more importantly, a Comptroller and Auditor General, because it is a 10-year position. I am really quite shocked that he was not written into the super-injunction and had no idea.

Especially given that it rolled on, all of the issues that arose would have been something that you, as accounting officer, had a responsibility to report. You cannot give us information about what advice you gave to Ministers, but I wonder whether Ministers understand that constitutional relationship that you, as accounting officer, have with the Comptroller and Auditor General. Were you concerned at any point that you were not fulfilling your public duties in that respect? I appreciate that you were under major constraints, but were you able to discuss it with the Treasury Officer of Accounts, for example?

David Williams: One member of the Treasury Officer of Accounts team was read in, although not the Treasury Officer of Accounts himself. Part of the way in which we handled this internally was that the policy response for much of this period was led by my deputy, the second Permanent Secretary, with me maintaining a separation for accounting officer purposes when it came to the spend.

On the day in July this year when I spoke to him about this, the Comptroller and Auditor General and I discussed whether we might develop a protocol. A super-injunction is so unprecedented that it is hard



to think of the circumstances in which we are likely to see one again any time soon, but we have talked about the need for a protocol for future such cases.

Q40 Dame Meg Hillier: As you are aware, there has been a lot of discussion in Parliament, and it got quite some traction at the end of the last Parliament, of having a special committee set up to look at the very few rare, sensitive issues in a very constrained environment. Is this one of those that could have been dealt with by such a committee? Do you have any update on where progress is on setting up such a parliamentary oversight committee?

David Williams: The proposal and request for a parliamentary oversight committee looking at more sensitive aspects of defence work, particularly defence and nuclear enterprise, is being considered at the highest level within Government. I do not know, if we had had it, whether that would have been used. I know that I sound like a stuck record, but the nature of the super-injunction meant that we were thinking about things in quite a different way, in a world in which we were not expecting this to last for as long as it did.

In the 2023-24 accounts, my sense was that, at that point, there was nothing material that the Comptroller and Auditor General needed to know about, but it may well be that the Comptroller and Auditor General will come to a different view as we finalise the accounts for 2024-25.

In the end game of preparation of this last year's set of accounts, given the likelihood of "break glass", I was not comfortable that we should publish and then this become transparent a week or so afterwards. The decision to defer publication of that set of accounts to the autumn to allow a proper review of the accounting treatment and liabilities is the right one.

Q41 Dame Meg Hillier: Can I just ask the Treasury Officer of Accounts has your team now discussed with the Comptroller and Auditor General how this is dealt with in future? Do you now have a protocol going forward, were there to be any other such super-injunction or similar challenging legal issue to overcome?

David Fairbrother: We have certainly discussed it in our team. As the Permanent Secretary says, these are ultimately issues for Ministers to take decisions on. I confess that we have not directly spoken to the NAO about this yet. We are awaiting some of these parliamentary hearings to understand what the major concerns are, but it is certainly something that we will pick up.

Dame Meg Hillier: While I am not a member of this Committee, Chair, I hope that you might consider those points in your recommendations.

Chair: I was going to reinforce with the Permanent Secretary that I am aware that there are other matters to do with the Ministry of Defence that are not getting any parliamentary scrutiny. That is thoroughly



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unsatisfactory, and the need for this special scrutiny is now urgent. I would ask you to do everything you can. I will be seeking a meeting with your Secretary of State to discuss this further. I have already discussed it with him once before the summer, but, if you would facilitate such a meeting, I would be very grateful.

Q42 Michael Payne: Before I come to my substantive question, I would just like to follow on from Dame Meg Hillier. Permanent Secretary, you are in a very privileged position as the principal accounting officer in the Ministry of Defence. That places a privilege on you, but a particular responsibility. This Committee and Parliament rely on the great work of the National Audit Office and, in particular, the Comptroller and Auditor General. You are very aware and do not need me to tell you that the Comptroller and Auditor General is a servant of this House. He is not a servant of the Civil Service or of the Crown. He is appointed by Parliament and, therefore, answerable to Parliament.

I would just like to press the particular question that Dame Meg has been asking you. Given that there were constraints under the super-injunction, and you are telling us that this was a ministerial decision, did you, as the principal accounting officer, at any point during conversations raise your concerns that you thought that the Comptroller and Auditor General ought to have been brought into a conversation about this?

Before you answer that question, Mr Williams, I would just also invite you to reflect on whether, at any point throughout this data breach, you reflected on the particular test that Parliament places on you as an accounting officer around propriety. You are responsible for a significant amount of public money, which means that you have to adhere to very high standards and to the intentions of Parliament.

You started today's session by saying that you fell below the standards that Parliament would expect, so I would posit to you that the Comptroller and Auditor General should have been brought into this conversation. I would like to know whether you, as Permanent Secretary and principal accounting officer, ever raised that issue with Ministers in your discussions with them.

David Williams: First, I do not imagine that we have gone through this period feeling, from an accounting officer perspective, anything other than deeply uncomfortable. Nevertheless, it is a degree of discomfort that, equally, I was willing to wear and accept. That is on me rather than on the Ministers I have supported through this process.

In specific written advice to Ministers, our focus was primarily on the Defence Select Committee and the Intelligence and Security Committee, but I recall some conversations around the role of the NAO and the Comptroller and Auditor General.

In the end, I take responsibility for this relationship against a backdrop where ministerial decisions on the tightness of briefing of Members of



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Parliament and parliamentary officials provided the context, if you like, but I will not duck that personally.

Q43 Michael Payne: I appreciate you being candid, Mr Williams. Before I move on, would you say that you, as Permanent Secretary and principal accounting officer, regret the fact that the Comptroller and Auditor General was not brought into the conversation?

David Williams: With hindsight, it is not sustainable to have kept the Comptroller and Auditor General at arm's length for a period of two years. Had we expected it to be two years when this started, I would have felt more clearly about the need to bring him in then. Not much of the expenditure for the Afghan response route had been incurred in the set of accounts that we have published. There is a live conversation about liabilities and provisions, although our ability to have reported those in the accounts, given the super-injunction, would have been limited.

As I indicated, to the point about agreeing a protocol, for my successor, having a clearer set of parameters for engagement between the departmental accounting officer and the Comptroller and Auditor General, rather than between Ministers and parliamentarians, would be a useful lesson from this process.

Chair: We are almost an hour in; we are only halfway through what we need to do. Can I appeal for very short questions—one person, one question—and replies, please?

Q44 Michael Payne: Mr Williams, how did you get assurance that those who were put at the highest risk by the breach had been identified and contacted? The NAO Report clearly says that some people's partners and family members were named in the data. You said that there are still a small number of people who have not been contacted. What does "a small number" mean?

David Williams: I wonder whether I might look to Mr Wilson to answer this one.

Dominic Wilson: Could you repeat that question?

Q45 Michael Payne: How did you get assurance that those put at the highest risk from the data breach have been identified and contacted? The NAO Report says that there are still a small number of people who have not yet been contacted who may have been put at risk. This Committee needs to understand what "a small number" is.

Dominic Wilson: As the Permanent Secretary said, the risk assessment was undertaken almost immediately after the breach was discovered. At that point, we worked at real pace on the database. Bear in mind that, for many of the reasons why the breach happened in the first place, this data was not held in, as we would see it now, a proper data management system. This was a spreadsheet, and that is where it all starts to go wrong, really.



That is quite difficult to interrogate, so we interrogated initially through keyword searches to identify the highest-risk individuals judged against the assessment of risk that we had undertaken. We have continued to iterate that over the months to try to get to the right list, which gives you the 1,500 or so principal applicants who we have contacted.

Q46 **Michael Payne:** How many have you not yet made contact with?

Dominic Wilson: There are a handful of individuals still in the system. The reason that the numbers are complicated is that they pull in slightly different directions. There are some applicants who we have not managed to contact yet. There are other individuals who will turn out to be eligible through other parts of our assessment process. For example, we are doing a review of the Triples. It may be that, during the course of that review of the Triples, we identify more individuals who we subsequently decide are eligible and who were also in the original database. They are not in the system yet, so there are a small handful of people who are in the system but unknown about, and who we have not contacted yet.

Q47 **Chris Kane:** Can I ask about how you accounted for the costs of this, given that you have not accounted for them separately? Why did you not account for the costs in a manner that would allow you to separately identify the costs specifically associated with this Afghan response route from other areas?

David Williams: There are two reasons. First, given that the scheme itself was covert, in keeping with the super-injunction, reporting of separate costs would clearly breach the super-injunction. More practically, much of the activity to identify, relocate and resettle individuals under the secret scheme and under the open ARAP scheme was the same. It is possible to undertake an apportionment. That is what we have estimated with the £850 million total costs, of which about £400 million has been spent so far, with £450 million to come. The practical reason is that, if you are processing a claim, chartering a flight or looking at transitional accommodation, it is the same cost, regardless of the route by which we have judged their eligibility.

Q48 **Chris Kane:** We are going to have to take your word for that now, because we cannot then investigate it by looking at the costs separately. You have managed to keep this secret for two years. Could you not have found a way to account for this separately, knowing that, once the super-injunction was lifted, this Committee, among others, would have wanted to interrogate the figures and that it would have been very good if you were able to provide them? Surely, it was not beyond the Department to come up with a method by which we could have this information now.

David Williams: The figure of £850 million—there is a forecast element in there, and some of those variables and assumptions will change—is a materially right number.

Q49 **Chris Kane:** Two years ago, you would have known that you would be



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here and that one of the questions you would be asked by the Public Accounts Committee would be, "Can we delve into the weeds of the money here to make sure that we know what it cost and that the money has been spent appropriately?" You have been here many times before. That is what this Committee is all about. Could you have recorded the information differently, in a way that would have allowed us to interrogate it?

