



Ministry  
of Defence

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**JEREMY QUIN MP**  
MINISTER OF STATE FOR DEFENCE PROCUREMENT

MSU 4.8.1.2

14 September 2020

*Dear Tobias,*

Thank you for your letter of 26 August 2020, requesting an update on the F-35 Lightning Programme.

The Government welcomes the Committee's continued recognition of the challenge of delivering one of the largest and most complex international defence programmes in history. The Government remains committed to delivering the Lightning Programme on time and within budget, providing a cutting-edge capability for the Armed Forces in the defence of the United Kingdom and her global interests.

The Programme has continued its successful Operational build-up to further develop the capabilities declared on time at Initial Operating Capability (IOC) (from Land) in December 2018. This activity included the overseas deployment of the UK Lightning Force to RAF Akrotiri for LIGHTNING DAWN which delivered the first operational sorties of UK Lightning over Iraq and Syria as part of Operation SHADER. Other key activities included the successful completion of Exercise RED FLAG in the US in which the UK worked closely with NATO partners to train in a highly complex, contested environment. Throughout this time, the Lightning Programme has continued to work towards the achievement of IOC(Maritime) which is enabling the Lightning Force to operate from our two Queen Elizabeth Class (QEC) Carriers, delivering the world-class capabilities of Lightning as part of the Carrier Enabled Power Projection Programme (CEPP). Despite the impact of the COVID pandemic, work has continued at pace across UK Defence and our international partners to keep delivery of the IOC(Maritime) milestone on track for declaration by 31 December 2020.

Rt Hon Tobias Ellwood MP  
Chair, Defence Committee  
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## **Future UK programme**

The Lightning programme is approved in tranches: the first 48 aircraft have been approved and are entering service successfully, as described above. We will continue to approve tranches incrementally to meet both combat air and carrier strike requirements. I am sure you will understand it is not appropriate for me to comment on the speculation published in *The Times* article you reference. In every review there is naturally a substantial amount of speculation on which it is simply not helpful to be drawn. I know you will understand that the starting point for Defence is to ask ourselves what the threat is, and whether we have the capability to meet it. I can assure you that any decisions on the future direction of the Lightning Programme, as a result of the Integrated Review, will be firmly based on those principles.

The Carrier Strike and Lightning capability positions remain unchanged; by December 2023, the UK will have the ability to embark, sustain and operate up to 24 UK Lightning aircraft from land or from the QEC Carriers, with the requisite clearances, weapons, personnel and support. We will also be able to embark and integrate our international partners, such as the US Marine Corps.

## **Adapting during the Pandemic**

Like every area of the MoD, the Lightning Force had to rapidly adapt to the lockdown and development of Key Worker status in the early stages of the COVID pandemic. Despite a very short-term impact on aircraft and personnel availability in late March and April, the Lightning Force and our suppliers worked closely together to address these issues quickly. The US Program has continued to provide the required levels of logistic and technical support to the UK Lightning fleet during the pandemic with the availability of both spare parts and technical advice remaining constant and within contracted target levels. The International F-35 Joint Program Office (JPO) continues to forecast that there will be no impact on its ability to support the worldwide F-35 fleet. Therefore, the emergence of the pandemic had a negligible impact on our overall force production, and we have a further three airframes due for delivery in November 2020. The ongoing impact of COVID on the Carrier Strike programme has to date been managed in a way that has sustained the programme. The continuity of training has ensured that Lightning has remained on schedule for IOC(Maritime), an important CEPP programme milestone and key aspect of IOC (Carrier Strike) declaration in December 2020, ahead of the inaugural embarked operational deployment in 2021.

## **Continuous Development**

With regard to our plans for aircraft upgrades, expenditure on developing the aircraft to the initial Block 3F standard is now complete. Beyond this, the F-35 Production, Sustainment and Follow-on Development MOU, signed by F-35 Partner Nations including the UK in 2006, sets out arrangements for further development of the aircraft. Subject to approval, the MoD intends to commit funding in the coming months to the next phase of development on Follow-on Modernisation (FOM), which will deliver the Block 4 standard. In parallel, applying the JPO's predominantly software-centric

Continuous Capability Development and Delivery (C2D2) philosophy, the Lightning air system, including the aircraft and supporting ground systems, will be in continuous, spiral upgrade through-life to stay ahead of emerging threats. The MoD is also conducting internal Value for Money Investment Appraisal processes for the future procurement of a second Deployable Support Package (which includes the spares package) aligned with Force growth and will look to move to a contractual stage once these internal appraisals are complete.

## **ALIS/ODIN**

The rollout of the Autonomic Logistics Information System (ALIS) is almost complete, with installation on HMS Prince of Wales due to complete this year. As technology advances, F-35 offboard systems need to continue to be developed through-life; therefore, as with the air vehicle, ALIS will benefit from regular hardware and software upgrades. The UK remains a strong supporter of the JPO's Operational Data Integrated Network (ODIN) programme which will replace ALIS; indeed, the Partner Nations are fully engaged with the JPO over the development of ODIN and have provided much support to the generation of the capability need statements. The JPO plans to trial various industrial solutions to ODIN over the coming year, with rollout to US Services in Q4 2021 and to Partner Nations in 2022.

## **Programme Costs**

Moving to your questions about programme costs, with Turkey leaving the Program, the UK's shared contribution has increased by a small proportion of 0.15%. However, you will be aware that production efficiencies have continued to drive down airframe costs with each successive Lot while delivering the spiral capability development detailed above. It remains the case that UK industry benefits from 15% by value of each aircraft built worldwide.

As you can see, the Lightning Programme has again made impressive progress in the last six months despite the difficult and unprecedented circumstances. The main focus this autumn is finalising the pan-Defence effort to achieve IOC (Maritime) as part of IOC (Carrier Strike), thus unlocking this extraordinary capability onboard our carriers. Despite the impact of COVID on our routine business, the Lightning Programme remains on schedule to deliver IOC (Maritime) and subsequent milestones and is well placed to implement any decisions resulting from the Integrated Review.

Yours sincerely,



**JEREMY QUIN MP**