In the Government’s response to the House of Commons Defence Committee’s report on F-35 Procurement, we undertook to provide the Committee with a six-monthly progress report. The Government welcomes the Committee’s continued recognition of the challenge of delivering the largest and most complex international defence programme in history. The Government remains committed to delivering the F-35 programme on time and within budget, providing a cutting-edge capability for the Armed Forces in their defence and security of the United Kingdom.

The Committee asked for detail on the progress made in addressing each of the issues identified in their report and any additional problems encountered since the report. Specifically, the Committee requested detail on the ongoing cost of the programme, including sustainment, spares and logistics, software upgrades and the unit recurring flyaway costs.

The Government’s second formal update to the Committee’s recommendations and conclusions is set out below. Following a summary of progress since the last update, the Committee’s headline issue findings are each addressed in turn.

**Progress report**

The UK F-35 Programme continues to be delivered on time and within budget. The most significant milestone since our last update is the declaration of an Initial Operating Capability (IOC) for land-based operations on 31 December 2018 – testament to decades of work by many individuals and organisations, and more recently by 617 Squadron’s pilots and ground crews since their arrival at RAF Marham. Significantly, the Secretary of State confirmed in November 2018 the order of a further 17 F-35B aircraft (Block Buy 1 contract for Defence, to be delivered 2020-22), doubling our fleet of F-35Bs to 35 by the end of 2022. On current plans, the Department expects to receive the final 13 F-35Bs (bringing the total to 48) in 2023-24.

The WESTLANT 18 deployment of HMS Queen Elizabeth to the east coast of the United States saw the historic first landing on the ship by an F-35B Lightning and the world’s first Shipborne Rolling Vertical Landing with Lightning (giving an increased ability to bring back weapons and fuel to the carrier). The primary output of the deployment was the successful completion of Developmental Test 1 and 2. It was hugely successful, with feedback indicating that it has been the most successful period of embarked F-35B test globally to date. It exceeded expectations, largely due to excellent teamwork between HMS Queen Elizabeth and the Integrated Test Force (the Lightning test team, based in the US, consists of UK and US pilots using programme aircraft).

In terms of the international F-35 Programme, over 355 F-35 aircraft have rolled off the production line and over 175,000 flight hours have been achieved. The Belgian Government
announced its intention to procure F-35A aircraft in October 2018, becoming the fourth Foreign Military Sales customer (and 13th nation) in the F-35 Program of Record. On 18 December 2018 the Japanese Government publicly stated its intent to increase their planned F-35 purchase of 42 aircraft to 147 aircraft, of which 40 aircraft are expected to be the F-35B variant. This would make Japan the second largest planned user of F-35 behind the United States, with the UK becoming the third largest planned user.

In addition to the arrival of the UK’s 17th F-35B in November 2018, the Integrated Training Centre (ITC) and Maintenance and Finishing Facility at RAF Marham became operational in the Autumn. The ITC has already been heavily utilised for pilot synthetic training during IOC preparation and has facilitated the successful completion of the first ground crew avionics course.

Costs

The Defence Equipment Plan 2018 Financial Summary published a revised programme approval figure of £8.948Bn compared to the previously announced £9.1Bn. This revision is due to foreign exchange accounting treatment, with £218M being removed this year. By the end of this Financial Year, we anticipate seeking the approval of the Investment Approval Committee (IAC) to spend an additional £750M of our assigned budget on capability development and upgrades, enhanced reprogramming capability and sustainment. The IAC and scrutiny team will carefully consider the value for money argument in all submissions. In the past six months, Lockheed Martin confirmed the price of an F-35B from Low Rate Initial Production (LRIP) 11 (the single aircraft to be delivered in 2019), as $115.5M. This is a significant reduction in cost. The price of our first two aircraft in LRIP 3 was $161M each. The Joint Program Office (JPO) remains in negotiations for the Block Buy 1 contract, in which we expect to see further reductions in aircraft price.

The F-35 programme strives to be transparent on costs and continues to be subject to intense scrutiny. You will be aware of the combined House of Commons Defence Committee (HCDC)/Public Accounts Committee F-35 closed briefing session held on 20 November 2018, in which the Department covered subjects such as cost, capability and supply. For this session, the Department was privileged to obtain the assistance of Todd Melon, Executive Director of the JPO, who added significant value to proceedings through his global program outlook. The Programme continues to publish information in the Government Major Programmes Portfolio, and the Department provides frequent updates on the programme through answers to Parliamentary Questions and the media – which continues to place the programme under close scrutiny.

Connectivity

In 2016 trial Babel Fish III assessed 4th to 5th Generation fighter communications utilising the F-35 Multifunctional Advanced Data Link (MADL). This was the first time that non-US 5th and

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3 Following the Permanent Secretary’s offer to both committees of an F-35 closed briefing session in Autumn 2017.
4th Generation aircraft had shared data using a MADL gateway and is an important demonstration of interoperability. The trial report was received in April 2018 and the outcome was to commission trial Babel Fish IV to look at how information will flow from 4th Generation collection assets (Typhoon) through the gateway to allow 5th Generation manipulation utilising high-end processing. To date, the UK has been leading the way in interoperability of 4th and 5th Generation platforms; we expect this evidence to form the basis of formal requirements and future investment choices.

Connectivity between UK F-35 and the Queen Elizabeth Class will form an intrinsic part of Operational Test (OT) 1, scheduled for October-November 2019. As part of the OT programme, connectivity will be tested across the wider elements of the UK Maritime Task Group, which will significantly de-risk IOC (Maritime).

Software

Continued progress has been made in the commissioning and testing of the Autonomic Logistics Information System (ALIS) on Ministry of Defence (MOD) networks at RAF Marham. ALIS has been running successfully at RAF Marham as well as supporting First of Class Flight Trials on board HMS Queen Elizabeth in November 2018. ALIS is an important system for F-35 and it has been, and will continue to be, subject to rigorous cyber testing.

Communications

The MOD delivered an effective communications plan on First of Class Flight Trials, with specific emphasis on the success of F-35B during the test period, which enjoyed frequent visibility during the Autumn. In addition, the Secretary of State’s announcement of F-35 Lightning reaching IOC at RAF Marham on 10 January 2019 received wide media coverage, showcasing once more that a significant programme milestone has been delivered on time.

Summary

The F-35 Lightning Programme has achieved much in the last six months with successful flying trials on HMS Queen Elizabeth, the order of the next 17 aircraft and the timely delivery of IOC (Land) in December 2018. The next six months will see the Lightning Force continue to develop operational capability at RAF Marham and the return of a further five aircraft to form 207 Squadron, the Operational Conversion Unit, at RAF Marham.