David Williams: Yes, I suppose so. It is possible that, in the further work that the NAO will do on the Government's broader resettlement schemes—we have had good engagement with the team at pace over this summer—we will be able to provide a more detailed breakdown that will allow the Comptroller and Auditor General to give you more assurance about those costs.

Q50 **Chair:** Can you give us a timing on that?

David Williams: The Comptroller and Auditor General is looking to produce a report for the first part of next year.

Q51 **Chris Kane:** Transparency of reporting has been a big part of this hearing. That is important. The PAC is about transparency of money, so you have to remember that reporting to Parliament is a big part of this Committee, but you have to report the money transparently. There is no way for you to do that within this scheme, as far as I can see. That is not acceptable.

Q52 **Lincoln Jopp:** I am going to do the quickfire round at the end of the interview, which is the fun questions. Who did the leak and why have they not been court-martialled?

David Williams: I do not really want to go further than the Secretary of State and his statement to the House in saying that it was a defence official.

Q53 **Lincoln Jopp:** Did you ever entertain the idea that the leak was deliberate and, if not, why not?

David Williams: Immediately after the breach became known to us in August 2023, one of the early bodies that we contacted was the Metropolitan Police to see if it had been a deliberate or a criminal act, and its assessment was that this was accidental.

Q54 **Lincoln Jopp:** In the £850 million estimate for the cost of this, have you factored in the premium that we will have to pay to host people in order to gain their support come future operations?

David Williams: I am not sure that I accept that we will necessarily have to pay that premium, but there is not a cost in that £850 million for future operations. It is about the cost of completing this resettlement scheme.

Q55 **Chair:** Can we just examine these costs a bit? I do not think that we have really got into the costs properly. If you look at figure 3, it looks as



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though, since the breach, 23,463 people might be eligible to come here. If you put the Triples in, the numbers of whom are given in the Report, that amounts to 27,278 people possibly eligible to come here. If you then turn over the page and use the MOD estimated costs for the whole of Government at £128,000 per person, multiplying the two up, you get to a figure of about £3.5 billion. Is that anywhere in the right ballpark as to what this might cost in total for the whole of Government eventually?

David Williams: What we have said is that the full cost to Government overall to date, or at least the costs that will be incurred for those individuals to whom offers have been made since we started the process of relocation, is about £2.7 billion. The full cost overall could be around double that.

Q56 **Chair:** Around double £2.7 billion, so we are talking about over £5 billion.

Dominic Wilson: Yes, but do remember that, of that maximalist number of 27,000, it is always possible that not all the people we make an offer to will accept. Not all of them will come with the same numbers. Those figures also include individuals who would have come here if there had been no data breach, because they would have come under the ARAP scheme and been eligible in the normal way.

When you look at the Afghan resettlement programmes more generally, which I understand the NAO intends to do in the early part of next year, you will want to get into questions about whether all of that is good value for money in the normal way.

David Williams: To clarify, that overall figure from me is the combination of the ARAP scheme, the Afghan citizen resettlement scheme that was run by the Home Office, and our Afghan response route.

Q57 **Dame Meg Hillier:** What contingent liability have you set aside for compensation for this data breach?

David Williams: As yet, nothing.

Q58 **Dame Meg Hillier:** Will you be doing that in future sets of accounts?

David Williams: That will be a live issue with the Comptroller and Auditor General between now and publication of my accounts for 2024-25.

Dame Meg Hillier: I am sure that we will be looking at that.

Chair: That will be an interesting discussion.

Dame Meg Hillier: We will look for that line in the accounts.

David Williams: The Government's position is that they currently plan to defend compensation claims robustly in the courts, so we will see where we come out on that, which will factor that into our judgments about financial provision.

Q59 **Dame Meg Hillier:** Will you defend every case robustly, even if there is



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known harm done to somebody?

David Williams: These are the debates that we are currently having.

Dame Meg Hillier: We will look at the accounts with interest.

Q60 **Lloyd Hatton:** When you answered my colleague Michael Payne's question about how many have been identified and contacted, we never got a figure. We just got "a handful". Does the MOD have a figure?

Dominic Wilson: There are a handful of current applications.

Lloyd Hatton: Do you know how many?

Dominic Wilson: It is teens or something like that. A point that I should have made earlier is that the cohort we are talking about who appear on that schematic there—the 24,000 or the 27,000—are people we judge to be eligible who we are trying to contact for the purposes of making an offer and bringing them here. There are, of course, a much greater number of people who are on the list of 18,700.

On "break glass", before the breach was made public, we sent an email, as far as we could, to everybody on that list, notifying them that the breach had occurred and informing them of a set of processes that we had put in place that would allow them to identify whether they were one of the individuals who had appeared on the database.

In that sense, as far as we can, given that some of the data is old and we cannot absolutely guarantee that the contact details are correct, we have contacted a large number of people.

Q61 **Lloyd Hatton:** Moving on to my main, substantive question, in figure 3 of the NAO Report, the estimated number of people who are eligible for resettlement here in the UK as part of ARR as a result of this breach is 7,355. How confident are you that you will be able to relocate all of those 7,355 individuals here in the UK?

Dominic Wilson: That, again, is a maximalist projection based on the numbers of family members who potentially come with an eligible principal. How many of those eligible principals ultimately decide to take up the offer is unknown. Our data shows that normally only 80% of people do, and it will depend on how many family members they have.

Q62 **Lloyd Hatton:** Sorry to interrupt, but 80% is quite a considerable proportion of that maximalist figure of 7,355. When do you think we will reach that approximately 80% figure, and how long do you anticipate it will take to complete that relocation as part of the Afghan response route?

Dominic Wilson: Broadly, we bring over about 400 individuals per month, so it will take some months and years before we complete the pipeline. How many of those individuals fall into that particular box will depend on their circumstances and the casework, and how quickly they



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can be processed and come back, but the intention would be to bring over those who are eligible and want to come to the UK.

- Q63 **Lloyd Hatton:** So the MOD is confident that it will be able to be successful here and complete that relocation for everybody who wants to. Could you give us a bit of detail there? Could you then explain to the Committee whether there have been any obstacles to this being a successful roll-out up until now, and what work the MOD is doing to try to remove those obstacles?

Dominic Wilson: The obstacles apply more generally to the scheme. This is not particularly associated with the data breach. Identifying people in Afghanistan is not always straightforward. Not all individuals are in Afghanistan. Some of them are in third countries and there are complications with getting them exit visas. In some cases, it is difficult to contact individuals. We have a number of cases where we have been trying to contact individuals for some time, and we just have not been able to. They have not replied for whatever reason. It is not a straightforward process, but we will certainly keep trying.

- Q64 **Chair:** We have a lot to get through. I have one final question, Permanent Secretary. We know that there were 49 breaches, seven of which reached the threshold for bringing in the ICO. This is a yes/no question, and I want you to really think about the answer. We have had lots of dribs and drabs of facts coming out since the Secretary of State's statement to Parliament on 15 July. Are you aware of any other breaches that have not yet entered the public domain?

David Williams: No, not that would meet the threshold for notification.

- Q65 **Chair:** No, any other breaches, whether or not they meet the threshold?

David Williams: It is a feature of running a complex and large organisation such as the MOD that there will be accidental data breaches from time to time. We report the overall number in the annual report and accounts, and that will be updated when the accounts come out this autumn. I am happy to share some detail on the 49 that were revealed in the FOI and are referred to in the NAO Report, if the Committee would find that helpful.

- Q66 **Chair:** In relation to the security overview, when are we going to get the full information requested by the Chair of the Science and Technology Committee as to whether all the 14 provisions have been implemented?

David Williams: That is a cross-Government review. I can send you a note on the MOD response to those recommendations. Some of them were for Departments, and some for the Cabinet Office and the centre. I can give data on our share of them, if that is helpful.

Chair: Permanent Secretary, Dominic, you have been very helpful this morning. I understand that it has been quite an ordeal for you both, but we are very grateful for your help.

We now go into the more comprehensive matter, perhaps, of the F-35 programme.

Examination of witnesses

Witnesses: David Williams, Sir Richard Knighton and Nick Lowe.

Q67 Chair: Welcome back to the Public Accounts Committee on Monday 8 September 2025. We now move into the second part of this session. The F-35 is a technologically cutting-edge stealth fighter aircraft with significantly superior capability to any other previous UK aircraft. The US Department of Defence originally conceived the aircraft and the UK is one of eight nations that are partners in the global F-35 programme. The UK's commitment to the global programme has brought a great deal of industrial and other benefits because UK companies now are manufacturing at least 15%, I think by value, of each F-35 aircraft. The Ministry of Defence committed to procure 138 aircraft in total in 2015 and currently expects to have received 48 aircraft by March 2026. It estimates that the F-35 fleet will cost more than £18 billion over its whole life.

Today we will be scrutinising the UK's level of F-35 capability, examining how the MOD can improve on its programme and financial management of the F-35 to achieve better value for money, and asking the Department why it is failing to provide the personnel, infrastructure, weapons and spare parts necessary for effective capability in order to guarantee the nation's security. We are very fortunate to have a very senior team here today. I am going to ask Air Chief Marshal Sir Richard Knighton to introduce himself and say who he is and what he does.

Sir Richard Knighton: I am Air Chief Marshal Rich Knighton. I am now on day seven of being Chief of the Defence Staff, but I am here because I was for the last two and a bit years Chief of the Air Staff. It felt a bit unfair to ask my successor to come in front of you so soon after he has started. I am very pleased to be here. Thank you, Chair.

Chair: We are delighted to see you and congratulations on your promotion.

Sir Richard Knighton: Thank you.

Chair: Air Commodore Nick Lowe DSO, would you like to introduce yourself and tell us what you do?

Nick Lowe: Good afternoon, everyone. I am Air Commodore Nick Lowe. I am the senior responsible owner for the UK F-35 Lightning programme.

Chair: Thank you very much. Permanent Secretary, do you want to introduce yourself very briefly? You were here at the previous hearing.



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David Williams: I am David Williams, Permanent Secretary and accounting officer at the Ministry of Defence.

Chair: Thank you very much. Thank you very much to all three of you for being here this afternoon to examine this important matter.

Q68 **Mr Charters:** Air Commodore, it is the F-35 Lightning programme in name only, given the delivery delays, as we will come on to. It is hats off to the Aussies and the Norwegians. Have you learned the lessons about how they have beaten us, shall we say, in terms of delivery speed?

Sir Richard Knighton: You mean hats off because they had their aircraft delivered earlier than we did.

Mr Charters: They have more aircraft than we have.

Sir Richard Knighton: If I might just pick that up initially, the decision around the pace at which aeroplanes are procured is a Government and national decision. Back in 2010 through to 2015 and then into 2021, decisions were taken around the delivery profile of the aircraft. The UK will have 48 aircraft by the end of this financial year. You will know from the integrated review in 2021 that the Government committed to buy a further 27 aircraft to take us up to 74. The fact that other nations have elected to buy their aircraft sooner is a matter for them rather than for us.

Q69 **Mr Charters:** What I really want to come on to is the fact that in any large programme of this nature delays cost. The MOD has deliberately decided, for good reasons, as you will come on to explain, to delay taking the delivery of F-35. Have you been able to compute the cost to the taxpayer of those delays? We are privileged to visit many of our serving personnel. Readiness has changed; schedules have changed; and the costs of parts and exercises all shift into the future. The cost of the overall programme increases inherently as a result of the very deliberate decision to delay. What is the cost of actively deciding to delay when the services were not ready?

Sir Richard Knighton: The delay was not because the services were not ready. It was because the Government, the Departments of the day, could not afford the profile or scale of procurement that they had originally envisaged. If you go back to 2010, the priority for the Government of the day was the global financial crisis. Defence, like every other Department, saw a reduction in its budget.

In order to retain the ability to keep the capability, the decision would have been taken at the time to change the profile and reduce the number that were delivered earlier. That saves money in the short term. In the long term it may increase costs because you are buying aircraft at a higher price when you have been through inflation. I do not know whether the Permanent Secretary wants to add anything on that.



David Williams: We could give you a note on the cost saving in the early years versus the overall cost of the programme. My recollection from the decisions of 2010 that the Chief of Defence Staff has referenced is that we were previously buying quite early in the Lerner curve. The early decision to delay got us to a cost per airframe that was cheaper than our planning assumption, although that would then be offset by inflation. It is not a straightforward calculation.

In the end, what the Government and the Department need to do is prioritise the money voted to them by Parliament in the spending review settlements on an annual basis against the full range of capabilities. That decision about the profile of build-up was a deliberate decision partly around financial pressure, partly around linkages into wider carrier strike capability, which we can come on to, and in some cases prompted by challenges in the global programme.

Q70 Mr Charters: We are all familiar with defence inflation, particularly on attritables, but even more so when it comes to an exquisite piece of technology such as the F-35. Did the MOD adequately have a theory about defence inflation when it came to advising Ministers on deferring the stages of the programme? Was it able to articulate the theoretical forecasted costs of deferring each stage of the programme so you could assess the impact on taxpayer value for money per airframe, as you envisage?

David Williams: As a matter of routine, if we are considering the deferral of equipment programmes in our planning round, we would identify what we expect the downstream—usually higher—costs to be to deliver that programme in a longer timeframe. We routinely identify that as part of our planning round. Some of that will be captured in approvals for this programme. That is a yes, broadly speaking.

Nick Lowe: What I can say from the current programme is that we are working within our approved budgetary level. We are approaching the end of our first procurement phase a significant proportion under our approved budgetary level. When we were scrutinised by the National Infrastructure and Service Transformation Authority recently, it looked at our programme and was pleased to see the way that we were delivering on a daily basis and tracking our costs within our approved budgetary level to ensure that we deliver the very best capability we can to the warfighter, which is exactly my aim.

Chair: Thank you very much. I should have mentioned in my opening remarks that I am delighted to be joined by two guests from the Defence Select Committee, Calvin Bailey and Lincoln Jopp, to add, no doubt, specialist knowledge into this hearing. With no further ado, I am going to ask Lincoln Jopp to ask the next question.

Q71 Lincoln Jopp: Can I paint a picture and see whether this is something that you recognise or not? You want a new whiz-bang bit of kit and it is going to cost a load of money. The military say to the Permanent



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Secretary, "It is going to cost a lot less than you think, Permanent Secretary" in order to get into the programme. Underpinning that estimate is a series of heroic assumptions. If you really costed what it was going to cost, you would never get it into the programme. That is well known. It is called entryism, and it happens every year.

As a result, we get it into the programme. One of the first things that we do is delay our own delivery programme. That is before we have the delays from the global piece, which kick in. Is that a characterisation that you recognise in any way? I probably ought to ask the Permanent Secretary because I think I know what the military will say.

David Williams: I recognise it as a historic characterisation of the way in which some projects have entered our programme. It is not particularly the case for F-35 and it is not particularly the way that we do business any more. It is in the interests of frontline commands and SROs to get a swept-up capability that delivers what it needs to. Simply getting it into the programme and finding out you cannot afford it does not help anyone.

Here, it is a combination of the fact that this has been a well-run but complex programme, in terms of both its multinational nature and the interface between the fast jets and the wider carrier strike capability that it supports in part, set against a number of planning rounds and spending reviews in which the defence budget has not been going up in the way that it now is.

Q72 **Lincoln Jopp:** Can you remember, when it passed its main gate business case in 2013, how the Department thought it was going to cost compared to what we think it is going to cost now?

David Williams: Interestingly, although I was chair of the investment approvals committee in 2013, I do not have that number to hand. The SRO might. The one that I would look for would be 2016 review note 4.

Sir Richard Knighton: This is exactly the point that the SRO made. The expected forecast was £10 billion and it is going to come in at just over £9.3 billion. While what you describe, Mr Jopp, is something that you will recall from your time working in Army resources and plans, that is not a characterisation that we can level at the F-35 programme.

Q73 **Lincoln Jopp:** That is based on the whole hundred and however many it is, not just the 40. The costings that the NAO Reports are the only ones that it could unearth.

Sir Richard Knighton: The numbers that I and the SRO just gave you were for the first 48. The numbers associated with the 138 will depend on the decisions that the Government take and will be examined as part of the defence investment plan.

Q74 **Lincoln Jopp:** The 138 would have been the basis on which the programme—



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Sir Richard Knighton: It was not approved on that basis in 2013. In the original approval, probably back in about 2003 or 2004, we would have talked about 138. I am afraid I do not know what that position was. Certainly in the 2013 and 2016 numbers, it is the position that we have just described for you.

Lincoln Jopp: On the basis that I have elicited the inimitable statement that this is a well-run programme, I hand back to the Chair for others to question.

Chair: We will probe that in numerous respects, I suspect.

Q75 **Mr Bailey:** You have articulated quite clearly that the programme is well run within its budgetary limits now, but there were significant costs as a result of taking the decision earlier in 2010, Chief. Were those costs made clear to the Government and did they accept them? They were within the Report. They are significant costs.

Sir Richard Knighton: Can you flag to me which bit of the Report you are talking about?

Q76 **Mr Bailey:** These are the delays that Luke was talking about in receiving the aircraft and bringing about the capability. What was the cost in total of those delays? It was a Government decision. We know it is not from the Ministry.

Sir Richard Knighton: Can you just point to exactly which page that is on so I can answer that properly for you?

Q77 **Mr Bailey:** The question that was asked was about the fact that the phased arrival of the aircraft may incur increased costs, which you allude to, but the reprofiling means you are working within the profile, as it stands now. That is different from how it was when the delays were incurred in 2010. There has been cost inflation as a result of the delays on the programme.

Sir Richard Knighton: As the Permanent Secretary mentioned earlier, it is quite complicated with the F-35. I have sat here and given evidence to earlier versions of this Committee that showed how the cost of F-35s per airframe, per air vehicle, declined over time. The delay allowed us to buy aircraft at a cheaper price than had been the case previously. As the Permanent Secretary pointed out, the estimation at the time of what the impact of the delay would be, on both near-term and long-term costs, would have been provided to Ministers. I am sure of that.

Q78 **Mr Bailey:** What has been the operational cost to our total number of combat aircraft and the risks associated with that?

Sir Richard Knighton: The original procurement decision was always for the first 48. The issue has been that we have delivered those aircraft later than we would have wanted.

Q79 **Mr Bailey:** What has been the resulting risks as a result of that in terms



of combat air mass and the challenges therein?

Sir Richard Knighton: It means that we have had fewer combat aircraft in service over the last few years than had originally been intended back in 2010. To be fair, a lot changed in 2010 as a consequence of the major restructuring of defence and the reduction in force structure. You may recall Tornado F3 was taken out of service. You will know that Tornado GR4 was due to stay in service well into the 2020s. That was brought out of service early as well. It is not just the delay to the delivery of F-35 that has contributed to the mass that we have.

Right now, we have two squadrons deployed on the carrier. We will declare full operating capability this year as a consequence of demonstrating what we can do on the carrier. F-35 will be a critical component of our combat air capability and is essential to our ability to fight and win control of the air alongside our allies in NATO.

Q80 **Mr Bailey:** You are content with the cost in terms of combat air mass as a result of the delay. That is outwith what the Defence Select Committee found in terms of looking at the size of our combat air force. I believe there is a gap. Maybe that is something that you can explore or perhaps write to the Committee about afterwards.

In terms of full operating capability, Air Commodore, who decides what full operating capability looks like? There are some comments in the Report.

Nick Lowe: Full operating capability is clearly a significant programmatic milestone. It is also a stepping stone as we grow the force through FOC.

Q81 **Mr Bailey:** Who determines what full operating capability is? I am going to buy my car and, for those who do not know, when I buy it, I buy it at its full operating capability. Who decides what that means?

Nick Lowe: I provide a recommendation, which is then cleared through the Royal Air Force, the Air Officer Commanding No. 1 Group and ultimately the Chief of Air Staff.

Q82 **Mr Bailey:** Is it science or applied military judgment?

Nick Lowe: It is both.

Q83 **Mr Bailey:** Availability, so how many aircraft you have, capability, so how much they are able to do, and your ability to sustain them, which are the components of readiness, are all met within that full operating capability. You can tell me what they are and align them with what other F-35 users are doing.

Nick Lowe: All of those are taken into account. In preparation for full operating capability, we have tested this through four lenses. We have not just used a programmatic lens to look at the programme, as stated. We have also looked at it through an operational capability lens. Thirdly, we have looked across the defence lines of development, for example:



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personnel, organisation, infrastructure and doctrine. Fourthly, we have looked from a contractual and legal perspective.

We do not just take a narrow view of readiness for full operating capability; we take a system-of-systems view, recognising where there are risks and uncertainties, and laying out a plan for what we are going to do to continue to build—

Q84 Mr Bailey: On availability, you have the numbers. On capability, you were the head of the SPEAR 3 programme and other complex weapons system programmes. The capability of these aircraft will be measured by the programmes that you were in charge of delivering. Are they all integrated on to the aircraft?

Nick Lowe: They are not all integrated into the aircraft at this stage.

Q85 Mr Bailey: On availability, we may have the numbers. We are not quite there yet. On capability, it does not meet the capability that was required as part of the programme. On sustainability, Chief, you spoke about the carrier deployment. We have the ability to meet the readiness numbers now. We have the carriers out. I believe the Report talks about you getting additional support while the carriers are out. You have demonstrated the capability, which is excellent. What are the consequences of doing that? How long will it be to recover those units, including the delays in the operational conversion unit, to bring that force back to readiness?

Sir Richard Knighton: Can I just take half a step back? Then Nick and I, between us, will take a run at that question. Mr Bailey, I know you recognise how this works, given your past. For other members of the Committee, the formal definition of full operating capability is part of the approvals as the programme goes through the process. Full operating capability is declared—this is at official level; there are other elements that are more classified—as the ability to deploy and sustain two operational squadrons. There are a whole bunch of things that sit underneath that, but that is the approval. That is what we will be able to do.

As this aircraft, through its life, evolves in terms of its technology and the weapons that are fitted to it, that capability will grow. In order to get the money signed off and approved, we have to set a baseline on full operating capability. That is why I can be confident that it will deliver that.

Your question was specifically about whether we are getting enough out of the aircraft in terms of availability and whether we have all the weapons that we want integrated on to the aircraft. The answer to both those questions is, “No, not yet”.

In terms of when the aircraft arrive back from deployment, there will definitely be a period in which those aircraft will require additional maintenance. We clear aircraft maintenance ahead of long-term



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deployments to ensure that we deliver the availability that is required while they are away. When they get back, it will take some weeks for us to deliver that before we are able to step back up and take readiness. That is a standard cycle that we would expect.

Q86 Mr Bailey: Have you sustained the programme in their absence? Has the conversion unit continued?

Sir Richard Knighton: Yes.

Q87 Mr Bailey: The programme has not been impacted by the deployment.

Sir Richard Knighton: The delivery of the programme and the delivery of full operating capability demands that we do the deployment. Clearly, more airplanes are deployed out of the country. That provides less flexibility back at home. The operational conversion unit is still operating. I spoke to the boss of the squadron a few weeks ago. He confirmed to me that that is happening.

Clearly, with a smaller number of aircraft in the UK, that provides less flexibility, but the programme has not stopped. We have continued to train pilots. They will continue to be delivered to the frontline.

Q88 Mr Bailey: The reason I ask is that I am just curious as to what we are getting for our money. To define full operating capability, to use military vernacular, you have chosen to move away from scientific or recognisable capability milestones, one of which is using stand-off capabilities and munitions. There are real questions about the programme's ability to integrate those munitions on to the platform. There is a delay out until 2035, which is something that just does not appear to be a problem, even though that is one of the core capabilities of the platform. Instead of those scientific metrics, we are using applied military judgment.

Sir Richard Knighton: That is not correct. As Nick described, there are some elements of judgment and some elements of hard fact. The requirement to integrate SPEAR Cap 3 on to F-35 is not part of the definition of full operating capability. As I said, we will continue to evolve and develop the capability of F-35 through its life.

As the Chief of the Air Staff, as I was until a week or so ago, if you ask me what I worry about most with F-35 and its capability, it is the integration of a stand-off weapon on to that platform to ensure that we are able to maximise the value of the stealth capability. Nick and others are doing all they can to try to accelerate the delivery of that, but there are elements that are dependent on the US programme that we are unable to influence directly.

We are examining opportunities to use other weapon types that are already integrated. We will consider that as part of the defence investment plan alongside the Government's commitment to increase investment in stockpiles and weapons. That is how we will seek to



mitigate the risk that I worry about as Chief of the Air Staff and Chief of the Defence Staff.

Q89 **Mr Bailey:** There are other aspects to the full operating capability of the aircraft, which has been deferred twice and then changed.

Sir Richard Knighton: When you say “twice”, what do you mean by that?

Q90 **Mr Bailey:** The Report says the MOD deferred the target date to April 2025 and then to December 2025. There are further details within the Report. It was deferred twice. It is something that you are still working towards.

Sir Richard Knighton: Full operating capability was originally intended to be 2023 for a single squadron. The decision was taken in the review note, which was ratified in 2023, to align it with carrier strike deployment and increase it to two squadrons rather than one. That will be delivered—I am confident—by the end of this calendar year.

Q91 **Mr Bailey:** Just to be clear on those numbers, that is 50% of the fleet. It is 24 aircraft out of a force of 48.

I have an F-35A/F-35B question. Why do we have no clarity on the size of a future F-35A force?

Sir Richard Knighton: You will see that the Government committed that 12 of the 27 would be F-35A. That would support us in what is known as DCA, the dual capable aircraft mission, which is part of the NATO nuclear mission. We have clarity on that.

What happens beyond that 74 is a question that will be considered in future defence strategic reviews and future investment plans. For now, the Government’s commitment for 12 aircraft is clear. That is what Nick, as SRO, with the Defence Equipment and Support organisation, has been charged with negotiating with the Joint Programme Office in the US.

Q92 **Mr Bailey:** Nick, can you just explain the risks associated with buying only F-35Bs and the failure to integrate some of the capabilities on to the B that may be on the A only?

Nick Lowe: First, each of the F-35 models has its own strengths. It is a phenomenal aircraft. It is unlike anything else that we have in service as a fifth-generation aircraft. The B model has the ability to do short take-off and landing, and to land on carriers such as ours. Nothing else can do that. That comes with a weight limitation, which means you have some limitations on range that you might not have on the A model.

If I take the A model as a comparison, one of the critical reasons for procuring A models is that with extra fuel we can do more training in every single sortie on the operational conversion unit. That means we can train more pilots and we can train them more quickly. That is very important to grow the force through its life, not just in the current phase.



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The A models routinely will be on 207 Squadron, the operational conversion unit. That will give us an opportunity to grow the force more quickly as well as providing the contribution of a dual capable aircraft to the NATO nuclear mission.

Q93 **Chair:** I will be careful not to go too wide because other people are asking about various aspects of this. While we are on this subject of As and Bs, virtually the only other people in the world who fly the B variant, which is the vertical take-off and short landing, are the American marines. They are going to phase them out in the mid-2030s. The Spanish operate them.

Sir Richard Knighton: The Italians, the Singaporeans, the Japanese, us and the US Marine Corps. The US Marine Corps is not going to phase out its F-35Bs. It will continue to operate them over the next 30 to 40 years.

Chair: That is not quite what the Report says.

Sir Richard Knighton: The Report does not say it is phasing out F-35B.

Chair: Tom, could you clarify this?

Sir Richard Knighton: The Report may say that it will stop buying them in the 2030s, but it will not be phasing out the F-35B. It will continue to operate them for decades to come.

Oliver Ryan: They are going to stop all procurement in 2035.

Q94 **Chair:** They will stop all procurement in 2035. Does that mean the upgrades, the parts and everything else are going to be fully available from that date onwards?

Sir Richard Knighton: Yes. There will be a fleet of several hundred F-35Bs in the world and all those operating them, such as us, the Italians and the Japanese, will need to continue to use them well into the future.

Q95 **Oliver Ryan:** The NAO Report does say that, because of what the Chair has just mentioned, the unit cost will be pushed up over that time.

Sir Richard Knighton: That is potentially true, yes.

Q96 **Michael Payne:** Air Chief Marshal Knighton made reference to the first part of my question, which is to the Permanent Secretary. The Government announced their wish to purchase 12 F-35As following the announcement of the strategic defence review. The MOD has stated that it hopes that delivery will begin by the end of the decade. I just wondered whether you could elucidate to the Committee what the MOD is doing to prepare for the deployment of F-35As that will have nuclear capability and will be joining the NATO nuclear mission.

Air Chief Marshal Knighton, how will joining the NATO nuclear mission affect the requirements for personnel, training and infrastructure as well? The F-35A is a very impressive piece of kit. I am particularly interested in



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this, as is the Committee. My hon. Friend sat to the left of me represents Burnley constituency, where a large part of the aircraft is built. I know his constituents are particularly interested in this.

David Williams: Let me start, but I may want to hand over to either the SRO or the CDS. In terms of preparedness, as you would expect, there is quite a wide range of engagement happening with our US partners and NATO, both as an organisation and those NATO partners that are already part of the DCA mission. There are a range of factors that we need to take into account as we restore a nuclear capability to the Royal Air Force alongside a range of deterrence policy work to provide the framing for us joining the mission.

At the point that we are at now, it is really a set of quite practical engagements with the global programme and partners about the timing, the sequencing and what practical logistical steps we need to take, which are probably more for my colleagues.

Sir Richard Knighton: Mr Payne, I will just talk about the general requirements. Nick has been charged by me in my previous role to do the detailed work over the next few weeks. He can talk a little bit about that.

The weapons in the dual capable aircraft programme are US weapons and they remain under US control. As you can imagine, there are detailed and specific requirements around the certification of people—ground crew and pilots—infrastructure and aircraft to ensure that we meet the exacting standards associated with handling, loading and using nuclear weapons. There are also training requirements for the pilots, which will be done synthetically through the amazing simulators that we have for F-35.

We know that a number of other nations that are F-35 operators are part of the DCA mission. We are working closely with them. Some of them have already achieved certification and some are on that journey. We are working with them to ensure that we can learn all the lessons from them. Clearly, we are working with the US, which will set those standards. It sets those standards globally, but will set those standards for us so we can then work through that detail.

I anticipate that there is definitely a requirement for additional training. I can foresee potentially a requirement for additional personnel. In terms of the infrastructure, there may be some requirements around security, but there is more work to be done on that to get to the detail. You can imagine that those specifics are highly classified. Given that the infrastructure associated with F-35 is common right across the programme, my anticipation at the moment is that that is not significant.

As I say, Nick has been charged with talking to our allies about what they have done and reporting back to the Chief of the Air Staff and then to me so we can understand how quickly we can get this done. That shapes the negotiation that the Permanent Secretary described. Nick might add a bit more colour.



Q97 Michael Payne: If I may, Air Commodore, just before you come in, the MOD forecast for the whole-life cost is around £57 billion. You referenced that figure earlier, Air Chief Marshal. That has been described by the MOD, Permanent Secretary, as being pessimistic and not yet independently validated. What future mix has been assumed in terms of F-35As and F-35Bs in the current forecast cost of £57 billion over the lifetime period to the 2069 end-of-service date? Could you or the Air Chief Marshal, as you are coming back, make reference to that as well?

Sir Richard Knighton: I would have to check, but it is worth noting the F-35A is cheaper to operate. That will contribute to the overall reduction in cost as we go forward. Nick may have a bit more.

Nick Lowe: There is a cost differential between the two models. In terms of the up-front cost, the F-35A is about 20% to 25% cheaper than the B model. There is also an associated sustainment cost, with the F-35A being, by a small but significant amount, less costly to sustain.

Coming back to your question about learning, it is a good question. Tomorrow, I am going to visit a NATO country. I cannot say which one. While there are several NATO members involved in DCA, it is a long-standing commitment that NATO does not declare which countries. Tomorrow, I am going to learn from others who have already generated this capability and meld that with our experience to date of a NATO nuclear mission, which of course is some years ago now.

The learning is starting now. What is more, we know that our commitment to NATO—putting NATO first, as was declared in the strategic defence review—has been welcomed by our NATO partners. I have open doors to go and talk to my colleagues across NATO so we can learn from their experience and generate this capability as quickly and effectively as we can.

Q98 Michael Payne: Permanent Secretary, if there is information in relation to the forecast balance between F-35As and F-35Bs, clearly it would be appreciated if you can share it with the Committee. It is referenced in the NAO Report. There must be some forecasting. On specific details, I appreciate that there are sensitivities around this, but there is a reference to that. Our Committee is concerned with value for money for the taxpayer. Whatever can be shared would be appreciated.

David Williams: I am happy to share some of the assumptions behind that either in open session or, if it is confidential, by making the necessary arrangements.

Q99 Chair: I am a little surprised about the sensitivity of this because a lot of countries only have the A version. Just because you have the A version, that does not mean they are capable of carrying these bombs. What is the sensitivity? There must be planning around the mix between As and Bs.



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Sir Richard Knighton: I did not say that that information was sensitive. I was saying that I was not sure. On reflection, because the NAO field work and the Report were completed before the announcement of the decision to buy F-35A, I am pretty sure that the MOD estimates of the through-life cost would have been on the basis of F-35B only. As we said, I would imagine that adding F-35A, which are cheaper to procure and cheaper to sustain, would reduce the cost.

Q100 **Chair:** As the CDS has mentioned this, Tom, can you clarify whether it was the B or the A version? That makes a significant difference to the whole-life cost of the programme.

Tom McDonald: We carried out the field work at the point when the Ministry of Defence made the announcement, but I will have to come back and check whether we know whether any of the A figures were included in the cost that the MOD gave us.

Chair: The Report does say that they are 25% cheaper to purchase.

Q101 **Chris Kane:** Air Chief Marshal, I want to talk about the personnel associated with the F-35. I want to ask you about engineers, cyber professionals, pilots and qualified flying instructors, but let us start with the engineers. At paragraph 2.3 of the NAO Report, it says, "Shortages of suitably qualified engineers represent the biggest threat to delivering the F-35 capability", according to a NISTA review. Can you talk about what you are doing to resolve that shortage of engineers?

Sir Richard Knighton: This is a problem that besets the whole of defence. In fact, nationally, we have a shortage of engineers. The numbers in terms of the percentage of fill against the requirements in F-35 is very similar to the numbers across the rest of the Air Force and the rest of defence.

In the period through covid, very few people left the service. Post-covid, when the economy took off—you will recall that in around January 2022 there were something like 1.3 million job vacancies in the UK—there was a very significant increase in the outflow of qualified, disciplined and capable people, which is what we have a lot of in the services, into private industry. We were unable to replace them at the rate at which they were leaving.

Over the last two and a bit years and prior to that, while I have been Chief of the Air Staff there have been a whole range of actions taken by the Department and Government more broadly. There have been straightforward increases in pay. The Ministry of Defence has spent a significant amount on a financial retention incentive for our engineers. We have also increased our recruitment. We have had joining bonuses for some specific professions. We have increased the capacity of our training schools in both phase 1 and phase 2, where they do technical training.

I am pleased to say that the number of trainees we are holding at RAF Cosford, which is where the engineers are trained, has come right down.



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We have increased the capacity and throughflow. We are getting very good numbers of applications to join as engineers. We have seen a significant increase in recruitment over the last two years.

In terms of retention, we are now at a position where the voluntary outflow rates have fallen to at or below the historic norms. Those measures that the Department and the Air Force have taken to reduce outflow and increase inflow have made a difference. The challenge, though, is that it takes time. It takes about two years from somebody walking off the street to them turning up to the squadron as a qualified engineer. They then have to do specialist training on F-35. There is a lag in the benefit of the changes that I have described reaching the frontline. Over the next three or four years, it is going to take us that time to grow back to the number that we needed.

We also made the position on F-35 more difficult for ourselves because about three years ago we recognised that the number of engineers that we were established for was not sufficient and we needed to increase it. That is the 168 number that you will see in the Report. We have to grow the F-35 engineers to where they were before and, again, get up to that number.

As Chief of the Air Staff, operational mindset and people were the top two areas of focus for me. I am pleased to say that the measures taken by the Department and the Air Force have made an impact on retention and recruitment, but I am afraid to say it is going to take time for us to get through that.

Chair: CDS, I would just like to draw your attention to paragraph 2.4. I wonder whether you are putting rather too good a gloss on all this. I accept that it is your job to put a gloss on things, but paragraph 2.4—

Q102 **Chris Kane:** Yes, I am going to cover that. One of the things that paragraph 2.4 says is that you miscalculated the number of engineers you needed in the first place. While you have talked about the overall engineering shortfall and some of the reasons behind it, there is another factor as well, which is the miscalculation. Can you talk to that and why that happened? What have you done to make sure that does not happen again?

Sir Richard Knighton: The 168 additional engineers, which represents about a 20% increase, was exactly that as a result of the estimates that were made by predecessors' predecessors' predecessors on the number of engineers who would be required to support the aircraft. They got that wrong. It is a new aeroplane. Once we had the aircraft properly in service, we identified that we needed to address that. That was a decision I took when I was the Air Member for Personnel. That is what we have funded, and that is what we will do to regrow it.

In terms of lessons for the future, a really key issue for the global combat air programme is to understand how we will want to maintain and sustain



that aircraft, recognising that we want something that is agile and can be moved around airfields. That demands more people. It demands more workforce to be able to do that. We are going to factor that into our thinking around the support for the global combat air programme and try to avoid making the mistakes that were made 15, 16 or 17 years ago on the numbers required to support F-35.

Q103 Chris Kane: I was going to ask you about cyber and flying instructors, but perhaps I am going to try to bring it all together in one question. There seems to be a disconnect, in my mind. There is a laser-like focus on delivery for the actual operational weapon, once it is up and running, but there is almost an acceptance of factors outwith your control when it comes to getting ready for it and personnel.

I wonder whether you would like to comment on that. When we get people in your position coming to talk to us, I feel incredibly confident in your ability to operate these aircraft, but I worry that there is an acceptance that we are going to have fewer flying instructors.

Chair: Ask your question, please, Chris.

Chris Kane: I am worried that we are not approaching that with the same laser-like focus.

Sir Richard Knighton: Mr Kane, I hope I can reassure you. The 30,000-odd people in the Air Force would tell you this. Workforce and people has been absolutely my priority as the Chief of the Air Staff. As I explained, you cannot turn these things on instantly. We have to recruit them and train them. The most successful effort that we could make was to retain the people who were already trained. If I lose a sergeant who has 20 years' experience, it takes me 20 years to regrow. I am pleased to see those numbers have come down.

No, I am absolutely not complacent. That is why that has been the focus. Air Chief Marshal Harv Smyth, who has taken over for me, has picked up that mantle and will continue to drive it.

Chris Kane: When will it be fixed?

Chair: No, come on. Sarah has the other half of your question.

Sarah Green: Sorry, can I relinquish my question, Chair?

Q104 Chair: Right, let me try. It is not just engineers, is it? It is pilots; it is cyber-specialists; it is even flying instructors. You have a shortage of them all. At the end of paragraph 2.4 there is a sentence that says, "There will be an ongoing impact on aircraft availability until the uplift is complete". This is in relation to engineers. The issue of staff being able to operate these aircraft is a really serious issue and an impediment into the full capability of the aircraft, is it not?

Sir Richard Knighton: That is exactly right, Chair. That is exactly right. That is why it is such an important thing for us to get it fixed.



Q105 **Sarah Green:** I wanted to ask about the accommodation at RAF Marham, if I may, Permanent Secretary. Why has the MOD consistently provided substandard accommodation and amenities there?

David Williams: Let me give you a response on a general level, and then I might again look to my colleagues in light blue on the specifics at Marham. The Department and the Government definitely recognise the importance of provision of good-quality accommodation as part of the offer to service personnel and their families, whether that is linked to recruitment or specifically to retention.

The SDR has identified the need for substantial increased investment in service family accommodation and, indeed, in single-living accommodation. We are working through those choices through the defence investment plan. Ministers have launched a defence housing review and I expect that review panel, which is independently led, to report in a timeframe, during this autumn, that will inform our defence investment plan. Shortly before the summer break, we launched a new consumer charter with commitments about investment in those areas of accommodation that most need to be improved.

The general context is one in which we absolutely recognise the need to invest, and will invest, in accommodation, in part facilitated by our having brought back the Annington estate into departmental ownership. On Marham specifically, I might look to my colleagues to the left.

Sir Richard Knighton: I will pick that up, if I may. Across the Air Force and across defence, more than half our estate is over 50 years old. The accommodation at RAF Marham consists of a range of standards, but it is not good enough. My predecessor and the Air Force board a number of years ago committed right across the Air Force to removing all grade 3 and 4 accommodation and upgrading it to grade 1 and 2. That is a programme of about £1.5 billion over about 15 years.

At Marham, the programme runs from 2021 to 2034. I was at Marham earlier this year. The first of those new blocks has been constructed and commissioned, and will be available for people to move into, I understand, before the end of this year. That is the first phase of three phases. Across the whole base, 901 accommodation units, bedrooms and rooms, will be upgraded.

It is fair to say that ideally I would have wanted that work and that investment to occur earlier, so that when people arrived at the unit to work on F-35 they were able to move into new accommodation. We have been through a period of 25 years, most of my career even, where the Department has consistently had to make savings in order to preserve its output. As the Permanent Secretary described, the commitment by Ministers to spend more on accommodation and the commitment by the Prime Minister to spend much more on defence offers us an opportunity to accelerate the delivery of those upgrades.



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Q106 **Sarah Green:** How long is that going to take, though?

Sir Richard Knighton: It will take until 2034 to do all 900.

Q107 **Sarah Green:** I am keen to understand the consequences of the accommodation and the facilities not being where you want them to be when you are trying to recruit and retain some of the most qualified people, who the private sector could probably snaffle up quite quickly. We are offering them substandard accommodation. What are the consequences of having to wait until 2034?

Sir Richard Knighton: The risk is that it leads people to leave the service earlier than we want them to. If you go to RAF Lossiemouth, which is a few years ahead of RAF Marham in terms of this programme, we have had very significant investment in single-living accommodation. I have been up there three or four times this year and talked to our junior aviators. They want a degree of choice over this. What we find at RAF Lossiemouth is a workforce that is engaged, feels invested in and feels valued. That is what we need to do right across defence.

That is the risk that we have, and that is why we will continue to prioritise investment in infrastructure. That is why Ministers have committed to publish the accommodation strategy and continue to put more money into accommodation, to reflect exactly the point that you make. It is a very fair risk.

Q108 **Chair:** The Committee is hoping to visit RAF Marham later in the year. We look forward to seeing those new blocks and to looking at some of the worst, so we can see what needs to be done.

Sir Richard Knighton: I can tell you, Chair, that whenever I go they always show me the worst of the accommodation. I might just suggest that you might want to wait until the carrier comes back before you visit in order to be able to speak to the men and women who have deployed on it, which will probably take you into the new year. We will facilitate whatever you would like to do.

Q109 **Chair:** That is a really cracking idea. Thank you for that. That is very helpful. Calvin has touched on this, but both the stand-off weapons and the air-to-surface missile are way behind schedule. Again, does this not affect full operational capacity? When do you expect those two weapons to be on track?

Sir Richard Knighton: As I said earlier, the single biggest concern I have around the capability is the integration of a stand-off weapon or a longer stand-off weapon. SPEAR Cap 3 is our planned weapon. That relies on the Block 4 software upgrade for F-35. We know, because of global problems with the programme, that is delayed. My understanding is that that is likely to be in the early 2030s now, not as late as Mr Bailey described. To be fair, we do not definitively know that yet because the Block 4 upgrade programme is yet to be finally defined and the timetable established. The team—Nick can talk a bit more about this—is examining



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options to integrate Meteor and SPEAR Cap 3 in a different way potentially to accelerate delivery.

In terms of air-to-air weapons, we have AMRAAM integrated. I am more confident around that, but we do need some kind of stand-off weapon to ensure we maximise the benefits of the stealth characteristics and capability of the F-35. As I described earlier, that will be one of those priorities that will be considered as part of the defence investment plan and part of the Government's commitment to invest more in weapon stockpiles. Nick might be able to provide a bit more detail on the SPEAR Cap 3 integration.

Nick Lowe: Certainly, sir. SPEAR Cap 3 is my No. 1 priority for integration on to F-35. We have already integrated other weapons, not just AMRAAM. We have integrated two versions of AMRAAM, a medium range air-to-air missile; two versions of the UK's advanced short-range air-to-air missile, ASRAAM; and two versions of a GPS precision-guided munition known as Paveway IV.

SPEAR Cap 3 is my priority. The US JPO, the Joint Programme Office, has been looking really eagerly at how to accelerate the way in which we integrate capabilities into what is known as Block 4, the next block of capabilities to keep F-35 at the cutting edge of warfare. One of the elements that it has been exploring is how it can make more use of digital design technologies and digital models. It has invited us to put forward a UK weapon integration into that digital accelerator to see what benefit can be generated. We are leaning into that hard to see what opportunities there are to accelerate the integration of SPEAR Cap 3 and Meteor into F-35.

Q110 **Chair:** While you are on your feet, metaphorically, could I ask you about two other possible limitations to the programme? The first is an over-horizon digital radar capability. Is that a problem for the operation of these aircraft?

Sir Richard Knighton: I will pick that up. Do you mean a ground-based over-the-horizon radar?

Chair: Yes.

Sir Richard Knighton: No, it is not directly a problem for F-35.

Q111 **Chair:** Since we have phased out AWACS, we do not have an aircraft over-the-horizon capability at the moment, do we?

Sir Richard Knighton: A ground-based over-the-horizon radar is a very different thing. The UK does not have one and, to my knowledge, has never had one. The airborne early warning aircraft—that capability will be delivered by E-7—is important to our ability to fight for and win control of the air and to defend the UK's airspace. That is not directly related to F-35, but it is really important to me as CDS, as it was for me as the Chief of the Air Staff.



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Q112 **Chair:** Before the summer there was an Adjournment debate on this very subject. Could you write to me about the problems with the E-7 Wedgetail, if necessary in confidence? I would be very grateful.

Sir Richard Knighton: We will do that, of course.

Q113 **Chair:** That is very kind. While you are talking, Air Commodore, the other thing to mention is this programme to assure that the aircraft has stealth capability. That perhaps leads me into a more general question, which I did ask the Minister for Procurement. Could you enhance this programme through enhanced co-operation with some of our NATO allies? That is about training pilots, but the Italians also have this stealth assurance capability. Could you enhance our own programme by integrating some of our programmes with theirs?

Nick Lowe: We already work very closely with our Italian colleagues and a number of other NATO nations within the F-35 programme and more broadly. On signature measurement—so how low observable your aircraft is—we are working closely with the Italians in the interim while we generate our own sovereign capability, which, as you will be aware, we have delayed as we have prioritised spend across defence.

In the short term, we have work ongoing with Italy. We are also actively exploring other capabilities to ensure that we can understand as much as possible about our airframes, have confidence in them and know what engineering processes we might need in the future. There is work to do, but it is work that is progressing well with allies.

Q114 **Chair:** You did not answer the other bit of my question about integration with NATO allies on such things as training pilots. For example, way before you get the A version, why could you not send some of our pilots to nations that have already acquired them so they get some flying experience on that particular variant?

Sir Richard Knighton: I will pick that up, Nick. In terms of F-35, by the time we get into the early part of the 2030s, there will be over 600 F-35 aircraft in Europe as part of NATO. Fewer than 10% of those will be US aircraft. They will mostly be our allies' aircraft.

We already have a close relationship with the other F-35 nations in NATO and we meet as chiefs and leaders every six months in order to review the opportunities to share best practice and enhance our overall capability of NATO. In terms of flying training, we already have pilots being trained in Italy at Decimomannu as part of that international flying training school there.

In terms of the overall programme around F-35, we know, because we have done some trials, that F-35A is easy to transition to. We did a programme of an exchange with the Australians where an Australian F-35A pilot came to the UK. We put him through the simulator and then he was able to go and do a trip in an F-35B. It was really straightforward. It was even easier when we sent the UK F-35B pilot to Australia to fly one



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of their F-35As. This idea of interchangeability will be quite important to us across NATO as we think about making sure we have the right level of agility, so what is called agile combat employment, to enable us to have engineers service and load, say, Dutch aeroplanes, or for the Italians to do ours. That is work that is being led through that NATO F-35 air chiefs' symposium.

Chair: That is a very constructive answer. Thank you. We are going to Clive Betts on costs next.

Q115 **Mr Betts:** This is probably for the Permanent Secretary first. This is clearly a key part of our defence capability, yet, over a long period of time, the programme has gone over time and over budget. Who takes responsibility for that?

David Williams: It has not gone over budget. It is currently under budget for the 48 aircraft. The modest delay in achieving full operational capability is, in part, linked to a shift to two frontline squadrons rather than one. Against its original approvals, this programme is doing really quite well.

Q116 **Mr Betts:** You say that it has not gone over budget, but, until the National Audit Office did its investigation, you did not have a lifetime cost for the programme at all that was worth anything.

David Williams: That is a different question. There are a range of decisions that we have made around the first 48 aircraft and the expansion to a fleet of 74, and we have good cost information for that. The extrapolation to the whole-life costs of a fleet of 138 may be an interesting calculation as we come to decisions about the next set of investments, but it is about having the right cost information for the management decisions that you want to make.

We have an estimate of those costs here. We were discussing, I think before you were able to join the hearing, the balance of variants of F-35 within those costings. We will give the Committee a note on some of the underpinning assumptions. There is then a question about how many related but not direct costs you want to include in that calculation. The NAO has included more than we routinely do. My understanding is that we follow, for consistency, the kind of guidance that NISTA has set out for major programmes, but we can explore or set out some of those differences if that is helpful as well.

Q117 **Mr Betts:** It might be, but the fact is that, surely, Permanent Secretary, when the NAO began this audit, you did not have any lifetime costs worth the paper they were written on, did you?

David Williams: We had whole-life costs for the fleet that we have already committed to and a set of planning assumptions that are still to be tested, through the defence investment plan and subsequent reviews, about what the full fleet mix will look like and about the relationship between F-35 and the rest of our combat air programme. It is not that



we are uninterested in whole-life costs. It is just being clear about the purpose to which a whole-life costing exercise is being put.

- Q118 **Mr Betts:** Surely the purpose is to actually get an idea what the equipment is going to cost over the life and therefore to plan for that in your defence strategy, which I think we are still waiting to see revealed to us, so you can balance these costs against other costs in your Department and, indeed, in the wider government budget.

David Williams: Yes, but, on the other hand, against an out-of-service date of 2069, we are looking at a defence investment plan that will look five to 10 years out. We have a spending review settlement for the rest of this Parliament. The degree of precision that you need in a 40-year costing is particularly interesting when you are comparing different investment choices at a point in time. It is not particularly helpful now for budgeting, because I have no idea what the defence budget is going to be in 2069, for example.

It is a bit like—it has been a while since I have been in the main House rather than Portcullis—if you are thinking about the cost of the renewal programme for the Palace of Westminster. My version of the costing would have surveys, renovation and construction work, but I would not put in 50 years of keeping the lights on, because I am assuming you are going to do that anyway. It is the question of the definition of what is in and whether it suits the management decisions that we need to make.

- Q119 **Mr Betts:** I would have thought, looking at lifetime costs, just in passing—you can come back to us with a description of what you assume and what the NAO assumes—that fuel would be in there. You may have some very advanced planes, but I do not think that they run without fuel, for example.

David Williams: Yes, but you can compare F-35s against some other types of aircraft, unless there is a material difference in the fuel consumption, given that it is variable depending on how much we then fly the aircraft. I understand the basis of the NAO's costing. I think the NAO understands the basis of our costing. We have chosen to include different things in that long-term, four-decade-long calculation.

- Q120 **Mr Betts:** There are figures in the NAO Report, which you have signed off, Permanent Secretary, that talk about—I think in paragraph 3.15—a decision taken in 2021 about the aircraft signature assessment facility that was supposed to save £82 million and actually cost £16 million. There are examples of a programme that is not being well managed, are there not, from a financial point of view?

David Williams: In that particular case, there was a decision deliberately to slow investment in that facility, partly for short-term affordability reasons, which has led to an increased cost overall, but was necessary in order for the Department to live within the budget that it had at the time.



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Q121 **Mr Betts:** This is in the Report that you signed off. A saving of £82 million turned into a loss of £16 million. That is true, is it not?

David Williams: Indeed, the figures are there. The point is that the cost is not in the years in which we have saved the £82 million and we have to live within an annual budget set by the Treasury and voted for by Parliament.

Q122 **Mr Betts:** Why did you not ask for a caveat to be put in if you think that that is not a fair description?

David Williams: It is a conventional consequence of making decisions. As we live within an annual budget, we are constantly making decisions about the sequencing and volume of spend on different programmes. Those kinds of decisions will be made for this spending review in the defence investment plan. That work is underway now and then we will want to deliver against that plan for the rest of the Parliament.

Q123 **Mr Betts:** Basically, by taking short-term decisions to balance one year's budget, you end up costing more money. Is that what you are saying to us?

David Williams: That is the risk, if you have a programme that, in the end, you are unable to afford in the way that you hoped that you would. That, in this particular case, is not a weakness of the programme management of this project. It is part of the consequences of trying to afford the defence programme overall.

Q124 **Mr Betts:** Is it a project generally of managing the defence budget in your Department?

David Williams: Yes, but we have had to deal with a range of cost pressures, including extraordinary levels of inflation, for example, after the Russian invasion of Ukraine and some of the energy cost crises of earlier this decade. There are constantly things that add costs to the programme and some things that do not progress as we expect. Managing the overall portfolio of investment is something that, from time to time, will require us to make decisions based on affordability rather than on pure value for money.

Q125 **Mr Betts:** That is a really important point, because it means—and perhaps this should be flagged up when this happens—that taking short-term costs to manage a budget within a year, or two or three years, can often end up with substantial additional costs. We went up to Barrow-in-Furness recently and looked at the Dreadnought project. Simple message: because of the delays, when you start again, the costs go up substantially. Is that not a problem generally with defence procurement? Are we looking here at a microcosm of a more general problem?

David Williams: It has been a problem, because, in the end, we have to live within an annual budget. The trick is to ensure that we are forecasting the cost of the programme in a way that has appropriate risk



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contingency built in, are thinking about the balance of risk across portfolios of like-minded or similar capabilities and do not so overheat the programme that, if one area starts costing more, we necessarily then have to go and interfere with other projects that are otherwise performing well. That is the challenge that we have to address in the defence investment plan, which we will then share with our colleagues in the NAO and with this Committee once it is concluded.

Q126 Mr Betts: When this happens, and you say short-term measures to balance within the year's budget may end up costing you more in the long term, do you, as a matter of course, flag that up when you take those short-term decisions?

David Williams: Yes, internally, certainly.

Q127 Mr Betts: Right. That is the point, is it not? This Committee is actually the Committee to oversee, on behalf of the public, what is going on with Government expenditure. You do not flag it up as a matter of course to the PAC.

David Williams: On individual projects we may from time to time. There is possibly something for us to examine about whether we can do that more systematically. Some of the changes in requirements to publish or make public a version of business cases for GMPP projects that the Treasury introduced earlier in 2025 would be a good vehicle for that sort of transparency that you are looking for.

Mr Betts: The Committee might come back to that point.

Chair: My deputy, Clive, has raised a really good point. You would save a lot of questions from this Committee as to why programmes were over budget—and Calvin was alluding to this earlier—if you could point precisely to what the consequences of delayed decisions are in terms of cost. The granular information would then begin to tell us why that programme had overrun. Otherwise, we just think that it is incompetent management. If there is a real reason for it, that would be really helpful.

Q128 Mr Bailey: That entirely is the point I was trying to make earlier. The decisions that you are forced to make in-year may have consequences that you are now sat in front of us trying to justify on behalf of the previous Government. The Report covers that very well.

David Williams: I absolutely agree with the principle. On the particular point around 2010, in the 2010 SDR, we were assuming that we were buying F-35C variants. We changed to the Bs. It is just that there is a degree of complexity around 2010 that I do not have at my fingertips.

Q129 Mr Bailey: We need to get to that, because it is about understanding where we are. It is in paragraph 3.15, which is where I drew the affordability challenges and the costs and consequences from. The Report says that perhaps you need additional budgetary control to deal with that flexibility. That is in-year stuff. In 3.17, which is about subjective



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measurement of full operating capability, it talks about you taking risks for programmatic failings.

The SPEAR 3 issue is about supplier failings, not integration failings. The integration failings come in as JPO not giving you adequate allowance to integrate some of the UK weapons on there as well, which is something that you may wish to bring out.

Sustainability is also a problem. The point I was trying to make is in paragraph 2.19. MOD has problems with support and cannot sustain two detachments. That is the sustainability part of ACS.

They are all the costs of other people's decisions that you are now justifying and you have no choice over. We are trying to hear how those costs come out. You should not be justifying them. They are reasonable decisions that we expect the Government, or the Government at the time, to make, because you will be under those budgetary pressures now. Defining the success of the programme, you may wish to touch on some of those, but also expand into the other things that we do not see, which are the cost-benefits that the programme gives us.

Chair: Can I slightly qualify that question? We are running into the defence investment plan. We hope that this will be a reset of how this Committee examines defence equipment procurement. We really do, because, in the past, it has been very unsatisfactory. Some of the suggestions that have been made by the two gentlemen on my right would be really useful for us to understand why the defence equipment budget is where it is and whether it is affordable or not.

David Williams: I understand that. I am happy to think about that in the context of the defence investment plan, but, more broadly, some of the areas mentioned here, particularly around streamlining of approvals. The threshold at which reapproval is needed is part and parcel of our defence reform work and the way in which we are looking to streamline equipment acquisition, as part of our establishment of the National Armaments Director and that new set-up.

Chair: Calvin, are you finished?

Q130 **Mr Bailey:** I think so, unless these are things that you want to come back and expand on. It is not to say, "Point the finger", but please take the opportunity to explain the pressures that you are under. The Report brings it out quite well. You are managing a programme well, but there is pressure being driven into that programme externally. We need to hear about it, and that is what we are after.

Sir Richard Knighton: I will say a few things, if I may, to reinforce and address Mr Bailey's point. We are living with the consequences of decisions that were taken over the last 15 years, some of them as a consequence of affordability and some as a consequence of supplier performance. We have to live with the world as it is, as opposed to the world as we might want it to be, so our job is to try to fix these problems.



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If you look at spares and support, we know that the US is having what it describes as a GSS—global support system—reset, which is to improve availability and drive cost out of that system. We have some real expertise in this in the UK because of the way in which we support our aircraft, particularly Typhoon and previously Tornado. We have people in the Joint Programme Office who are supporting that work. That is really important to us.

In terms of the situation with the overall global F-35 programme and particularly Tech Refresh 3 and Block 4, which are the big capability enhancements, our weapon integration is tied in with that. You cannot integrate the weapon until you have an opportunity to upgrade the software. As Nick described, we are trying to find out ways in which we can accelerate that and deliver that more quickly.

You are absolutely right, Mr Bailey, that we are living with the consequences of decisions taken in the past and the challenges around hollowing out bits of defence that we are trying to address now. With the defence investment plan and the very significant commitment the Government have made to increase defence spending, there is an opportunity for us to fix that over the next few years, but it will not be something that happens overnight. It is all going to require work over a considerable period of time.

I am very conscious that, on a day-to-day basis, it is the young pilots and engineers on the frontline who are having to manage the consequences of those decisions. It is my job and our job to minimise the demands on them as far as we possibly can, and that is our focus. I welcome the approach and the way you have set that out. Thank you.

Q131 Chair: That is very helpful. Perhaps we have made a useful step forward there. Can I ask you something, CDS, and maybe, Air Commodore, you would like to come in on this as well? It does not just apply to the F-35, although you have been the SRO for two years, Air Commodore. We have many times commented that SROs come and go far too quickly. They have just about got into a programme. It does not really matter whether it is F-35 or whatever it is. Some of your military programmes are very complicated.

It seems that, within the military, if you were to leave somebody such as an Air Commodore there too long, he would lose out on promotion. What is the answer to this? If private industry had a complex programme like this, it would want a manager there to manage the entire programme. That is not to say that they are going to be there until 2069—I am not saying that—but certainly a reasonable number of years so they can become experts. What is the answer to that?

Sir Richard Knighton: There are a number of aspects to it. Fundamentally, I agree that we should have SROs in place for key periods in a project life cycle. Indeed, the Infrastructure and Projects Authority, now NISTA, and the Major Projects Leadership Academy talk



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about best practice. You do not have an SRO for the entirety of the programme, but for particular periods you would do that.

We have had three SROs since 2019. The first of those three decided he wanted to leave the service after about two and a half years. I am pleased to say that he is still in the wider defence enterprise. There is a limit to what I can do about that. The chap who took over from him did a super job, as did his predecessor, but he was promoted and is now responsible for delivering flying training and delivering pilots to the frontline, and doing a fantastic job at that. It is important that he had that opportunity.

Nick is the only one who has been appointed while I was Chief of the Air Staff. I was involved in the air rank appointments board and I was very clear when Nick took over that we should expect him to do more than three years. Nick came in on promotion. I do not want to give him his annual report in public now, but the Report is clear what a good job he is doing, and we foresee no intent to move Nick in the foreseeable future.

One way in which we will be able to systemise that is to increase the number of civilian SROs in our system. We have seen that across defence and certainly the Air Force. We recently, within the last two years, lost a serviceperson and put a civilian in place. There is no guarantee that they will stay longer, but the career management aspects are a bit easier to manage. It is something we consciously and constantly think about, both in the Air Force and more broadly across defence.

Q132 **Mr Betts:** We have probably covered my next question. I will just say that it is an important programme. What does success look like?

Sir Richard Knighton: In the short term, for me it is declaration of full operating capability on the completion of a successful deployment of the carrier. If you were to ask me to come back in three or four years, what would it look like? I would want us to have addressed the personnel challenges. I would want us to have seen significant improvement in the infrastructure provision at RAF Marham.

I would like us to have an interim solution to the stand-off weapon programme and understand what the firm programme is for the upgrade of F-35 to Block 4 and the integration of SPEAR Cap 3 and Meteor, which opens up huge opportunities for exports for our people. I would want us to be delivering more capability from the investment that the taxpayer has made in this vital platform for the delivery of UK military effect and deterrence. Those are the things that I would want to see over the next three or four years.

Q133 **Mr Betts:** That is a hope. Is it a promise?

Sir Richard Knighton: I have learned in this job that you should under-promise and overdeliver.

Mr Betts: It sounds like a politician's answer coming up.



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Sir Richard Knighton: I will confidently tell you that all the systems are in place to deliver those things that I described to you. The bit that we have less control over is the overall international programme, so the Joint Programme Office. I am also confident that, with Nick in charge and with the relationship that our Defence Equipment and Support organisation has with the Joint Programme Office, we have excellent interactions—the NAO identified that—and very good, robust systems. We are giving ourselves the best chance of delivering that improvement I described.

Mr Betts: We will see in 44 years' time.

Sir Richard Knighton: I am up for that. Let us hope that I am still here.

David Williams: From a Perm Sec perspective, the programme is already demonstrating value for money, on a day when we have launched the defence industrial strategy, with a focus on defence as an engine for growth. Some £22 billion-worth of contracts into the UK supply chain for an investment of around half that is good for jobs and the economy. We already have a fifth-generation capability. We are proving its capability through this carrier strike group deployment.

Is there more value that we can get out of it? As we have discussed today, and echoing CDS's point, yes, absolutely in terms of, primarily, availability and lethality, building on those points about personnel, infrastructure and weapons integration. I am confident that that will come, but we have made a good start.

Q134 **Chair:** Is the 15% workshare that we get on worldwide sales baked in for ever more, or is it dependent in any way on the number of aircraft that we purchase?

Sir Richard Knighton: We cannot say that it is baked in for ever more, because it will depend as contracts come up for renewal. There is a view among some that actually there is a relationship with the number of aircraft we buy, but that is not written down and that is not a clear linkage between the two. Fundamentally, the UK industry won those contracts because it is good at what it does. As long as it can continue to deliver the quality and cost that Lockheed Martin and the JPO are looking for, I think it will be able to retain them.

Q135 **Chair:** Also, we put in significant up-front investment to help shape the programme.

Nick Lowe: Yes, it helped us to shape the programme and have a voting right in the design phase, but it also allows us to build those skills, both industrial and within Government, for GCAP in the future. The benefits go beyond the programme in that respect, and the learning certainly goes beyond the programme in that respect as well.

Q136 **Chair:** I have one final question. In this very fast-changing world, particularly with what China is doing with hypersonic missiles and aircraft, and unmanned aircraft and so on, come 2069, is this aircraft still



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going to be technically up there in terms of capability? It seems an awful long time to predict that you will still be using them.

Sir Richard Knighton: It is a long time, but the essence of this programme is that the capability continues to be upgraded and developed as the threat matures. By 2069, we expect to see very significant changes in capability. That is part of the reason why that is an out-of-service date and both the UK and the US are developing aircraft that will go beyond the capability of F-35. I am incredibly confident in the capability that F-35 delivers for the foreseeable future.

Chair: Is everybody done? CDS, Air Commodore, Permanent Secretary, you have been very generous with your time today. It has been a very instructive hearing. We have certainly learned a lot. We will be producing a report in due course with some recommendations. We would love to take up your invitation to go to Marham. Your suggestion that we should go when the aircraft has finished its deployment is a very good one. Apart from anything else, it will give you a bit more time to get those blocks up and running and open.

Can I thank you all very much indeed? An uncorrected version of our transcript will be available in the coming days.